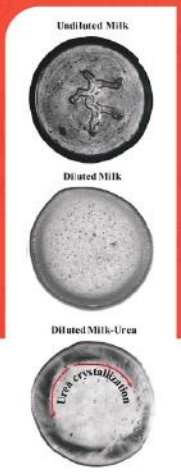
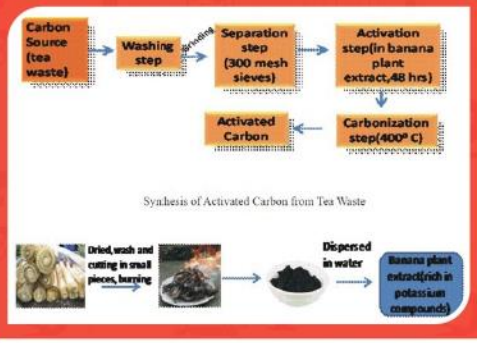
INDIA SCIENCE WIRE IN INDIAN MEDIA

OCTOBER 2021 / Vol.5 / No. 10

Highlights of India Science Wire (ISW) Stories





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विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF SCIENCE & TECHNOLOGY

वि प्र
V P
VIGYAN PRASAR

India Science Wire - highlighting Indian science in Indian media

The coverage of science and technology particularly relating to research done in Indian research institutions, is generally very poor in Indian media. There are several reasons for this situation, one of them being the lack of credible and relevant science content. In order to bridge this gap, Vigyan Prasar launched a unique initiative - India Science Wire (ISW) – in January 2017.

The news service is dedicated to developments in Indian research laboratories, universities and academic institutions. Almost all news stories released by this service are based on research papers by Indian scientists published in leading Indian and foreign journals. All news stories and features are written and edited by a team of professional science journalists with decades of experience in science journalism.

News stories based on happenings in Indian research labs are released to media houses on a daily basis. These stories are also uploaded on ISW website and are simultaneously promoted though social media – Twitter and Facebook. At present, the service is available in English and Hindi.

Reach out ISW Editor with story ideas, comments and suggestions at indiasciencewire@gmail.com

ISW website: http://vigyanprasar.gov.in/isw/isw.htm

ISW stories released and published in October 2021

S. No.	Story title	Date of release	Name of the writer
1.	Consortium to develop next-gen space technologies	Oct 01	Sunderarajan Padmanabhan
2.	New polymer material for the packaging industry	Oct 05	Sunderarajan Padmanabhan
3.	New technology promises to eliminate airborne COVID virus	Oct 05	Sunderarajan Padmanabhan
4.	ICMR releases Multilingual Dementia Research and Assessment Toolbox	Oct 06	Umashankar Mishra
5.	Novel formulation for cost-effective and thermo-stable Insulin	Oct 06	Umashankar Mishra
6.	देश के सभी जिलों में पीएसए ऑक्सीजन संयंत्र	Oct 06	Umashankar Mishra
7.	Facility to help MedTech startups	Oct 07	Sunderarajan Padmanabhan
8.	Study finds high level of pharma contaminants in Cauvery	Oct 07	Sunderarajan Padmanabhan
9.	Study gains new insights into a cosmic puzzle	Oct 07	Sunderarajan Padmanabhan
10.	Study pinpoints sources for aerosol over central Himalayan region	Oct 08	Sunderarajan Padmanabhan
11.	Technology to improve life of thermal power plant boilers	Oct 08	Sunderarajan Padmanabhan
12.	"दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण"	Oct 12	Umashankar Mishra
13.	From waste to wealth	Oct 13	Sunderarajan Padmanabhan
14.	वैज्ञानिकों ने विकसित की कचरे से गैर-विषाक्त सक्रिय कार्बन बनाने की तकनीक	Oct 13	Umashankar Mishra

S. No.	Story title	Date of release	Name of the writer
15.	Researchers Design White Light Emitters for LED Applications	Oct 18	Umashankar Mishra
16.	Taking science to lay public	Oct 20	Sunderarajan Padmanabhan
17.	विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल	Oct 20	Umashankar Mishra
18.	उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल	Oct 21	Umashankar Mishra
19.	New computation model to help diagnose autism	Oct 22	Sunderarajan Padmanabhan
20.	Researchers develop new machine for road cleaning with sewage water	Oct 22	Umashankar Mishra
21.	Saving endangered animals from extinction	Oct 22	Sunderarajan Padmanabhan
22.	सौर ऊर्जा संचालित हाइड्रोजन जेनरेटर के लिए नई सामग्री	Oct 25	Umashankar Mishra
23.	IIT Delhi to launch M.Tech in 'MINDS'	Oct 26	Umashankar Mishra
24.	New model to assess heavy rainfall-induced road damages	Oct 26	Umashankar Mishra
25.	New partnership to meet green energy goals	Oct 26	Umashankar Mishra
26.	बरसात से सड़कक्षति का आकलन करने - के लिए नया मॉडल	Oct 26	Umashankar Mishra
27.	A new protocol to address security and privacy issues in electric vehicles	Oct 27	Sunderarajan Padmanabhan
28.	Dr. Rajesh S. Gokhale appointed as Secretary DBT	Oct 27	Umashankar Mishra
29.	Study decodes mystery around	Oct 27	Sunderarajan Padmanabhan

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	'black tigers'		
30.	Study may help find new way to aid bone regeneration	Oct 27	Sunderarajan Padmanabhan
31.	एनबीआरआई के वैज्ञानिकों ने खोजी आठ नई वनस्पति प्रजातियां	Oct 27	Umashankar Mishra
32.	New method for detecting adulterants in milk	Oct 28	Sunderarajan Padmanabhan
33.	Study finds mental illness may have unusual evolutionary basis	Oct 28	Sunderarajan Padmanabhan
34.	शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति	Oct 28	Umashankar Mishra
35.	New Centre of Excellence in Disability & Assistive Technology	Oct 29	Umashankar Mishra

Voice of the Nation
ORGANISER

Consortium to develop next-gen space technologies

WEBDESK Oct 02, 2021, 09:23 AM IST

The consortium will focus on building an end-to-end Atmanirbhar ecosystem for space technologies from on-demand access to data and space, including rapid launch capabilities, satellite design and assembly, sensors, future generation communication.

New Delhi: Indian Institute of Technology-Madras's IITM Pravartak Technologies Foundation is all set to collaborate with five start-ups to develop technologies for ecosystem development and the commercialisation of space and deep space.

The consortium will develop next-generation applications named 'Indian Space Technologies and Applications Design Bureau' (I-STAC.DB). It will focus on building an end-to-end Atmanirbhar ecosystem for space technologies from on-demand access to data and space, including rapid launch capabilities, satellite design and assembly, sensors, future generation communication such as 6G, security of satellites, ground stations, data processing, assimilation for communication and geospatial applications.

I-STAC. DB is inviting companies in space and allied domains to join this effort. The founding members of I-STAC. DB includes Delhi-based Dron Vayu Pvt Ltd, Chennai-based Agnikul

Cosmos Pvt Ltd, GalaxEye Space Solutions Pvt Ltd, Mindgrove Technologies Pvt Ltd, and Resileo Labs LLP.

The key outcomes and impact envisaged from I-STAC. DB in the medium and long terms includes designing launch vehicles and spacecraft for additive manufacturing, developing mobile launch platforms on land, air, and sea, building capacity for trusted, reliable, and quickly repeatable satellite launch, creating precision navigation, and ground station infrastructure.

The other expected outcomes include development of hyperspectral vision, photogrammetry, and synthetic aperture radar sensors, sensor fusion; on-board processing based on edge computing and deep learning in space, earth observation remote sensing, 5G/6G/7G communication, inter-satellite communication within constellations, satellite applications such as data storage and management; space debris management; satellite cyber-physical security, anti-satellite countermeasures; and capability building and space-data sciences.

Under its National Mission on Interdisciplinary Cyber-Physical Systems, the Department of Science and Technology funded the Indian Institute of Technology-Madras to host a Technology Innovation Hub (TIH) for sensor, networking, actuators, and control systems (SNACS) area. IIT Madras established IITM Pravartak Technologies Foundation recently to host this TIH.

Prof. Satya Chakravarthy, Head, I-STAC.DB, Faculty, Department of Aerospace Engineering, IIT Madras, said, “In today’s world, collaboration is the mantra. It is not possible for any single company to do all that is required for the end customer of space applications. This consortium thus naturally gravitates all such key stakeholders.”

Dr. M. J. Shankar Raman, Chief Executive Officer, IIT Madras Pravartak Technologies Foundation, said, “IIT-M Pravartak is extremely thrilled to have dynamic and young entrepreneurs to synergise their thoughts and efforts towards India-based space ecosystem through this platform. It is the expression of their deep commitment and conviction that made this happen.”

Prof. V. Kamakoti, Faculty In-Charge, IIT Madras Pravartak Technologies Foundation, and Member, National Security Advisory Board, Government of India, said, “The time has come to pool the talent available in our country to synergise and deliver a complete end to end ecosystem for space and allied technologies. Indian Space Technocrats are established space technology Gurus, and this consortium is a Guru Kul, a premium knowledge centre for India and the world to tap.”

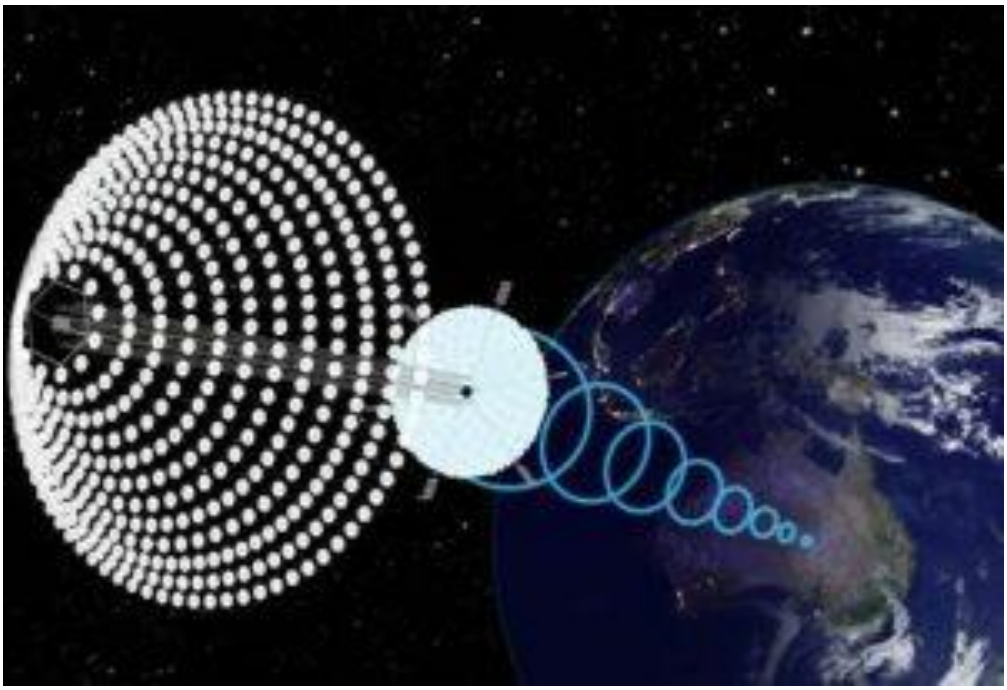
Courtesy: India Science Wire

DELHI POST
Politics | Democracy | Development

Consortium to Develop Next-Gen Space Technologies

By **ISW Desk** On **Oct 4, 2021**

Indian Institute of Technology-Madras's IITM Pravartak Technologies Foundation is all set to collaborate with five start-ups to develop technologies for ecosystem development and commercialization of space and deep space.



Named 'Indian Space Technologies and Applications Design Bureau' (I-STAC.DB), the consortium will develop next-generation applications. It will focus on building an end-to-end Atmanirbhar ecosystem for space technologies from on-demand access to data and space including rapid launch capabilities, satellite design and assembly, sensors, future generation communication such as 6G, security of satellites, ground stations, data processing, assimilation for communication and geospatial applications.

I-STAC.DB is inviting companies in space and allied domains to join this effort. The founding members of I-STAC.DB include Delhi-based DronVayu Pvt Ltd, and Chennai-

based Agnikul Cosmos Pvt Ltd, GalaxEye Space Solutions Pvt Ltd, Mindgrove Technologies Pvt Ltd, and Resileo Labs LLP.

The key outcomes and impact envisaged from I-STAC.DB in the medium and long terms include the design of launch vehicles and spacecraft for additive manufacturing; development of mobile launch platforms on land, air, and sea; building capacity for trusted, reliable, and quickly repeatable satellite launch; creation of precision navigation, and ground station infrastructure.

The other expected outcomes include development of hyperspectral vision, photogrammetry, and synthetic aperture radar sensors, sensor fusion; on-board processing based on edge computing and deep learning in space; earth observation remote sensing, 5G/6G/7G communication, inter-satellite communication within constellations; satellite applications such as data storage and management; space debris management; satellite cyber-physical security, anti-satellite countermeasures; and capability building and space-data sciences.

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TELANGANA TODAY NEWS

Telangana Today News 1

Consortium to develop next-gen space technologies

Odisha Expo

by Odisha Expo October 2, 2021 in Technology News

New Delhi: Indian Institute of Expertise-Madras's IITM Pravartak Applied sciences Basis is all set to collaborate with 5 start-ups to develop applied sciences for ecosystem growth and commercialization of house and deep house.

Named 'Indian Area Applied sciences and Functions Design Bureau' (I-STAC.DB), the consortium will develop next-generation functions. It is going to concentrate on constructing an end-to-end Atmanirbhar ecosystem for house applied sciences from on-demand entry to knowledge and house together with fast launch capabilities, satellite tv for pc design and meeting, sensors, future technology communication reminiscent of 6G, safety of satellites, floor stations, knowledge processing, assimilation for communication and geospatial functions.

I-STAC.DB is inviting corporations in house and allied domains to hitch this effort. The founding members of I-STAC.DB embody Delhi-based Dron Vayu Pvt Ltd, and Chennai-based Agnikul Cosmos Pvt Ltd, GalaxEye Area Options Pvt Ltd, Mindgrove Applied sciences Pvt Ltd, and Resileo Labs LLP.

The important thing outcomes and impression envisaged from I-STAC.DB within the medium and lengthy phrases embody the design of launch automobiles and spacecraft for additive

manufacturing; growth of cell launch platforms on land, air, and sea; constructing capability for trusted, dependable, and shortly repeatable satellite tv for pc launch; creation of precision navigation, and floor station infrastructure.

The opposite anticipated outcomes embody growth of hyperspectral imaginative and prescient, photogrammetry, and artificial aperture radar sensors, sensor fusion; on-board processing based mostly on edge computing and deep studying in house; earth remark distant sensing, 5G/6G/7G communication, inter-satellite communication inside constellations; satellite tv for pc functions reminiscent of knowledge storage and administration; house particles administration; satellite tv for pc cyber-physical safety, anti-satellite countermeasures; and functionality constructing and space-data sciences.

The Division of Science and Expertise, below its Nationwide Mission on Interdisciplinary Cyber-Bodily Programs, funded the Indian Institute of Expertise-Madras to host a Expertise Innovation Hub (TIH) for sensor, networking, actuators, and management techniques (SNACS) space. IIT Madras established IITM Pravartak Applied sciences Basis just lately to host this TIH.

Prof. Satya Chakravarthy, Head, I-STAC.DB, and College, Division of Aerospace Engineering, IIT Madras, stated, “In right now’s world, collaboration is the mantra. It’s not potential for any single firm to do all that’s required for the tip buyer of house functions. This consortium thus naturally gravitates all such key stakeholders.”

Dr. M. J. Shankar Raman, Chief Government Officer, IIT Madras Pravartak Applied sciences Basis, stated, “IIT-M Pravartak is extraordinarily thrilled to have dynamic and younger entrepreneurs to synergize their ideas and efforts in direction of India based mostly house ecosystem via this platform. It’s the expression of their deep dedication and conviction that made this occur.”

Prof. V. Kamakoti, College In-Cost, IIT Madras Pravartak Applied sciences Basis, and Member, Nationwide Safety Advisory Board, Authorities of India, stated, “The time has come to pool the expertise accessible in our nation to synergise and ship a whole finish to finish ecosystem for house and allied applied sciences. Indian Area Technocrats are established house know-how Gurus, and this consortium is a Guru Kul, a premium data centre for India and the world to faucet.”

Key phrases*:* Indian Institute of Expertise, IIT-M, Pravartak Applied sciences Basis, start-up, ecosystem, house, deep house, next-generation, software, Atmanirbhar, knowledge, satellite tv for pc, design, sensor, communication, floor station, geospatial, launch car, spacecraft, navigation, photogrammetry, radar, constellations, cyber-physical safety

Source link

Telangana Today
FOR LOCAL TO GLOBAL NEWS

Consortium to develop next-gen space technologies

BY INDIA SCIENCE WIRE PUBLISHED: 2ND OCT 2021 2:41 PM

New Delhi: Indian Institute of Technology-Madras's IITM Pravartak Technologies Foundation is all set to collaborate with five start-ups to develop technologies for ecosystem development and commercialization of space and deep space.

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The key outcomes and impact envisaged from I-STAC.DB in the medium and long terms include the design of launch vehicles and spacecraft for additive manufacturing; development of mobile launch platforms on land, air, and sea; building capacity for trusted, reliable, and quickly repeatable satellite launch; creation of precision navigation, and ground station infrastructure.

The other expected outcomes include development of hyperspectral vision, photogrammetry, and synthetic aperture radar sensors, sensor fusion; on-board processing based on edge computing and deep learning in space; earth observation remote sensing, 5G/6G/7G communication, inter-satellite communication within constellations; satellite applications such as data storage and management; space debris management; satellite cyber-physical security, anti-satellite countermeasures; and capability building and space-data sciences.

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Keywords*:* Indian Institute of Technology, IIT-M, Pravartak Technologies Foundation, start-up, ecosystem, space, deep space, next-generation, application, Atmanirbhar, data, satellite, design, sensor, communication, ground station, geospatial, launch vehicle, spacecraft, navigation, photogrammetry, radar, constellations, cyber-physical security

MyNews 24x7
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Consortium to develop next-gen space technologies

Written by corres2

TELANGANA TODAY
NEWS

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Source link

Consortium to develop next-gen space technologies

by **India Science Wire** October 1, 2021 in **Indian Sciences**

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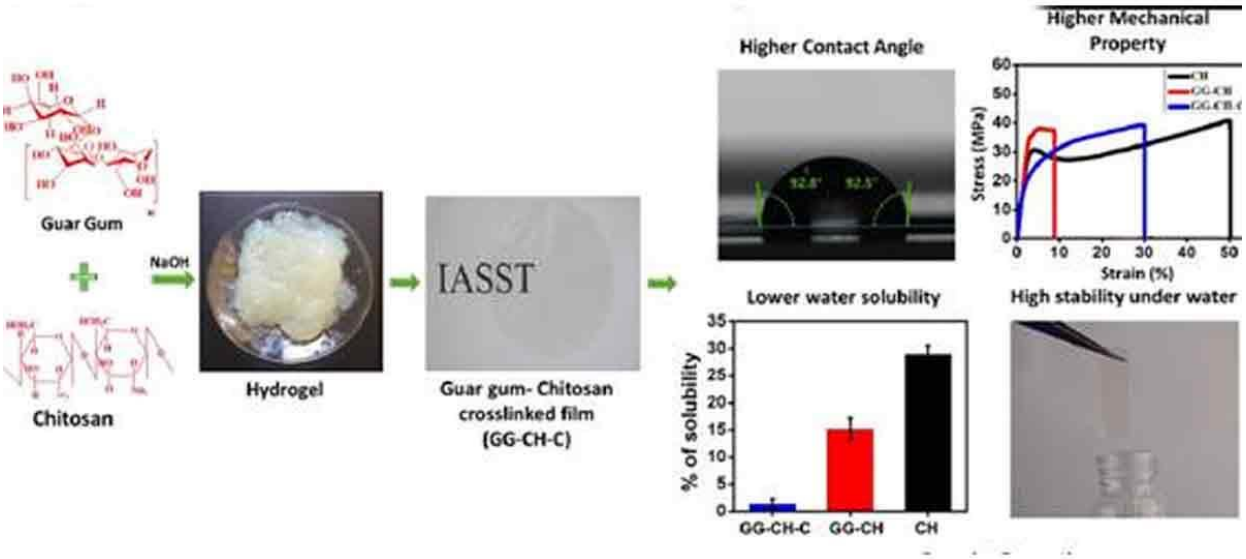
Telangana Today
FOR LOCAL TO GLOBAL NEWS

New polymer material for the packaging industry

BY INDIA SCIENCE WIRE PUBLISHED: 5TH OCT 2021 8:12 PM



New Delhi: A team of Indian scientists has developed an environment-friendly, non-toxic, biodegradable polymer that could be used as a packaging material for products that may be exposed to harsh environmental conditions.

The polymer has been produced using guar gum and chitosan, a polysaccharide that is obtained from the hard outer skeleton of shellfish, including crab, lobster, and shrimp. It has been found to have high water stability and mechanical strength, and excellent resistance to harsh environmental conditions.

Polysaccharides are biopolymers with high potential for use in the synthesis of packaging material. However, they are not preferred as they have several drawbacks such as low mechanical properties, high water-solubility, and low barrier properties.

In the new study, Devasish Chowdhury, Associate Professor, and Sazzadur Rahman, an Inspire Junior Research Fellow, of the Department of Science and Technology's Institute of Advanced Study in Science and Technology, Paschim Boragaon, Garchuk, Guwahati, have overcome these challenges by fabricating a cross-linked polysaccharide with the help of a technique called the solution casting method.

The researchers found that the product did not dissolve in water even after 10 days. In addition, the mechanical strength of crosslinked guar gum-chitosan composite film was high, was water repellent or hydrophobic and had low water vapor permeability.

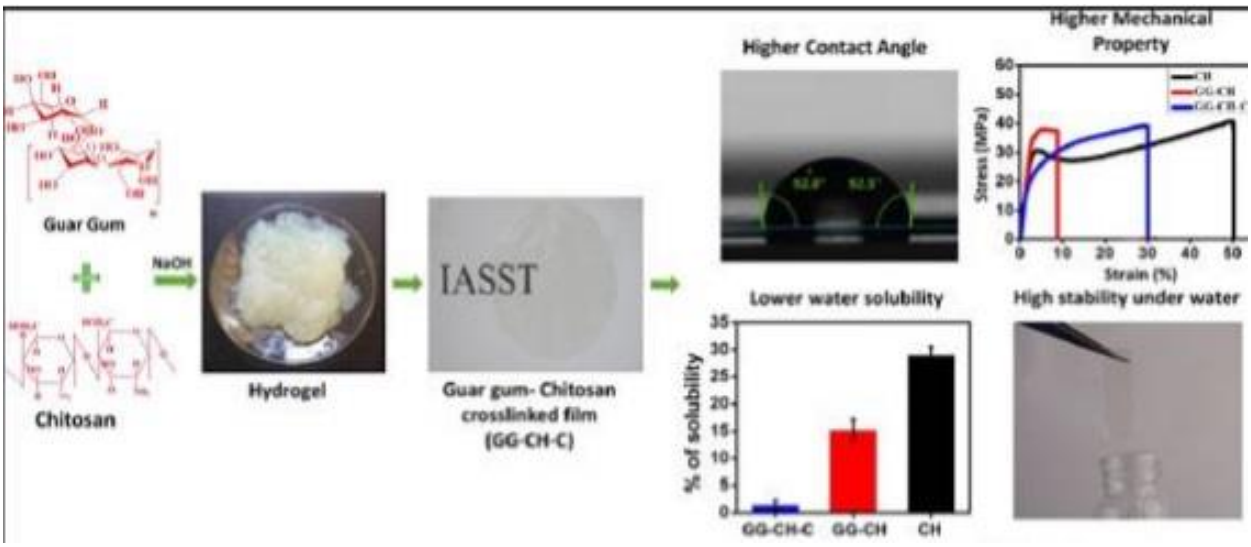
The scientists noted that superior mechanical strength, water repellent properties, and resistance to harsh environmental conditions of the fabricated cross-linked guar gum-chitosan increase its potential of being used in packaging applications. They have published a report in the science journal `Carbohydrate Polymer Technologies and Applications'. The study team included Achyut Konwar and Gitanjali Majumdar.

Keywords: environment, non-toxic, biodegradable, guar gum, chitosan, polysaccharide, shellfish, crab, lobster, shrimp, biopolymers, Institute of Advanced Study in Science and Technology, Guwahati, hydrophobic, permeability, mechanical strength,

Voice of the Nation
ORGANISER

New polymer material for the packaging industry

WEBDESK Oct 06, 2021, 01:00 PM IST



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The polymer has been produced using guar gum and chitosan, a polysaccharide that is obtained from the hard outer skeleton of shellfish, including crab, lobster, and shrimp. It has been found to have high water stability, mechanical strength, and excellent resistance to harsh environmental conditions.

Polysaccharides are biopolymers with high potential for use in the synthesis of packaging material. However, they are not preferred, as they have several drawbacks, such as low mechanical properties, high water-solubility, and low barrier properties.

In the new study, Devasish Chowdhury, Associate Professor, and Sazzadur Rahman, an Inspire Junior Research Fellow of the Department of Science and Technology's Institute of Advanced Study in Science and Technology, Paschim Boragaon, Garchuk, Guwahati have overcome these

challenges by fabricating a crosslinked polysaccharide with the help of a technique called the solution casting method.

The researchers found that the product did not dissolve in water even after ten days. In addition, the mechanical strength of crosslinked guar gum-chitosan composite film was high, was water repellent or hydrophobic and had low water vapour permeability.

The scientists noted that superior mechanical strength, water repellent properties, and resistance to harsh environmental conditions of the fabricated crosslinked guar gum-chitosan increase its potential of being used in packaging applications. They have published a report in the science journal `Carbohydrate Polymer Technologies and Applications'. The study team included Achyut Konwar and Gitanjali Majumdar.

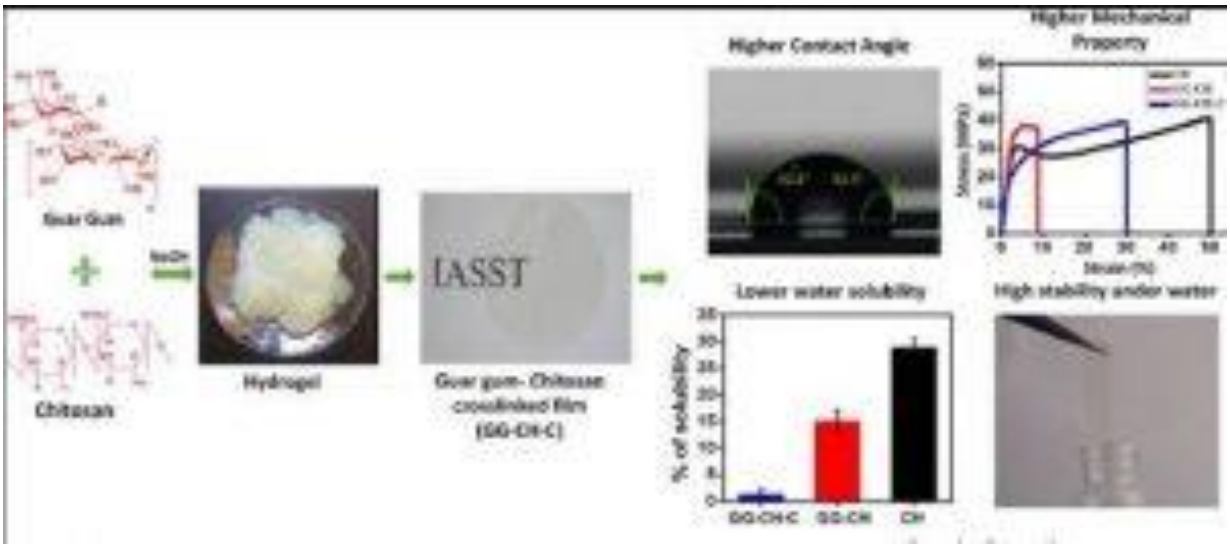
Courtesy: India Science Wire

DELHI POST
Politics | Democracy | Development

New Polymer Material for the Packaging Industry

By **ISW Desk** On **Oct 5, 2021**

A team of Indian scientists has developed an environment-friendly, non-toxic, biodegradable polymer that could be used as a packaging material for products that may be exposed to harsh environmental conditions.



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Kashmir Convener
Voice of Courage

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New polymer material for the packaging industry

Editor | Oct 6, 2021 - 10:57

Inorder to protect items from extreme environmental conditions, an Indian research team has developed a biodegradable, non-toxic polymer. This polymer might be utilised as a packaging material.

Chitosan, a polysaccharide derived from shellfish such as crab, lobster, and shrimp, was used to make the polymer from guar gum. High water stability and mechanical strength, as well as good resistance to extreme environmental conditions, have been discovered in this substance.

For packaging, polysaccharides are excellent biopolymers to utilise. They are, however, not the favoured choice due to a number of disadvantages, including poor mechanical qualities, excessive water solubility, and poor barrier properties.

This new study by Associate Professor Devasish Chowdhury and Junior Research Fellow Sazzadur Rahman of the Institute for Advanced Study in Technology, Paschim Boragaon, Garchuk in Guwahati has overcome these challenges by fabricating a cross-linked polysaccharide using a technique known as the solution casting method. They were funded by the Department of Science and Technology.

A 10-day test revealed that the substance remained insoluble in water. Guar gum-chitosan crosslinked composite film had good mechanical strength and was water repellent or hydrophobic with low vapour permeability.

The cross-linked guar gum-chitosan material's exceptional mechanical strength, water repellency, and tolerance to extreme environmental conditions improve its packaging application potential, according to the researchers. Carbohydrate Polymer Technologies and Applications, a scientific publication, has published their findings. Achyut Konwar and Gitanjali Majumdar were on the research team.

Telangana Today
FOR LOCAL TO GLOBAL NEWS

New technology promises to eliminate airborne COVID virus

BY INDIA SCIENCE WIRE PUBLISHED: 5TH OCT 2021 8:19 PM

New Delhi: Biomoneta, a Bengaluru-based startup funded by Government of India and Karnataka Government has developed an air decontamination technology which promised to eliminate airborne COVID-19 virus with 99.9999% efficiency in any closed setting. The company has conducted validation studies at the Indian Institute of Science, Bengaluru, with support from The Department of Biotechnology's Biotechnology Industry Research Assistance Council (DBT-BIRAC).

The technology, developed under the Centre for Cellular and Molecular Platforms (C-CAMP)'s COVID-19 Innovations Deployment Accelerator programme (C-CIDA), is pathogen agnostic. In previous studies conducted by ICMR/NABL-accredited labs, it had destroyed other airborne microbes with 99.999% efficiency as well.

Among other things, it has proven to be effective against pathogens notorious for causing secondary infections in hospitals, including bacteria such as *Mycobacterium tuberculosis*, fungi such as *Candida*, and viruses such as H1N1 which cause influenza.

Its activity against *Mycobacterium tuberculosis,* the pathogen causing TB, is particularly important as TB remains a neglected disease with no preventive vaccine. The causative pathogen is airborne, highly transmissible and can spread through variants that cannot be treated easily with currently available antibiotics.

Janani Venkatraman, co-founder and CEO of Biomoneta, noted that post-COVID, there is a realization that air treatment needs microbe-specific standards. “The methods used to disinfect air even in state-of-the-art medical environments focus on particulate matter removal as a surrogate for microbial decontamination. Our medical and surgical procedures have evolved significantly. We aspire to bring air sterilization to the same level.”

Arindam Ghatak, CTO and co-founder, said, “Lab data is important but real impact is measured by how the technology translates for the end user. We have worked with hospitals, clinics, IVF labs, offices and cafeterias to demonstrate this.”

Dr Taslimarif Saiyed, CEO & Director of C-CAMP, said that Biomoneta, as a C-CAMP incubated startup, is testimony to what deep-science led innovations can do to solve a crucial problem for COVID and looking beyond, for non-COVID airborne infections.

Keywords: startup, Karnataka, decontamination, technology, airborne, validation, Indian Institute of Science, Department of Biotechnology, Biotechnology Industry Research Assistance Council, DBT-BIRAC, Centre for Cellular and Molecular Platforms, C-CAMP, pathogen, microbes, bacteria, fungi, TB, antibiotic, hospital, clinic

Voice of the Nation
ORGANISER

New technology promises to eliminate the airborne COVID virus

WEBDESK Oct 06, 2021, 12:04 PM IST

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Courtesy: India Science Wire

DELHI POST
Politics | Democracy | Development

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By **ISW Desk** On **Oct 6, 2021**

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New technology promises to eliminate airborne COVID virus

Editor | Oct 6, 2021 - 11:03

Air decontamination technology developed by Biomoneta, a Bengaluru-based start-up backed by the Indian and Karnataka governments, promises to remove airborne COVID-19 virus with a 99.9999% efficiency in any confined setting. The Department of Biotechnology's Biotechnology Industry Research Assistance Council helped the company undertake validation studies at the Indian Institute of Science in Bengaluru (DBT-BIRAC).

C-COVID-19 CIDA's Innovations Deployment Accelerator programme (C-CIDA) developed the technology, which is pathogen indifferent. In prior ICMR/NABL-

accredited lab trials, it has also eliminated airborne microorganisms with 99.999 percent effectiveness.

It's also shown efficient against pathogens including Mycobacterium TB, Candida, and influenza viruses like H1N1, which are infamous for causing secondary infections in hospitals.

Due to the fact that TB is still a neglected disease without a preventive vaccination, its efficacy against the TB pathogen, Mycobacterium tuberculosis, is particularly essential. Because it is airborne, the virus that causes the disease is extremely contagious and can spread through strains that are resistant to currently available antibiotics.

Following COVID, Biomoneta's co-founder and CEO, Janani Venkatraman, highlighted that air purification requires microbe-specific requirements. "Even in cutting-edge medical facilities, approaches for disinfecting the air depend on particulate matter removal as a substitute for microbiological decontamination. Our medical and surgical methods have progressed tremendously throughout the years. We want air sterilisation to be on the same level as hand sterilisation."

CTO and co-founder Arindam Ghatak stated, "Lab data is important, but the real impact is determined by how the technology transfers to the end user. This has been demonstrated in collaboration with hospitals, clinics, IVF labs, offices and cafeterias."

For C-CAMP incubated startup Biomoneta CEO and Director Dr Taslimarif Saiyed, the company is proof of what deep-science-led innovations can achieve to solve a critical challenge for COVID and, going beyond COVID, for non-COVID airborne diseases.

India Science Wire

Latest S&T News from India

ICMR releases Multilingual Dementia Research and Assessment Toolbox

By India Science Wire

New Delhi, Wednesday, October 06, 2021

Dr. Balram Bhargava, DG, ICMR

Despite the high number of people with dementia in the country, only one in ten people with dementia are diagnosed in India due to low awareness and the lack of linguistically and culturally appropriate tests that are essential for diagnosis. Early diagnosis is key to optimal management of the disease and adequate care for people with dementia.

Now, Director General, Indian Council of Medical Research (ICMR), Dr. Balram Bhargava released MUDRA Toolbox, a pioneering initiative undertaken by ICMR-Neuro Cognitive Tool Box (ICMR-NCTB) consortium to transform India's dementia and mild cognitive impairment research and clinical practices.

MUDRA Toolbox is a unique tool consisting of various tests and questionnaires and is sensitive to the factors that affect performance on cognitive tests including education, language and culture.

This Toolbox is a collective effort by seven leading centres in India-NIMHANS (Bangalore), AIIMS (New-Delhi), SCTIMST (Trivandrum), NIMS (Hyderabad), Apollo Hospital (Kolkata), Manipal Hospital (Bangalore), and Jawaharlal Nehru Medical College.

According to the Dementia India Report 2010 by Alzheimer's and Related Disorders Society of India (ARDSI), there are approximately 5.29 million people living with dementia in India and this number is expected to increase to 7.61 million by 2030. Dementia refers to a neurological disorder that causes a decline in a person's cognition and affects their ability to carry on with day-to-day activities.

Dr. R S Dhaliwal, Head-NCD informed that to address the gap in diagnosis, ICMR commissioned a multidisciplinary project with team of researchers from various fields including neurologists, psychologists, and speech-language pathologists to develop a culturally, educationally and linguistically relevant neurocognitive toolbox.

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Dr. Balram Bhargava, DG, ICMR said "The validated Multilingual Dementia Research and Assessment (MUDRA) Toolbox available now in various Indian languages Hindi, Bengali, Telugu, Kannada and Malayalam. This was one of the crucial needs for undertaking uniform, standardized dementia research in the country. The tool box includes various cognitive tests to assess different domains of cognition such as attention and executive function, memory, language, and visuospatial functions. The questionnaires assess depression, functionality, quality of life,

prevalence of neuropsychiatric symptoms and informant questionnaire on cognitive decline in elderly."

"ICMR has decided to make this tool freely accessible to professionals and researchers across the country. We hope this would be used in quality longitudinal studies and for early and accurate diagnosis of dementia. It includes a short 5 minutes cognitive screening instrument for the busy clinic, and a detailed version for more in-depth clinical testing or for research", Dr. Bhargava added.

Prof. Jeyaraj D Pandian, Principal, Christian Medical College Ludhiana who in the Chair of this Task Force stated that MUDRA Toolbox is a comprehensive tool specifically to diagnose dementia in the Indian population. The investigators had worked very hard over the last 6 years to develop and validate the tool in Indian population.

Dr. Meenakshi Sharma, a senior scientist at ICMR, said "Most of the existing batteries are largely designed for educated English-speaking population, the MUDRA Toolbox, on the other hand, was developed to address cultural and linguistic diversity. The toolbox is designed to provide detailed neuropsychological profile of a patient and is a standardized measure of diagnosis for mild cognitive impairment (MCI) and dementia."

Dr. Suvarna Alladi, Prof. Neurology, NIMHANS and Clinical Coordinator for development of MUDRA Toolbox said "The toolbox has been validated for diagnosis of dementia and MCI. The clinicians and researchers will be encouraged to use the tool and submit data online which will help for improving the performance of tool and coming up with its higher version."

Research paper describing the study design 'Standardizing Dementia Diagnosis Across Linguistic and Educational Diversity: Study Design of the Indian Council of Medical Research-Neurocognitive Tool Box (ICMR-NCTB)' has been published in February 2020 in Journal of International Neuropsychological Society, Dr. Alladi said.

India Science Wire
ISW/USM/ICMR/ENG/06/10/2021

DownToEarth | डाउन टू अर्थ

Indian scientists hit novel formulation for cost-effective and thermo-stable Insulin

Fibrilliation lead to loss of effective quantum of insulin

By India Science Wire

Published: Wednesday 06 October 2021

A small peptide molecule comprising four amino acids, called ‘Insulock’, prevents fibrillation (solidification) of insuling induced by heat and improper storage, a group of scientists from several prominent Indian institutions demonstrated.

Fibrilliation lead to loss of effective quantum of insulin. There have been efforts across the world to invent new formulation for thermo-stable, nontoxic and bioactive insulin.

Insulock is non-toxic, non-immunogenic and heat-stable. It can maintain insulin in active form at room temperature without any loss for months, claimed the researchers from Bose Institute, Council of Scientific and Industrial Research-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata in collaboration with CSIR-Indian Institute of Chemical Technology, Hyderabad.

Insulock has been tested in mice models. This research work has been published in *iScience* journal of Cell press.

The work involves two major contributions: Identification of an appropriate small peptide to inhibit the insulin from fibrillation, which has been accomplished by Subhrangsu Chatterjee of Bose Institute and Partha Chakrabarti (principal investigators). Second, the determination of the three-dimensional structure of the Insulock-insulin complex and its thermal stability by using high-resolution Nuclear Magnetic Resonance (NMR) spectroscopy. It was done by B Jagadeesh, chief scientist, and Jithender Reddy, scientist from NMR Centre of CSIR-IICT.

Insulin needs to be kept in a refrigerator, which, otherwise after some hours becomes unfit for use due to fibrillation. Prolonged storage in normal refrigerator is not good either. Therefore, its thermal instability and fibrillation at non-refrigerated temperatures demands storage and maintenance of cold chain, making it expensive.

For diabetes patients who are staying at remote locations with no refrigerator facility or those who are travelling for long hours, the problem is more acute.

THE FEDERAL

CSIR develops novel formulation for cost-effective, thermo-stable Insulin

The researchers have found that the Insulock is non-toxic, non-immunogenic and heat-stable and can maintain insulin in the active form at room temperature

India Science Wire
12:38 PM, 7 October, 2021

The researchers hope that upon successful completion of trials in humans, the novel Insulock formulation can give a rich scope for producing cost-effective insulin injection

Availability of injectable insulin formulation has been a major breakthrough in diabetes management. However, insulin needs to be kept in a refrigerator, which, otherwise after some hours becomes unfit for use due to fibrillation (some kind of 'solidification'). Its prolonged storage even in normal refrigerator is also not good.

Therefore, its thermal instability and fibrillation at non-refrigerated temperatures demands storage and maintenance of cold chain, making it expensive. Further, for diabetes patients who are staying at remote locations with no refrigerator facility, or those who are travelling for long hours, the problem is more acute.

Worldwide efforts are being made to invent new formulation for thermo-stable, nontoxic and bioactive insulin. Researchers from Bose Institute, CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata, in collaboration with CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, have shown that a small peptide molecule consists of four amino acids, named as Insulock prevents both heat and storage induced insulin fibrillation and thereby loss of effective quantum of insulin.

The researchers have found that the Insulock is non-toxic, non-immunogenic and heat-stable and can maintain insulin in the active form at room temperature, without any loss for months. The Insulock has been tested in mice models. This research work has been published in *iScience*, an international reputed journal of Cell press.

The work involves two major contributions: identification of an appropriate small peptide to inhibit the insulin from fibrillation, which has been accomplished by Dr. Subhrangsu Chatterjee, Associate Professor of Bose Institute and Dr. Partha Chakrabarti (Principal Investigators); and determination of the three-dimensional (3D) structure of the Insulock-insulin complex, and its thermal stability by using high-resolution Nuclear Magnetic Resonance (NMR) Spectroscopy, which has been accomplished by Dr. B. Jagadeesh, Chief Scientist, and Dr. Jithender Reddy, Scientist from NMR Centre of CSIR-IICT.

Dr. Jagadeesh of CSIR-IICT said that "gaining the structural insights about the Insulock" and establishing its 3D-structural similarity, with respect to the native insulin injection are crucial steps, which have been carried out at the NMR center of CSIR-IICT. This NMR-center has world class facilities with USFDA-audited and National accreditations, that are best suited for regulatory studies of drug molecules.

The Kolkata-Hyderabad scientists team hopes that, upon successful completion of trials in humans, the novel Insulock formulation can give a rich scope for producing cost-effective insulin injection, and will be extremely useful in delivering it to the patients even in resource-limited areas.

Further, the team is planning to take up the developmental activity pertaining to trials in humans by collaborating with Indian pharmaceutical industries. This discovery is expected to attract pharma giants with vested interest in thermo-stale Insulin production.

Voice of the Nation
ORGANISER

A novel formulation for cost-effective and Thermo-stable Insulin

WEBDESK Oct 07, 2021, 12:50 PM IST

Researchers have shown that a small peptide molecule consists of four amino acids, named as "Insulock" prevents both heat and storage induced insulin fibrillation and thereby loss of an effective quantum of insulin.

New Delhi: Availability of injectable insulin formulation has been a major breakthrough in diabetes management. However, insulin needs to be kept in a refrigerator, which, otherwise, after some hours, becomes unfit for use due to fibrillation (some kind of 'solidification'). Its prolonged storage, even in the normal refrigerator, is also not good. Therefore, its thermal instability and

fibrillation at non-refrigerated temperatures demand cold chain storage and maintenance, making it expensive. Further, the problem is more acute for diabetes patients who are staying at remote locations with no refrigerator facility or those who are travelling for long hours.

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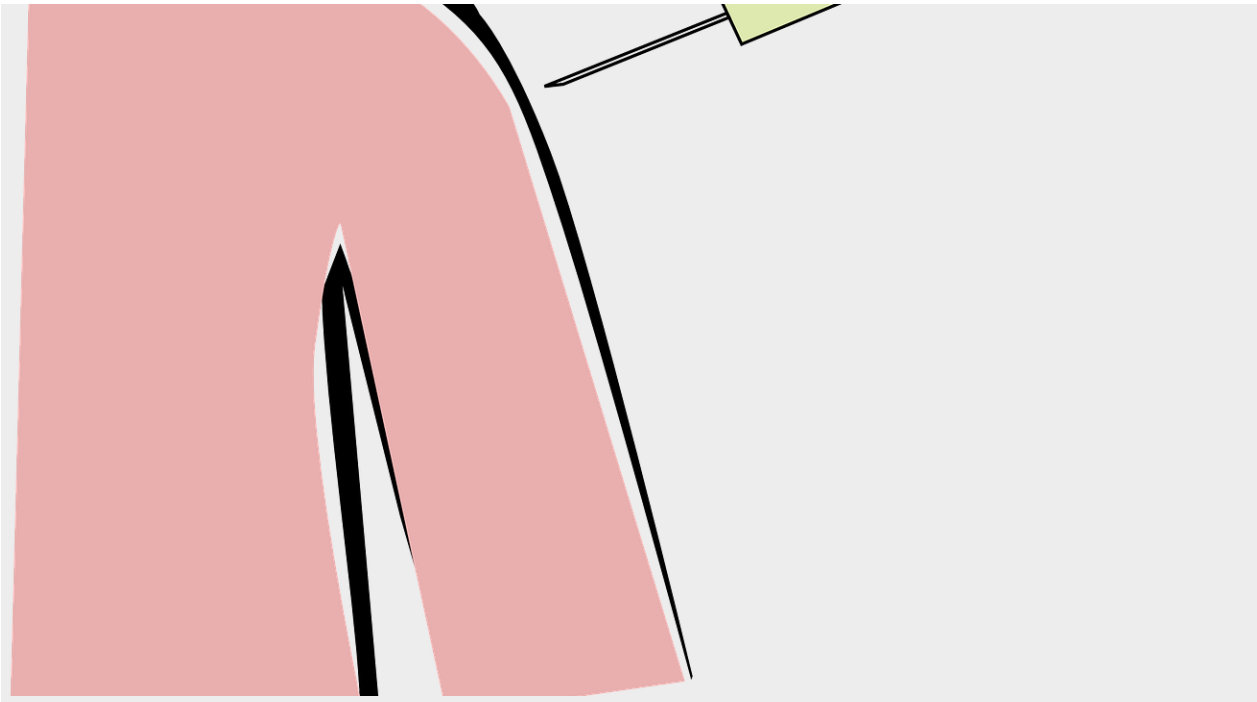
Courtesy: India Science Wire

Research Stash



Novel Formulation for Cost-Effective and Thermo-Stable Insulin

Research Stash News Oct 6, 2021

Researchers develop insulin that can be stored at room temperature

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Globally efforts are being made to invent new formulations for thermo-stable, nontoxic, and bioactive insulin. Researchers from Bose Institute, CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata in collaboration with CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad have shown that a small peptide molecule consists of four amino acids, named "Insulock" prevents both heat and storage induced insulin fibrillation and thereby loss of effective quantum of insulin.
The researchers found that the "Insulock" is non-toxic, non-immunogenic, and heat-stable and can maintain insulin in the active form at room temperature without any loss for months. The "Insulock" has been tested in mice models. This research work has been published in *iScience*, an international reputed journal of Cell Press.

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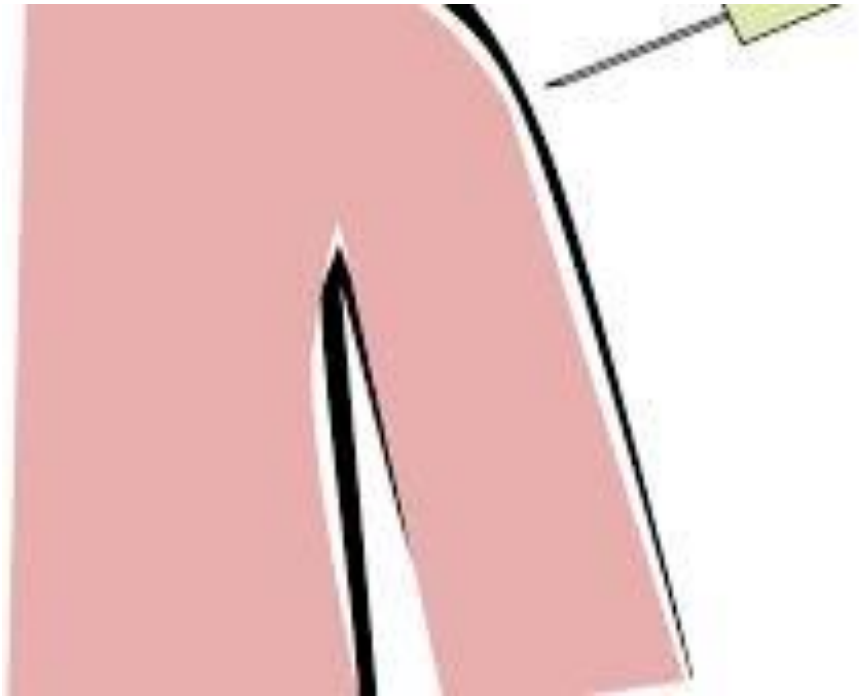
The Kolkota-Hyderabad scientist's team hopes that, upon successful completion of trials in humans, the novel Insulock formulation can give a rich scope for producing cost-effective insulin injection and will be extremely useful in delivering it to the patients even in resource-limited areas. Further, the team is planning to take up the developmental activity pertaining to trials in humans by collaborating with the Indian pharmaceutical industries. This discovery is expected to attract pharma giants with a vested interest in thermo-stale Insulin production. (ISW)

Novel formulation for cost-effective and thermo-stable Insulin

by India Science Wire October 6, 2021 in Indian Sciences



Availability of injectable insulin formulation has been a major breakthrough in diabetes management. However, insulin needs to be kept in a refrigerator, which, otherwise after some hours becomes unfit for use due to fibrillation (some kind of 'solidification'). Its prolonged storage even in normal refrigerator is also not good. Therefore, its thermal instability and fibrillation at non-refrigerated temperatures demands storage and maintenance of cold chain, making it expensive. Further, for diabetes patients who are staying at remote locations with no refrigerator facility or those who are travelling for long hours, the problem is more acute.

Worldwide efforts are being made to invent new formulation for thermo-stable, nontoxic and bioactive insulin. Researchers from Bose Institute, CSIR-Indian Institute of Chemical Biology (CSIR-IICB), Kolkata in collaboration with CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad have shown that a small peptide molecule consists of four amino acids, named as "Insulock" prevents both heat and storage induced insulin fibrillation and thereby loss of effective quantum of insulin. They found that the "Insulock" is non-toxic, non-immunogenic and heat-stable and can

maintain insulin in the active form at room temperature without any loss for months. The “Insulock” has been tested in mice models. This research work has been published in iScience, an international reputed journal of Cell press.

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देश के सभी जिलों में पीएसए ऑक्सीजन संयंत्र

06/10/2021 V3news India

नई दिल्ली, 06 सितंबर इंडिया साइंस)वायर-कोविड :(19 की दूसरी लहर के दौरान ऑक्सीजन सिलेंडर की आवश्यकता का अनुभव सबसे अधिक किया गया। भविष्य में ऐसी चुनौतियों से निपटने और विशेष रूप से कोविड-19 जैसी महामारी के दौरान ऑक्सीजन की माँग को पूरा करने के लिए, देश भर में प्रेशर स्विंग ऐड्सॉर्प्शन)PSA) ऑक्सीजन संयंत्र स्थापित करने पर जोर दिया जा रहा है।

उल्लेखनीय है कि प्रेशर स्विंग ऐड्सॉर्प्शन)PSA) ऑक्सीजन संयंत्र मेडिकलग्रेड ऑक्सीजन का एक प्रमुख स्रोत माने जाते हैं। - प्रधानमंत्री नरेंद्र मोदी; बृहस्पतिवार, 07 अक्टूबर, 2021 को अखिल भारतीय आयुर्विज्ञान संस्थान (एम्स), ऋषिकेश, उत्तराखंड में आयोजित होने वाले एक कार्यक्रम में 35 राज्यों और केंद्र शासित प्रदेशों में पीएम केयर्स के तहत स्थापित किए गए 35 पीएसए ऑक्सीजन प्लांट राष्ट्र को समर्पित करेंगे।

इसके साथ ही, अब देश के सभी जिलों में पीएसए ऑक्सीजन संयंत्र शुरू हो जाएंगे। प्रधानमंत्री कार्यालय द्वारा (पीएमओ) बुधवार को जारी वक्तव्य में यह जानकारी दी गई है। पृथ्वी के वायुमंडल में लगभग78 प्रतिशत नाइट्रोजन, 21 प्रतिशत ऑक्सीजन, 0.9 प्रतिशत आर्गन और 0.1 प्रतिशत
अन्य गैसें हैं। इन गैसों से ऑक्सीजन को अलग करने के लिए पीएसए ऑक्सीजन प्लांट अस्तित्व में आया।

कुछ विशिष्ट विधियाँ हैं, जिनके द्वारा ऑक्सीजन और नाइट्रोजन का उत्पादन किया जाता है। इन विधियों में पीएसए और वीपीएसए शामिल हैं। पीएमओ (वैक्यूम प्रेशर स्विंग ऐड्सॉर्प्शन) के वक्तव्य में कहा गया है कि अब तक, पूरे देश में कुल 1224

पीएसए ऑक्सीजन संयंत्रों को पीएम केयर्स के तहत वित्तपोषित किया गया है-, जिनमें से 1100 से अधिक संयंत्रों को चालू किया गया है,

जिससे प्रति दिन 1750 मीट्रिक टन से अधिक ऑक्सीजन का उत्पादन होता है। कोविड-19 महामारी के आगमन के बाद भारत की मेडिकलग्रेड ऑक्सीजन की उत्पादन क्षमता बढ़ाने की दिशा में इसे सरकार की एक प्रभावी पहल बताया जा रहा है। - पहाड़ी क्षेत्रों, द्वीपों और विषम परिस्थितियों वाले भूभागों की जटिल चुनौतियों का सामना करते हुए देश के प्रत्येक जिले में पीएसए ऑक्सीजन संयंत्र चालू करने की परियोजना को अंजाम दिया जा रहा है।

इन संयंत्रों का संचालन और रखरखाव 7,000 से अधिक कर्मियों को प्रशिक्षण देकर सुनिश्चित किया गया है। वे एक समेकित वेब पोर्टल के माध्यम से अपने कामकाज और प्रदर्शन की वास्तविक समय में निगरानी के लिए एक एम्बेडेड इंटरनेट ऑफ थिंग्स)IoT) डिवाइस से जुड़े होंगे

Facility Established to Help MedTech Startups

Article By : India Science Wire

Category : Market News | 2021-10-08

India has set up a national facility to specifically address the commercialization gaps faced by the developers of microfluidics technologies and medical devices.

The Department of Biotechnology's Centre for Cellular and Molecular Platforms (C-CAMP) has set up a national facility to specifically address the commercialization gaps faced by the developers of microfluidics technologies and medical devices with the help of Biotechnology Industry Research Assistance Council (BIRAC)'s National Biopharma Mission (NBM).

Dr. Renu Swarup, Secretary, Department of Biotechnology and Department of Science and Technology, inaugurated the facility named 'µFab' through an online event. It is a first-of-its-kind

facility in the country aimed at providing holistic design to pilot-scale production capabilities to entrepreneurs and innovators to enable faster product-to-market.

The facility is envisaged to provide design and prototyping support to medtech startups in developing low-cost, rapid, and point-of-care medical device solutions with applicability in healthcare, both human and animal health. It is also geared to support serological diagnostic devices, which could be a huge boost for India's budding COVID-19 molecular diagnostics sector.

Dr. Renu Swarup inaugurating the facility.

Speaking on the occasion, Dr. Swarup said, "We used to depend once on global infrastructure and global facilities. Today, we can boast of state-of-the-art facilities here in India which are at par with the global ecosystem. µFab at C-CAMP is a shining example. To help the ecosystem grow from research to translation to product to commercialization, µFab will be a key factor in scaling up capabilities. We are keen on not only meeting the nation's demands but also to cater to global markets."

Dr. Subhra R. Chakrabarti, Mission Director, NBM said, "National Biopharma Mission aims to boost biopharma infrastructure in India to enhance healthcare accessibility and affordability. µFab will anchor crucial innovation developments in this area."

The facility provides CAD design, flow simulation, prototyping, vacuum casting, injection molding, lateral flow assay printing, and packaging in CLASS10000 cleanroom facilities. It is currently in the process of acquiring ISO 13485:2016 and ICMED 13485 certifications.

Dr. Taslimarif Saiyed, C-CAMP CEO and Director, said "With µFab we are expanding our infrastructure capabilities to further strengthen our push as the catalyst for world-class innovations in India."

C-CAMP sets up facility to help MedTech startups

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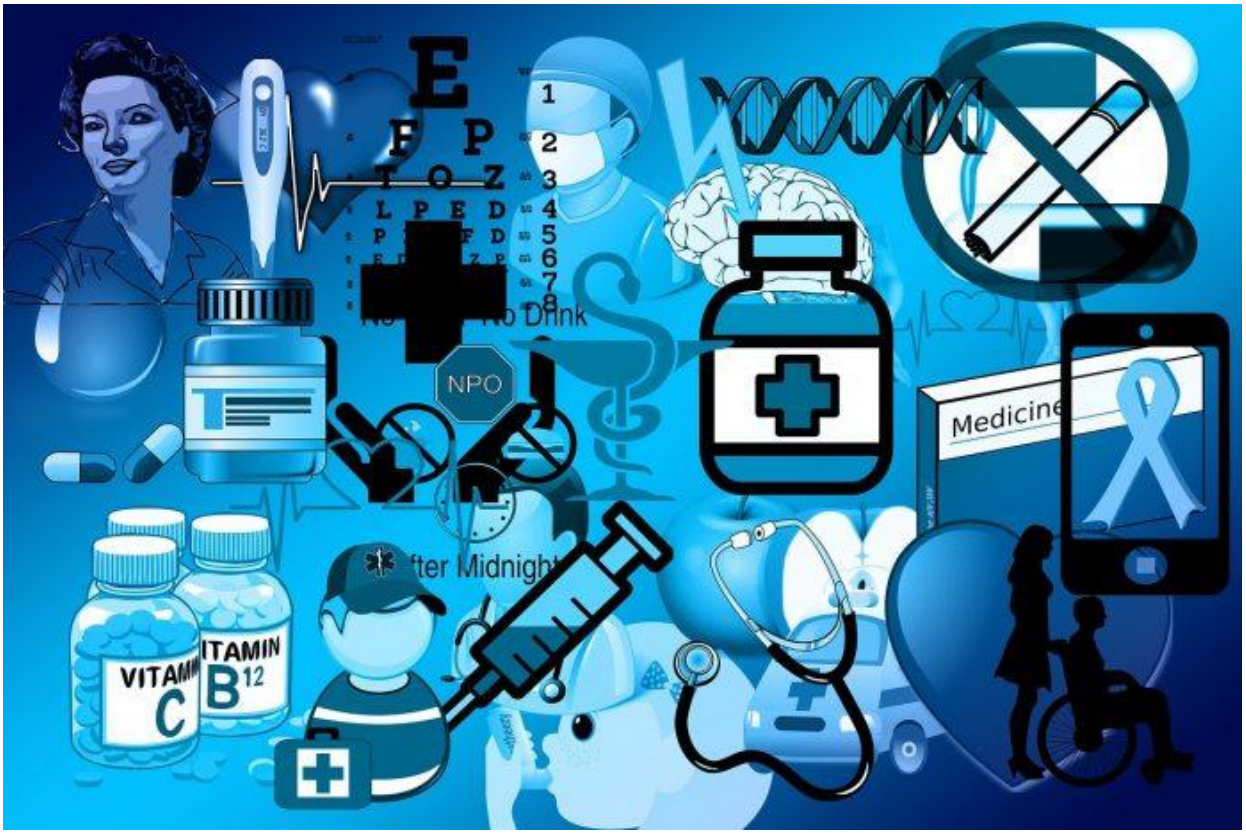
By **BioVoice News Desk** - October 8, 2021



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DownToEarth | डाउन टू अर्थ

Study finds high level of pharma contaminants in Cauvery

Water quality and levels of pharmaceutical contaminants in the Cauvery influenced by the monsoon season, according to a study

By DTE Staff

Published: Thursday 07 October 2021

A new study has found that the waters of the Cauvery river in south India are polluted by a range of emerging contaminants that include pharmaceutically active compounds, personal care products, plastics, flame retardants, heavy metals and pesticides, among many others.

Of these, pharmaceutical contamination was found to be particularly serious as their presence in water bodies even in minuscule amounts can harm human beings and the ecosystem in the long run.

In the study, a team of researchers from the Indian Institute of Technology-Madras (IIT-M) led by Dr. Ligy Philip quantified the seasonal distribution of emerging contaminants and pollutants in the river.

It was carried out with joint funding from Water Technology Initiatives of the Department of Science and Technology, Government of India, and the UK Natural Environment Research Council.

The team monitored the water quality of the river for two years to assess the seasonal variation of emerging contaminants, especially pharmaceutically active compounds. They collected water from 22 locations along the entire stretch of the river.

They also set up 11 sampling stations near discharge points of partially treated or untreated wastewater and 11 locations near intake points of water supply systems. The quality of water in the catchment sites was also monitored.

The researchers found that water quality and levels of pharmaceutical contaminants in the Cauvery were influenced by the monsoon season. The post-monsoon period showed an increased level of various types of contaminants including pharmaceuticals due to reduced riverine flow and continuous waste discharge from multiple sources.

Among other things, freshwater intake points were found to be loaded with extraordinarily high concentrations of pharmaceutical contaminants. The contaminants included anti-inflammatories like ibuprofen and diclofenac, anti-hypertensives such as atenolol and isoprenaline, enzyme inhibitors like perindopril, stimulants like caffeine, antidepressants such as carbamazepine and antibiotics such as ciprofloxacin.

“Our observations are alarming. So far, not much is known about how pharmaceutical contaminants affect human health and the ecosystem over time. The team’s environmental risk assessment has shown that pharmaceutical contaminants pose medium to high risk to the selected aquatic lifeforms of the riverine system,” said Prof. Ligy Philip.

The researchers have published a report of their work in the journal *Science of the Total Environment*. The study team included Jayakumar Renganathan, Insamam Ul Huq S, Kamaraj Ramakrishnan, and Manthiram Karthik Ravichandran.

River networks contribute to 0.006 per cent of global freshwater and often serve as a lifeline for various domestic and industrial activities. Worldwide, the water quality of the river systems has been deteriorating due to various anthropogenic activities. Cauvery is one river system in South India that has been subjected to constant human threat.

Study Finds High Level of Pharma Contaminants in Cauvery

By **Team DP** On **Oct 8, 2021**

A new study has found that the waters of River Cauvery in south India are polluted by a range of emerging contaminants that include pharmaceutically active compounds, personal care products, plastics, flame retardants, heavy metals, and pesticides, among many others.

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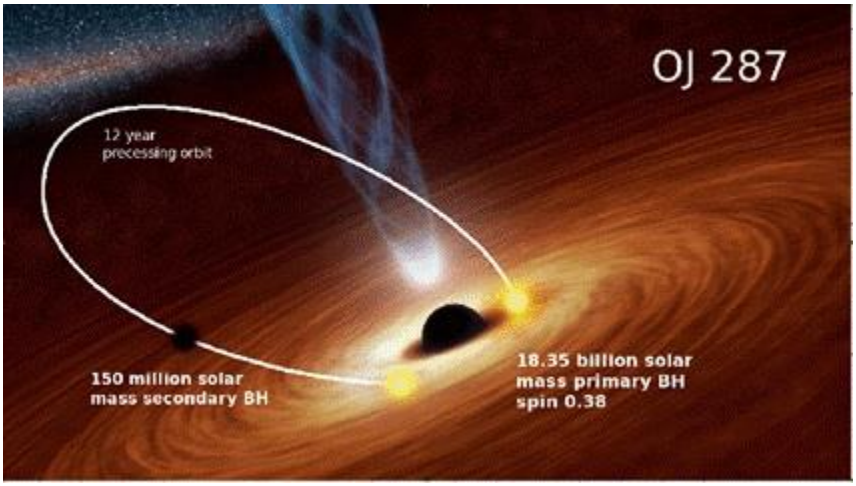
India Science Wire

Latest S&T News from India

Study gains new insights into a cosmic puzzle

By India Science Wire

New Delhi, Thursday, October 07, 2021



Binary black hole model proposed for OJ 287 (Credit: Dey et al. 2018)

Blazars are one of the brightest sources in the Universe. A special class of these objects is called BL Lacs. They show rapid and large variability in emission. A Blazer located about 3.5 billion light-years from earth and named OJ 287, whose central supermassive black hole is among the largest known, belongs to this class. An interesting feature of it is that the origin of its optical flare is unique and different from other BL Lacs.
It had been proposed to be a binary black hole system, where one supermassive black hole is orbiting another black hole with an orbital period of almost 12 years. The underlying physical mechanism of optical flaring has remained a puzzle, mainly because of its unpredictability and huge luminosity.

The blazar has become an object of interest all the more in recent times following a flare observed during April-May 2020. It was not predicted under the binary black hole scenario. It seemed that more physical phenomena than what was believed were involved in this source.

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A group of scientists from Raman Research Institute, an autonomous institute of the Department of Science & Technology, Govt. of India, along with colleagues from Tezpur University, Center for Theoretical Physics, Poland, and Saha Institute of Nuclear Physics studied the 2nd brightest flare observed in X-ray in April-May 2020 and detected very interesting behaviour of the X-ray spectrum during its flaring and non-flaring states.

They found a significant change in the optical-UV and X-ray spectrum, which leads to a shift in the location of the peak of radiation from highly energetic electrons in the magnetic field or the peak of synchrotron emission towards higher energy. As a result, the blazar OJ 287, which is known to be a BL Lac type object with peak energy flux at low energy, showed a peak at higher energy. This suggested a complex nature of the source of blazar OJ 287.

The study covered the observational data recorded by Astrosat, the first Indian astronomy mission aimed at studying celestial sources in X-ray, optical, and UV spectral bands simultaneously, and publicly available data from other detectors from all over the world like the Swift-XRT/UVOT, NuSTAR. The team has published a report on their findings in “Monthly Notices of the Royal Astronomical Society (MNRAS)”.

Binary black hole systems in blazars are very rare, and their study can establish the theory of galaxy mergers in the early universe, which eventually results in a binary black hole system. Thus, this study, partially supported by the Polish Funding Agency, National Science Centre, can provide a better understanding of blazar OJ 287.

India Science Wire
ISW/SP/Astronomy/07/10/2021

Voice of the Nation
ORGANISER

The study pinpoints sources for aerosol over the central Himalayan region

WEBDESK Oct 09, 2021, 08:31 AM IST

A representative picture of dust pollution

The researchers studied the chemical composition and source apportionment of total suspended particulate, which includes all the aerosols and air pollution in the central Himalayan region.

New Delhi: With a unique role in the Asian climate, the Himalayan region is considered a vulnerable environment. Several chemical speciation studies have been performed for carbonaceous aerosols and inorganic species over the western and central Himalayan regions during the last decade, reporting the dominance of transported aerosol plumes from the Indo-Gangetic Plains.

However, there is a knowledge gap regarding the primary and secondary organic carbon (POC, SOC) fractions, along with a lack of statistical methods for identifying and quantifying the sources of air pollutants at a receptor location (receptor model) in the central Indian Himalaya.

To address this, researchers at the Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital, an autonomous research institute under the Department of Science and Technology (DST), Govt. of India, along with Indian and foreign collaborators, studied the

chemical composition and source apportionment of total suspended particulate, which includes all the aerosols and air pollution in the central Himalayan region.

The main source regions for aerosols were the plains in northwest India and Pakistan, polluted cities like Delhi, the Thar Desert, and the Arabian Sea area. It also showed that the main aerosol factors were mineral dust (34%), biomass burning (27%), secondary sulfate (20%), and secondary nitrate (9%). There was a predominance of mineral dust in spring and summer and biomass burning and secondary sulfate in winter.

Further, the study showed that Carbonaceous aerosols - Organic Carbon (OC) and Elemental Carbon (EC) were the maximum in winter due to the intensification of biomass burning over the Indo Gangetic Plains and the Himalayas because of domestic heating and Indo-Gangetic mixing layer.

Apart from researchers from Aryabhatta Research Institute of Observational Sciences, scientists from the National Observatory of Athens, the University of Crete in Greece, Washington University in St. Louis, Finnish Meteorological Institute, Helsinki, The Cyprus Institute at Nicosia, Cyprus, Institute of Environment and Sustainable Development, Banaras Hindu University and Department of Physics at Gorakhpur University participated in the study. They have published a report on their work in the science journal, 'Atmosphere'.

Dr. Umesh Chandra Dumka and Mr. Rahul Sheoran of ARIES said the study's findings would help supplement emission inventories and contribute to an effective assessment of climate impacts over the Himalayan region.

Courtesy: India Science Wire

Study pinpoints sources for aerosol over central Himalayan region

October 8, 2021

India Science Wire

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The IndianBulletin
www.theindianbulletin.com

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By **The Indian Bulletin Online** - October 8, 2021

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October 8, 2021

A representative picture of dust pollution

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Research Stash

Study Pinpoints Sources of Aerosol Over Central Himalayan Region

Research Stash News Oct 8, 2021

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by India Science Wire October 8, 2021 in Indian Sciences

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DELHI POST
Politics | Democracy | Development

Study Pinpoints Sources for Aerosol over Central Himalayan Region

By **ISW Desk** On **Oct 10, 2021**

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By **Rupesh Dharmik** - October 8, 2021

A representative picture of dust pollution

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POSTED BY: HASTAKSHEP NEWS 9TH OCTOBER 2021

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(India Science Wire)

Topics: Asia, climate, environment, Indo-Gangetic plain, Aryabhatta Research Institute of Observational Sciences, ARIES, Nainital, DST, chemical, Thar Desert, Arabian Sea, mineral dust, biomass burning, sulfate, nitrate carbonaceous, organic Carbon, elemental Carbon.

Technology to improve life of thermal power plant boilers

by **India Science Wire** October 8, 2021 in **Indian Sciences**

A new laser-based clad coating technology has been developed that promises to help enhance the life of boilers used in thermal power plants by two to three times compared to currently used surfacing technologies.

Laser cladding is a technique for fusing a coating material on a substrate. It allows materials to be deposited accurately, selectively, and with minimal heat input into the underlying substrate. This process allows for property improvements of the surface of a part, including better wear resistance, thus allowing for the repair of damaged or worn surfaces.

In advanced supercritical and ultra-supercritical thermal power plants, various parts of the boiler and its accessories such as feeder nozzle tip, re-heater boiler tube bends, burner spreaders often degrade due to severe wear and corrosion at high temperatures and thereby require frequent replacements. Shutdown due to such problems severely affects power production.

To overcome this challenge, scientists from the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), an autonomous institute of the Department of Science and Technology, Government of India led by Dr. S. M. Shariff, have developed a laser-based clad coating technology (LCCT) that provides adequate protection to the boiler parts ensuring life span improvement beyond two years. An Indian patent has also been granted to the novel technology.

The technology involves fusing a Nickel-based soft matrix with hard metallic carbide particles of tungsten, chromium, or vanadium on steel parts by employing a high-power laser integrated into a multi-axis robot with process monitoring and control. The technology has been successfully tested for feeder nozzle tips of boilers used in NTPC's 200 and 500 Megawatt thermal power plants at Farakka and Korba.

Voice of the Nation
ORGANISER

Technology to improve the life of thermal power plant boilers

WEBDESK Oct 09, 2021, 08:54 AM IST

Laser-based clad coating deposition in progress Inset shows the laser-clad coated nozzle tip fixed in the boiler

Laser cladding allows materials to be deposited accurately, selectively, and with minimal heat input into the underlying substrate.

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Courtesy: India Science Wire

Research Stash

Technology to Improve Life of Thermal Power Plant Boilers

Research Stash News Oct 14, 2021

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By **Indian Scoops Tech** - October 8, 2021

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दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण

Last Updated: मंगलवार, 12 अक्टूबर 2021 (18:04 IST)

नई दिल्ली, बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है।

लखनऊ स्थित सीएसआईआरके निदेशक प्रोफेसर तपस कुंडु ने संस्थान (सीडीआरआई) केन्द्रीय औषधि अनुसंधान संस्थान-में आयोजित एक प्रशिक्षण कार्यक्रम के दौरान यह बात कही है। उन्होंने इस क्षेत्र में प्रभावी प्रशिक्षण को जरूरी बताया है।

प्रोफेसर तपस कुंडु ने कहा कि नये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है।

इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआरकोरोना महामारी के बाद एनएमआर स्पेक्ट्रोस्कोपी और मास - सीडीआरआई में हाल में आयोजित-को संबोधित कर (ट्रेनिंग प्रोग्राम-ऑन-हैंड्स) स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रमते हुए प्रोफेसर कुंडु ने परमाणु चुंबकीय अनुनाद स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री के बारे में भी विस्तार से बताया। (एनएमआर)

उन्होंने बताया कि एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री दो परस्पर पूरक महत्वपूर्ण विश्लेषणात्मक विधियां हैं, जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है।

एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-08 अक्तूबर 2021 को सीएसआईआरसीड-ीआरआई की सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट फेसिलिटी)SAIF) द्वारा किया गया था।

सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं प्रदान करने के लिए जाना (एनालिटिकल सर्विसेज) द्व (डीएसटी) जाता है। यह केंद्र देश में विज्ञान और प्रौद्योगिकी विभागारा 70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है।

सैफ, सीआईएसआईआरशशीधरा ने बताया कि सैफ की .वी .सीडीआरआई के प्रमुख एवं वरिष्ठ प्रधान वैज्ञानिक डॉ के-अवधारणा रासायनिक और जीव विज्ञान के अनुसंधान क्षेत्र में कार्यरत वैज्ञानिकों और अनुसंधानकर्ताओं की जरूरतों के अनुरूप विकसित हुई है। यह उन विश्वविद्यालयों, सरकारी शोध संस्थानों और फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता प्रदान करता है।

सीआईएसआईआरसीडीआरआई के कौशल विकास कार्यक्रमों के समन्वयक- एवं मुख्य वैज्ञानिक विनय त्रिपाठी ने संस्थान द्वारा आयोजित किए जाने वाले विभिन्न कौशल विकास कार्यक्रमों के बारे में बताया और कहा कि प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं। उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्सट्रेनिंग कार्यक्रम दोबारा शुरू हो गए हैं।-ऑन-

सैफ, सीआईएसआईआरसीडीआरआई के प्रधान वैज्ञानिक-, डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्विआयामी एनएमआर और उनके अनुप्रयोगों की जानकारी प्रदान की।-

सैफ, सीआईएसआईआरसीडीआरआई के ही एक अन्य प्रधान वैज्ञानिक-, डॉ संजीव कनौजिया ने मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार से जानकारी प्रदान की।

इस प्रशिक्षण कार्यक्रम के सचिव डॉ .संजीव कुमार शुक्ला ने कहा कि एनएमआर और मास स्पेक्ट्रोस्कोपी में विशिष्ट कौशल विकसित करने के उद्देश्य से तीन दिवसीय हैंड्सकार्यक्रम आयोजित (व्यक्तिगत व्यवहारिक प्रशिक्षण) ऑन ट्रेनिंग-किया गया, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हें सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है। ***(इंडिया साइंस वायर(***

"दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण"

By RD Times Hindi October 13, 2021

प्रोफेसर तपस कुंडु

नई दिल्ली, 13 अक्तूबर: बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है। लखनऊ स्थित सीएसआईआरकेन्द्रीय औषधि अनुसंधान - के (सीडीआरआई) संस्थाननिदेशक प्रोफेसर तपस कुंडु ने संस्थान में आयोजित एक प्रशिक्षण कार्यक्रम के दौरानयह बात कही है। उन्होंने इस क्षेत्र में प्रभावी प्रशिक्षण को जरूरी बताया है।

प्रोफेसर तपस कुंडु ने कहा किनये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है। इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआर सीडीआरआई में-हाल में आयोजित कोरोना महामारी के बाद एनएमआर स्पेक्ट्रोस्कोपी और -
को संबोधित करते हुए प्रोफेसर (ट्रेनिंग प्रोग्राम-ऑन-हैंड्स) मास स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रम
स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट् (एनएमआर) कुंडु नेपरमाणु चुंबकीय अनुनादरी के बारे में भी विस्तार से
बताया। उन्होंने बताया कि एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री दो परस्पर पूरक महत्वपूर्ण
विश्लेषणात्मक विधियां हैं, जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी
गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है।

एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-
08 अक्तूबर 2021को सीएसआईआर सीडीआरआई की सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट फेसिलिटी-
)SAIF) द्वारा किया गया था। सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं एनालिटिकल)
द्वारा (डीएसटी) प्रदान करने के लिए जाना जाता है। यह केंद्र देश में विज्ञान और प्रौद्योगिकी विभाग (सर्विसेज
70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है।

सैफ,सीआईएसआईआरसीडीआरआई के प्रमुख एव-ं वरिष्ठ प्रधान वैज्ञानिक डॉ केशशीधरा ने बताया .वी .
किसैफ की अवधारणा रासायनिक और जीव विज्ञान के अनुसंधान क्षेत्र में कार्यरत वैज्ञानिकों और
अनुसंधानकर्ताओं की जरूरतों के अनुरूप विकसित हुई है। यह उन विश्वविद्यालयों, सरकारी शोध संस्थानों और
फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता
प्रदान करता है।

सीआईएसआईआरसीडीआरआई के कौशल विकास कार्यक्रमों के समन्वयक एवं मुख्य वैज्ञानिकविनय त्रिपाठी ने -
संस्थान द्वारा आयोजित किए जाने वाले विभिन्न कौशल विकास कार्यक्रमो ं के बारे में बताया और कहा कि
प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं।
उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्सट्रेनिंग कार्यक्रम -ऑन-
दोबारा शुरू हो गए हैं।

सैफ, सीआईएसआईआरसीडीआरआई के प्रधान वैज्ञानिक-,डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी
की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्विआयामी एनएमआर और उनके अनुप्रयोगों की -
जानकारी प्रदान की। सैफ, सीआईएसआईआरसीडीआरआई के ही एक अन्य प्रधान व-ैज्ञानिक,डॉ संजीव
कनौजिया ने मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार सेजानकारी प्रदान की।

इस प्रशिक्षण कार्यक्रम के सचिव डॉसंजीव कुमार शुक्ला ने कहा कि एनएमआर और मास स्पेक्ट्रोस्कोपी में .
विशिष्ट कौशल विकसित करने के उद्देश्य सेतीन दिवसीय हैंड्स (व्यक्तिगत व्यवहारिक प्रशिक्षण) ऑन ट्रेनिंग-
कार्यक्रम आयोजित किया गया, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हेंसोफिस्टीकेटेड
एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है। इंडिया साइंस)
(वायर

भारत हेराल्ड

“दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण”

15 mins ago

प्रोफेसर तपस कुंडु

नई दिल्ली, 13 अक्तूबर: बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है। लखनऊ स्थित सीएसआईआर अनुसंधान औषधि केन्द्रीय- के कार्यक्रम प्रशिक्षण एक आयोजित में संस्थान ने कुंडु तपस प्रोफेसर निदेशक के (सीडीआरआई) संस्थान है। बताया जरूरी को प्रशिक्षण प्रभावी में क्षेत्र इस उन्होंने है। कही बात दौरानयह

प्रोफेसर तपस कुंडु ने कहा किनये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है। इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआर और स्पेक्ट्रोस्कोपी एनएमआर बाद के महामारी कोरोना- आयोजित में हाल में सीडीआरआई- प्रोफेसर हुए करते संबोधित को (प्रोग्राम ट्रेनिंग-ऑन-हैंड्स) कार्यक्रम प्रशिक्षण व्यवहारिक पर स्पेक्ट्रोमेट्री मास चुंबकीय नेपरमाणु कुंडु अनुनाद से विस्तार भी में बारे के स्पेक्ट्रोमेट्री मास और स्पेक्ट्रोस्कोपी (एनएमआर) महत्वपूर्ण पूरक परस्पर दो स्पेक्ट्रोमेट्री मास और स्पेक्ट्रोस्कोपी एनएमआर कि बताया उन्होंने बताया। हैं विधियां विश्लेषणात्मक, जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है।

एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-08 अक्तूबर 2021को सीएसआईआरइन्स्ट्रु एनालिटिकल सोफिस्टीकेटेड की सीडीआरआई-मेंट फेसिलिटी)SAIF) द्वारा किया गया था। सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं एनालिटिकल) द्वारा (डीएसटी) विभाग प्रौद्योगिकी और विज्ञान में देश केंद्र यह है। जाता जाना लिए के करने प्रदान (सर्विसेज 70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है।

सैफ,सीआईएसआईआर बताया ने शशीधरा .वी .के डॉ वैज्ञानिक प्रधान वरिष्ठ एवं प्रमुख के सीडीआरआई- और वैज्ञानिकों कार्यरत में क्षेत्र अनुसंधान के विज्ञान जीव और रासायनिक अवधारणा की किसैफ वि उन यह है। हुई विकसित अनुरूप के जरूरतों की अनुसंधानकर्ताओंश्वविद्यालयों, सरकारी शोध संस्थानों और फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता प्रदान करता है।

सीआईएसआईआर ने त्रिपाठी वैज्ञानिकविनय मुख्य एवं समन्वयक के कार्यक्रमों विकास कौशल के सीडीआरआई- द् संस्थानवारा आयोजित किए जाने वाले विभिन्न कौशल विकास कार्यक्रमों के बारे में बताया और कहा कि प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं। उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्स कार्यक्रम ट्रेनिंग-ऑन- हैं। गए हो शुरू दोबारा

सैफ, सीआईएसआईआरवैज्ञानिक प्रधान के सीडीआरआई-,डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्वि की अनुप्रयोगों उनके और एनएमआर आयामी- प्र जानकारीदान की। सैफ, सीआईएसआईआरवैज्ञानिक प्रधान अन्य एक ही के सीडीआरआई-,डॉ संजीव कनौजिया ने मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार सेजानकारी प्रदान की।

इस प्रशिक्षण कार्यक्रम के सचिव डॉस्पेक्ट्रोस मास और एनएमआर कि कहा ने शुक्ला कुमार संजीव .्कोपी में विशिष्ट कौशल विकसित करने के उद्देश्य सेतीन दिवसीय हैंड्स (प्रशिक्षण व्यवहारिक व्यक्तिगत) ट्रेनिंग ऑन- गया किया आयोजित कार्यक्रम, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हेंसोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है। साइंस इंडिया) (वायर

रिपब्लिक न्यूज़इंडिया

“दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण”

By **Rupesh Dharmik** - October 13, 2021

प्रोफेसर तपस कुंडु

नई दिल्ली, 13 अक्तूबर: बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है। लखनऊ स्थित सीएसआईआरकेन्द्रीय औषधि अनुसंधान - के निदेशक प्रोफेसर तपस कुंडु ने संस्थान में आयोजित (सीडीआरआई) संस्थानएक प्रशिक्षण कार्यक्रम के दौरानयह बात कही है। उन्होंने इस क्षेत्र में प्रभावी प्रशिक्षण को जरूरी बताया है।

प्रोफेसर तपस कुंडु ने कहा किनये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है। इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआरकोरोना महामारी के बाद एनएमआर स्प- सीडीआरआई में हाल में आयोजित-ेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रम को संबोधित करते हुए प्रोफेसर (ट्रेनिंग प्रोग्राम-ऑन-हैंड्स) स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री के बारे में भी विस्तार से (एनएमआर) कुंडु नेपरमाणु चुंबकीय अनुनाद बताया। उन्होंने बताया कि एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री दो परस्पर पूरक महत्वपूर्ण विश्लेषणात्मक विधियां हैं, जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है।

एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-08 अक्तूबर 2021को सीएसआईआर सीडीआरआई की सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट फेसिलिटी-)SAIF) द्वारा किया गया था। सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं एना)लिटिकल सर्विसेज द्वारा (डीएसटी) प्रदान करने के लिए जाना जाता है। यह केंद्र देश में विज्ञान और प्रौद्योगिकी विभाग (70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है।

सैफ,सीआईएसआईआरशशीधरा ने ब .वी .सीडीआरआई के प्रमुख एवं वरिष्ठ प्रधान वैज्ञानिक डॉ के-ताया किसैफ की अवधारणा रासायनिक और जीव विज्ञान के अनुसंधान क्षेत्र में कार्यरत वैज्ञानिकों और अनुसंधानकर्ताओं की जरूरतों के अनुरूप विकसित हुई है। यह उन विश्वविद्यालयों, सरकारी शोध संस्थानों और फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता प्रदान करता है।

सीआईएसआईआरसीडीआरआई के कौशल विकास कार्यक्रमों के समन्वयक एवं मुख्य वैज्ञानिकविनय त्रिपाठी ने -संस्थान द्वारा आयोजित किए जाने वाले विभिन्न कौशल विकास कार्यक्रमों के बारे में बताया और कहा कि प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं। उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्सट्रेनिंग कार्यक्रम -ऑन-दोबारा शुरू हो गए हैं।

सैफ, सीआईएसआईआरसीडीआरआई के प्रधान वैज्ञानिक-,डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्विआयामी एनएमआर और उनके अनुप्रयोगों की -जानकारी प्रदान की। सैफ, सीआईएसआईआरसीडीआरआई के ही एक अन्य प्रधान वैज्ञानिक-,डॉ संजीव कनौजिया ने मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार सेजानकारी प्रदान की।

इस प्रशिक्षण कार्यक्रम के सचिव डॉसंजीव कुमार शुक्ला ने कहा कि एनएमआर और मास स्पेक्ट्रोस्कोपी में . व्यक्तिगत व्यवहारिक प्र) ऑन ट्रेनिंग-विशिष्ट कौशल विकसित करने के उद्देश्य सेतीन दिवसीय हैंड्सशिक्षण (कार्यक्रम आयोजित किया गया, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हेंसोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है। इंडिया साइंस) (वायर

"दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण"

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नई दिल्ली, 12 अक्तूबर बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान :(इंडिया साइंस वायर) अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है। लखनऊ स्थित सीएसआईआर केन्द्रीय औषधि अनुसंधान संस्थान- के निदेशक प्रोफेसर तपस कुंडु ने संस्थान में आयोजित एक प्रशिक्षण कार्यक्रम के दौरान यह बात कही है। (सीडीआरआई)

उन्होंने इस क्षेत्र में प्रभावी प्रशिक्षण को जरूरी बताया है। प्रोफेसर तपस कुंडु ने कहा कि नये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है। इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआर सीडीआरआई में हाल में आयोजित-- कोरोना महामारी के बाद एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रम को संबोधित करते (ट्रेनिंग प्रोग्राम-ऑन-हैंड्स)हुए प्रोफेसर कुंडु ने परमाणु चुंबकीय अनुनाद

स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री के बारे में भी विस्तार से बताया। उन्होंने बताया कि एनएमआर स्पेक्ट्रोस्कोपी (एनएमआर) और मास स्पेक्ट्रोमेट्री दो परस्पर पूरक महत्वपूर्ण विश्लेषणात्मक विधियां हैं,

जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है। एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-08 अक्तूबर 2021 को सीएसआईआरसीडीआरआई- की सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट फेसिलिटी)SAIF) द्वारा किया गया था।

सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं (एनालिटिकल सर्विसेज)
प्रदान करने के लिए जाना जाता है। यह केंद्र देश में विज्ञान और प्रौद्योगिकी विभाग द्वारा (डीएसटी)70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है। सैफ, सीआईएसआईआर .वी .सीडीआरआई के प्रमुख एवं वरिष्ठ प्रधान वैज्ञानिक डॉ के-शशीधरा ने बताया कि सैफ की अवधारणा रासायनिक और जीव विज्ञान के अनुसंधान क्षेत्र में कार्यरत वैज्ञानिकों और अनुसंधानकर्ताओं कीजरूरतों के अनुरूप विकसित हुई है।

यह उन विश्वविद्यालयों, सरकारी शोध संस्थानों और फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता प्रदान करता है। सीआईएसआईआरसीडीआरआई के कौशल विकास कार्यक्रमों के -समन्वयक एवं मुख्य वैज्ञानिक विनय त्रिपाठी ने संस्थान द्वारा आयोजित किए जाने वाले विभिन्न कौशल विकास कार्यक्रमों के बारे में बताया और कहा कि प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं।

उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्सट्रेनिंग कार्यक्रम दोबारा शुरू हो -ऑन-गए हैं। सैफ, सीआईएसआईआरसीडीआरआई के प्रधान वैज्ञानिक-, डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्विआया -मी एनएमआर और उनके अनुप्रयोगों की जानकारी प्रदान की।

सैफ, सीआईएसआईआरसीडीआरआई के ही एक अन्य प्रधान वैज्ञानिक-, डॉ संजीव कनौजिया ने
मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार से जानकारी प्रदान की। इस प्रशिक्षण कार्यक्रम के सचिव डॉसंजीव . कुमार शुक्ला ने कहा कि एनएमआर और मास स्पेक्ट्रोस्कोपी में विशिष्ट कौशल विकसित करने के उद्देश्य से तीन दिवसीय हैंड्सकार्यक्रम आयोजित किया गया (व्यक्तिगत व्यवहारिक प्रशिक्षण) ऑन ट्रेनिंग-, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हें सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है।

“दवाओं की खोज में बायोमार्कर के रूप में छोटे अणुओं की पहचान महत्वपूर्ण”

इंडिया साइंस वायर Oct 16, 2021 17:56

सीएसआईआरपी कोरोना महामारी के बाद एनएमआर स्पेक्ट्रोस्को -सीडीआरआई में हाल में आयोजित- और मास स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रम को संबोधित करते हुए प्रोफेसर कुंडु ने परमाणु चुंबकीय अनुनाद स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री के बारे में भी विस्तार से बताया।

बायोमार्कर के रूप में छोटे अणुओं की पहचान दवा की खोज और रोग निदान अनुसंधान के लिए महत्वपूर्ण एवं उपयोगी होती है। लखनऊ स्थित सीएसआईआरकेन्द्रीय औषधि अनुसंधान सं-स्थान के निदेशक (सीडीआरआई) प्रोफेसर तपस कुंडु ने संस्थान में आयोजित एक प्रशिक्षण कार्यक्रम के दौरान यह बात कही है। उन्होंने इस क्षेत्र में को जरूरी बताया है। प्रभावी प्रशिक्षण

प्रोफेसर तपस कुंडु ने कहा कि नये छोटे अणुओं पर आधारित रासायनिक यौगिकों के संश्लेषण के लिए दुनियाभर में व्यापक शोध किया जा रहा है। इसका उद्देश्य औषधीय महत्व के पौधों एवं अन्य स्रोतों से जैविक रूप से

सक्रिय अणुओं की पहचान करना है। उन्होंने कहा कि इससे भविष्य में रोगों के निदान के लिए नये बायोमार्कर एवं दवाओं की खोज में मदद मिल सकती है।

सीएसआईआरकोरोना महामारी के बाद एनएमआर स्पेक्ट्रोस्कोपी और -सीडीआरआई में हाल में आयोजित- को संबोधित करते हुए प्रोफेसर (ग प्रोग्रामट्रेनिं-ऑन-हैंड्स) मास स्पेक्ट्रोमेट्री पर व्यवहारिक प्रशिक्षण कार्यक्रम स्पेक्ट्रोस्कोप (एनएमआर) कुंडु ने परमाणु चुंबकीय अनुनादी और मास स्पेक्ट्रोमेट्री के बारे में भी विस्तार से बताया। उन्होंने बताया कि एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री दो परस्पर पूरक महत्वपूर्ण विश्लेषणात्मक विधियां हैं, जिनका उपयोग अणुओं की संरचनाओं, उनकी मात्रा और उनकी क्रियाशीलता संबंधी गुणों को समझने के लिए बड़े पैमाने पर किया जा रहा है।

एनएमआर स्पेक्ट्रोस्कोपी और मास स्पेक्ट्रोमेट्री द्वारा लघु अणु विश्लेषण पर राष्ट्रीय कार्यशाला का आयोजन 06-08 अक्तूबर 2021 को सीएसआईआर सीडीआरआई की सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट फेसिलिटी-)SAIF) द्वारा किया गया था। सैफ)SAIF) को पिछले 45 सालों से उसकी विश्लेषणात्मक सेवाएं एनालिटिकल) द्वारा (डीएसटी) गिकी विभागप्रदान करने के लिए जाना जाता है। यह केंद्र देश में विज्ञान और प्रौद्यो (सर्विसेज 70 के दशक में स्थापित पहली चार ऐसी सुविधाओं में से एक है।

सैफ, सीआईएसआईआरशशीधरा ने बताया कि .वी .सीडीआरआई के प्रमुख एवं वरिष्ठ प्रधान वैज्ञानिक डॉ के- निकों और अनुसंधानकर्ताओं सैफ की अवधारणा रासायनिक और जीव विज्ञान के अनुसंधान क्षेत्र में कार्यरत वैज्ञा की जरूरतों के अनुरूप विकसित हुई है। यह उन विश्वविद्यालयों, सरकारी शोध संस्थानों और फार्मा उद्योगों, जिनके पास महंगे और परिष्कृत उपकरण नहीं हैं, के शोधकर्ताओं को अनुसंधान में सहायता प्रदान करता है।

सीआईएसआईआरसीडीआरआई के कौशल विकास कार्यक्रमों के समन्वयक एवं मुख्य वैज्ञानिक विनय त्रिपाठी - ने संस्थान द्वारा आयोजित किए जाने वालेविभिन्न कौशल विकास कार्यक्रमों के बारे में बताया और कहा कि प्रतिभागी अपने कौशल में सुधार और रोजगार क्षमता बढ़ाने के लिए इन कार्यक्रमों का लाभ उठा सकते हैं। उन्होंने बताया कि संस्थान में कोरोना महामारी के बाद कौशल विकास कार्यक्रम एवं हैंड्सट्रेनिंग -ऑन- कार्यक्रम दोबारा शुरू हो गए हैं।

सैफ, सीआईएसआईआरसीडीआरआई के प्रधान वैज्ञानिक-, डॉ संजीव कुमार शुक्ला ने एनएमआर स्पेक्ट्रोस्कोपी की मूल सिद्धांतों एवं अनुप्रयोगों के बारे में बताया और द्विआयामी एनएमआर और उनके अनुप्रयोगों की - जानकारी प्रदान की। सैफ, सीआईएसआईआरस-ीडीआरआई के ही एक अन्य प्रधान वैज्ञानिक, डॉ संजीव कनौजिया ने मास स्पेक्ट्रोमेट्री के सिद्धांतों एवं अनुप्रयोगों की विस्तार से जानकारी प्रदान की।

इस प्रशिक्षण कार्यक्रम के सचिव डॉसंजीव कुमार शुक्ला ने कहा कि एनएमआर और मास स्पेक्ट्रोस्कोपी में . विशिष्ट कौशलविकसित करने के उद्देश्य से तीन दिवसीय हैंड्स (व्यक्तिगत व्यवहारिक प्रशिक्षण) ऑन ट्रेनिंग- कार्यक्रम आयोजित किया गया, जिसमें देशभर के प्रतिभागी शामिल हुए। इस दौरान उन्हें सोफिस्टीकेटेड एनालिटिकल इन्स्ट्रुमेंट की कार्यप्रणाली को व्यावहारिक रूप से समझने का अवसर मिला है।

(इंडिया साइंस वायर(

Telangana Today
FOR LOCAL TO GLOBAL NEWS

From waste to wealth

BY INDIA SCIENCE WIRE PUBLISHED: 13TH OCT 2021 8:37 PM

New Delhi: A team of scientists has developed a technique to use tea and banana waste to make non-toxic activated carbon that can be used for several purposes such as industrial pollution control, water purification, food and beverage processing, and odour removal.

The processing of tea generates a lot of waste, generally in the form of tea dust. They could be converted to useful substances. The structure of tea is particularly favourable for conversion to high-quality activated carbon. However, it normally involved the use of strong acid and bases, making the product toxic and hence unsuitable for most uses. A non-toxic method of conversion was needed to overcome this challenge.

Dr N. C. Talukdar, former Director, Institute of Advanced Study in Science and Technology (IASST), Guwahati, an autonomous institute of the Department of Science & Technology, Govt. of India and Dr Devasish Chowdhury, Associate Professor at the Insitute, used banana plant extract as an alternative activating agent for the preparation of activated carbon from tea wastes.

Oxygenated potassium compounds contained in the banana plant extract help in activating the carbon obtained from tea waste. An Indian patent has recently been granted for the new process.

The process began with the drying of the banana peel. It was then burnt to make an ash out of it.

The ash was further crushed and made into a fine powder. Subsequently, water was filtered through the ash powder using a clean cotton cloth and the final solution was used as the activating agent.

The main advantage of this process is that the starting materials, as well as activating agents, are waste materials. Also, no toxic material was used at all in the entire process. The most preferred banana was found to be Bheem Kol, which is an indigenous variety found only in Assam and parts of North East India.

From waste to wealth

by **Editor** October 14, 2021 in **Indian Sciences**

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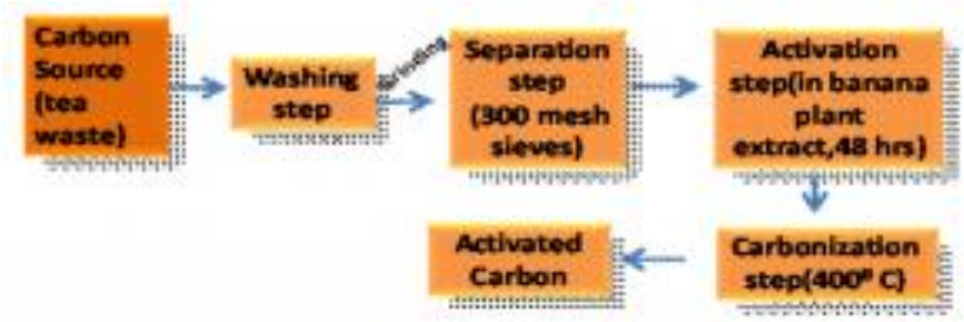
DELHI POST
Politics | Democracy | Development

From Waste to Wealth

By **ISW Desk** On **Oct 14, 2021**

A team of scientists has developed a technique to use tea and banana waste to make non-toxic activated carbon that can be used for several purposes such as industrial pollution control, water purification, food and beverage processing, and odour removal.



Synthesis of Activated Carbon from Tea Waste

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Kashmir Convener
Voice of Courage

Scientists developed technique to turn waste into wealth

By Online Editor On Oct 15, 2021

Dr. Manash Jyoti Deka, Dr. Devasish Chowdhury, Dr. N. C. Talukdar (L to R)

New Delhi, Oct 13 (India Science Wire): A team of scientists has developed a technique to use tea and banana waste to make non-toxic activated carbon that can be used for several purposes such as industrial pollution control, water purification, food and beverage processing, and odour removal.

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वैज्ञानिकों ने विकसित की कचरे से गैरविषाक्त सक्रिय - कार्बन बनाने की तकनीक

Last Updated: गुरुवार, 14 अक्टूबर 2021 (14:25 IST)

नई दिल्ली, भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैरविषैले सक्रिय कार्बन बनाने के लिए एक - तकनीक विकसित की है।उनका कहना है कि इस गैरविषैले सक्रिय कार्बन का उपयोग औद्योगिक प्रदूषण नियंत्रण-, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है।

इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरविषाक्त उत्पाद बनाये जा सकते हैं।-

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।

सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन कॉफी)

बीन्स, कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है।

चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरकता थी।विषैली प्रक्रिया की आवश्य-

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थान इंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी गया है। विज्ञान एवं प्रौद्योगिकी गुवाहाटी के शोधकर्ताओं द्वारा किया (आईएएसएसटी) मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गयाहै कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है।
इसके लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूरएक साफ सूती कपड़े से राख के चूर्ण से चूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद- पानी को छान लिया जाता है और अंत में जो घोल मिलता है, उसे खार कहते हैं।

केले से निकलने वाले प्राकृतिक खार को 'कोल खार' या 'कोला खार' कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एन .तालुकदार और एसोसिएट प्रोफेसर डॉ .सी. देवाशीष चौधरी शामिल हैं। शोधकर्ताओं का कहना है कि"सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट विषैले एसिड और) बेसके उपयोग से बचा जा सकता है। इस प्रकार यह एक हरित प्रक्रिया है (, जिसमें पौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। ***(इंडिया साइंस वायर(***

dailyhunt

Thursday, 14 Oct, 2.22 pm

वेबदुनिया

वैज्ञानिकों ने विकसित की कचरे से गैर-विषाक्त सक्रिय कार्बन बनाने की तकनीक

Last Updated: गुरुवार, 14 अक्टूबर 2021 (14:25 IST) नई दिल्ली , भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैर-विषैले सक्रिय कार्बन बनाने के लिए एक तकनीक विकसित की है। उनका कहना है कि इस गैर-विषैले सक्रिय कार्बन का उपयोग औद्योगिक प्रदूषण नियंत्रण, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है।

इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैर-विषाक्त उत्पाद बनाये जा सकते हैं।

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।

सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन (कॉफी बीन्स, कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना), स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है।

चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैर-विषैली प्रक्रिया की आवश्यकता थी।

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थान इंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी (आईएएसएसटी) गुवाहाटी के शोधकर्ताओं द्वारा किया गया है। विज्ञान एवं प्रौद्योगिकी मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है।
इसके लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूर-चूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े से राख के चूर्ण से पानी को छान लिया जाता है और अंत में जो घोल मिलता है, उसे खार कहते हैं।

केले से निकलने वाले प्राकृतिक खार को 'कोल खार' या 'कोला खार' कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एन.सी. तालुकदार और एसोसिएट प्रोफेसर डॉ. देवाशीष चौधरी शामिल हैं। शोधकर्ताओं का कहना है कि 'सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट (विषैले एसिड और बेस) के उपयोग से बचा जा सकता है। इस प्रकार यह एक हरित प्रक्रिया है, जिसमें पौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। (इंडिया साइंस वायर)

दी इंडियन बुलेटिन

वैज्ञानिकों ने विकसित की कचरे से गैर-विषाक्त सक्रिय कार्बन बनाने की तकनीक

3 days ago

डॉ मानस ज्योयति डेका, डॉदेवाशीष चौधरी, डा(बाएं से दाएं) तालुकदार .एन .

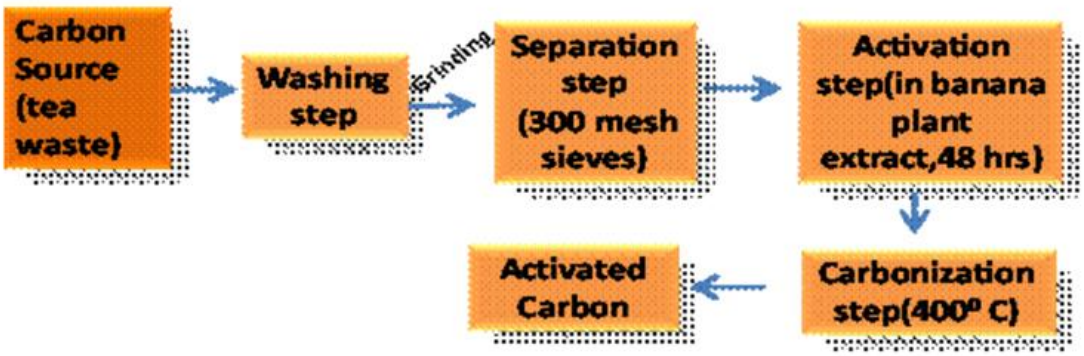
नई दिल्ली, 13 अक्तूबर: भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैर कार्बन सक्रिय विषैले- लिएएक के बनानेतकनीक विकसित की है। उनका कहना है कि इस गैर उपयोग का कार्बन सक्रिय विषैले- नियंत्रण प्रदूषण औद्योगिक, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है। इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरहैं। सकते जा बनाये उत्पाद विषाक्त-

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन

बीन्स कॉफी), कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरथी। कताआवश्य की प्रक्रिया विषैली-

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थानइंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी एवं विज्ञान है। गया किया राद्वा शोधकर्ताओं के गुवाहाटी (आईएएसएसटी) एक जारी को बुधवार द्वारा मंत्रालय प्रौद्योगिकी वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।



Synthesis of Activated Carbon from Tea Waste

केले के पौधे से सक्रिय करने वाले एजेंट का संश्लेषण

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके

लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूरकर चूर-के एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े से राख के चूर्ण से पानी को छान लिया जाता है और अंत में जो घोल मिलता है, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार'या 'कोला खार'कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एन एसोसिएट तालुकदारऔर .सी. कि है कहना का शोधकर्ताओं हैं। शामिल चौधरी शीषदेवा .प्रोफेसरडॉ"सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट है प्रक्रिया हरित एक प्रकारयह इस है। सकता जा बचा से उपयोग के (बेस और एसिड विषैले), जिसमेंपौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। (वायर साइंस इंडिया)

नई दिल्लीविषाक्त सक्रिय -गैर वैज्ञानिकों ने विकसित की कचरे से : कार्बन बनाने की तकनीक

News अक्तूबर 15, 2021

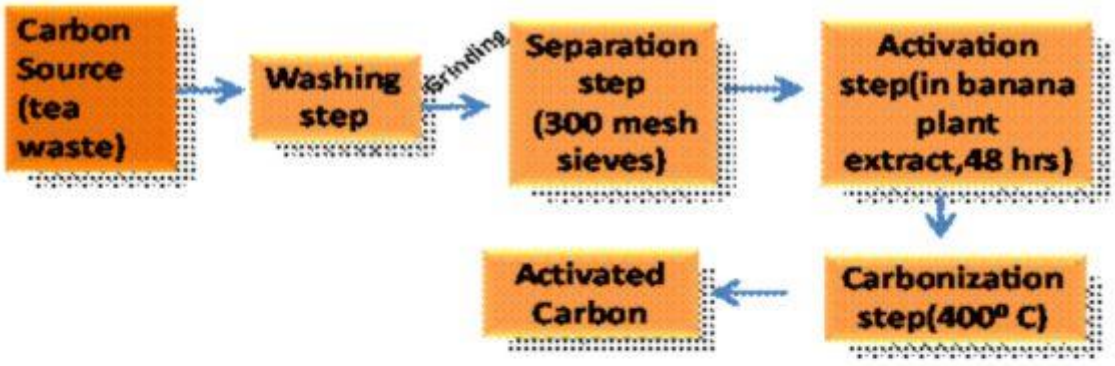
नई दिल्ली: भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैरविषैले सक्रिय कार्बन बनाने के लिए एक - विषैले सक्रिय कार्बन का उपयोग औद्योगिक प्रदूषण नियंत्रण-तकनीक विकसित की है। उनका कहना है कि इस गैर, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है। इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरविषाक्त उत्पाद बनाये जा सकते हैं।-

डॉ मानस ज्योति डेका, डॉ देवाशीष चौधरी, डा(बाएं से दाएं) तालुकदार .एन .

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।

सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन कॉफी) बीन्स, कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरकता थी।विषैली प्रक्रिया की आवश्य-



Synthesis of Activated Carbon from Tea Waste

केले के पौधे से सक्रिय करने वाले एजेंट का संश्लेषण

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थान इंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी गुवाहाटी के शोधकर्ताओं द्वारा किया गया है। विज्ञान एवं (आईएएसएसटी) धे के अर्क में मौजूद प्रौद्योगिकी मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौ

ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूरचूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े से - राख के चूर्ण से पानी को छान लिया जाता है और अंत में जो घोल मिलता है, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार' या 'कोला खार' कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एनतालुकदार और .सी. एसोसिएट प्रोफेसर डॉ . देवाशीष चौधरी शामिल हैं। शोधकर्ताओं का कहना है कि“सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट विषैले एसिड) के उपयोग से बचा जा सकता है। इस प्रकार यह एक हरित प्रक्रिया है (और बेस, जिसमें पौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है।

Initiate News Agency (INA), नई दिल्ली

भारत हेराल्ड

वैज्ञानिकों ने विकसित की कचरे से गैर-विषाक्त सक्रिय कार्बन बनाने की तकनीक

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डॉ मानस ज्योयति डेका, डॉदेवाशीष चौधरी, डा(बाएं से दाएं) तालुकदार .एन .

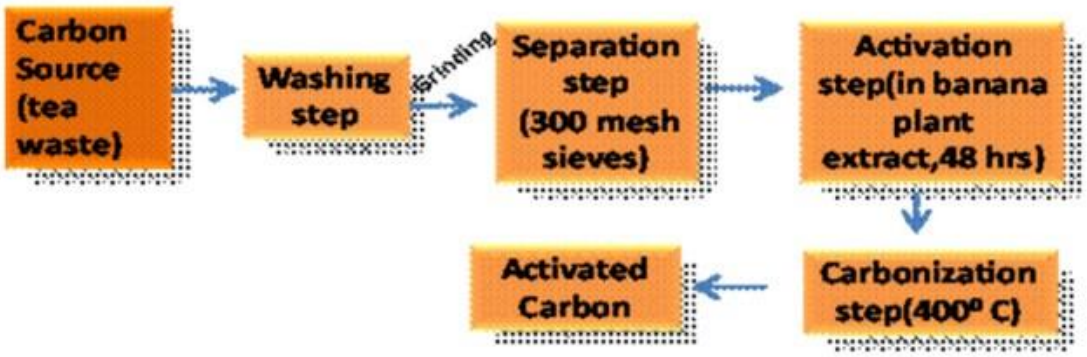
नई दिल्ली, 13 अक्तूबर: भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैर विषैले-सक्रिय कार्बन बनाने के लिएएक तकनीक विकसित की है। उनका कहना है कि इस गैर उपयोग का कार्बन सक्रिय विषैले-नियंत्रण प्रदूषण औद्योगिक, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है। इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरहैं। सकते जा बनाये उत्पाद विषाक्त-

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन

बीन्स कॉफी), कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरविषैली- प्रक्रिया की आवश्यकता थी।

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थानइंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी एवं विज्ञान है। गया किया द्वारा शोधकर्ताओं के गुवाहाटी (आईएएसएसटी) द्व मंत्रालय प्रौद्योगिकीारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।



Synthesis of Activated Carbon from Tea Waste

केले के पौधे से सक्रिय करने वाले एजेंट का संश्लेषण

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके

लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूर कपड़े सूती साफ एक बाद इसके है। जाता लिया बना पाउडर महीन एक करके चूर- है मिलता घोल जो में अंत और है जाता लिया छान को पानी से चूर्ण के राख से, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार'या 'कोला खार'कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एन एसोसिएट तालुकदारऔर .सी. कि है कहना का शोधकर्ताओं हैं। शामिल चौधरी देवाशीष .प्रोफेसरडॉ"सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट है प्रक्रिया हरित एक प्रकारयह इस है। सकता जा बचा से उपयोग के (बेस और एसिड विषैले), जिसमेंपौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। (वायर साइंस इंडिया)

वैज्ञानिकों ने विकसित की कचरे से गैरविषाक्त सक्रिय - कार्बन बनाने की तकनीक

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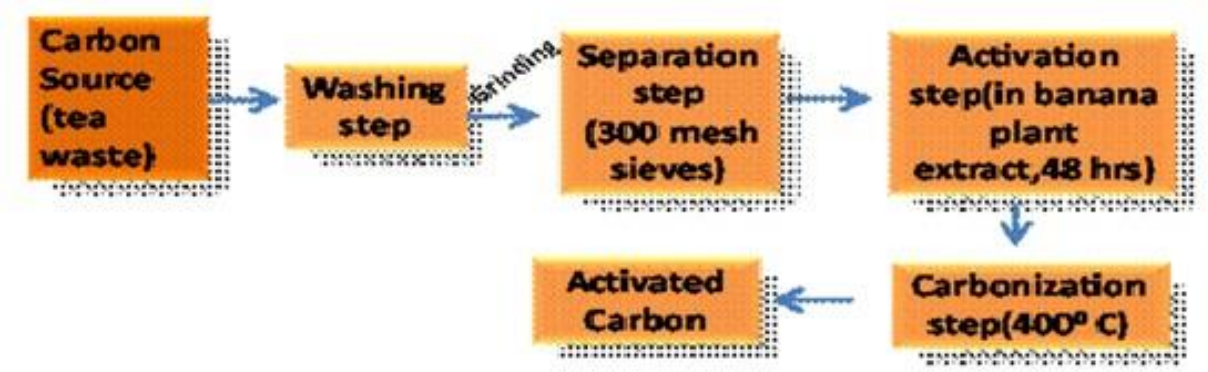


Synthesis of Activated Carbon from Tea Waste

नई दिल्ली, 13 अक्तूबर विषैले-भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैर :(इंडिया साइंस वायर) सक्रिय कार्बन बनाने के लिए एक तकनीक विकसित की है। उनका कहना है कि इस गैरविषैले सक्रिय कार्बन का उपयोग - औद्योगिक प्रदूषण नियंत्रण, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है। इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरविषाक्त उत्पाद बनाये जा सकते हैं।-

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं। सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन कॉफी बीन्स), कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में
किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है।

इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरविषैली प्रक्रिया की - कता थी। यह अध्ययन भारत सरकार के विज्ञान और प्रौद्यआवश्योगिकी विभाग के एक स्वायत्त संस्थान इंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी गुवाहाटी के शोधकर्ताओं द्वारा किया गया है। विज्ञान एवं (आईएएसएसटी) प्रौद्योगिकी मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है। खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है।

फिर राख को चूरचूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े से राख के चूर्ण से पानी को - छान लिया जाता है और अंत में जो घोल मिलता है, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार' या 'कोला खार' कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है। इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एनदेवाशीष चौधरी शामिल हैं। .तालुकदार और एसोसिएट प्रोफेसर डॉ .सी.

शोधकर्ताओं का कहना है कि "सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।" इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं।

इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट विषैले एसिड) के उपयोग से बचा जा सकता ह (और बेसै। इस प्रकार यह एक हरित प्रक्रिया है, जिसमें पौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है।

रिपब्लिक न्यूज़इंडिया

वैज्ञानिकों ने विकसित की कचरे से गैर-विषाक्त सक्रिय कार्बन बनाने की तकनीक

By **Rupesh Dharmik** - October 13, 2021

डॉ मानस ज्योयति डेका, डॉदेवाशीष चौधरी, डा(बाएं से दाएं) तालुकदार .एन .

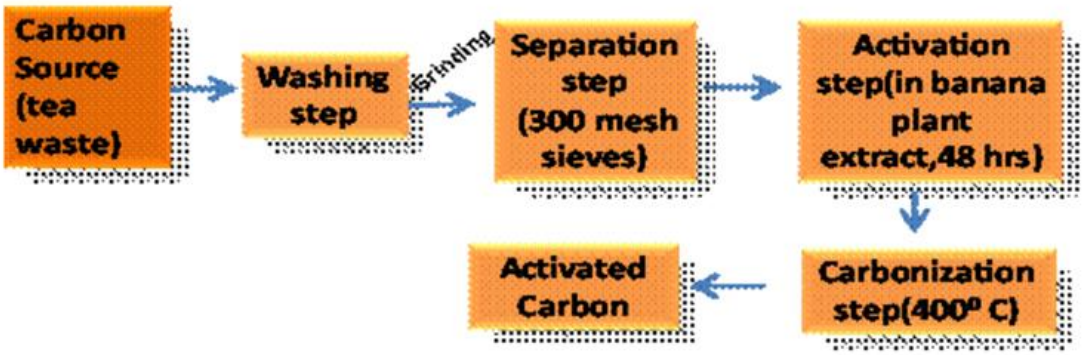
नई दिल्ली, 13 अक्तूबर: भारतीय वैज्ञानिकों ने चाय और केले के कचरे के उपयोग से गैरविषैले सक्रिय कार्बन - विषैले सक्रिय कार्बन का उपयोग -बनाने के लिएएक तकनीक विकसित की है। उनका कहना है कि इस गैर औद्योगिक प्रदूषण नियंत्रण, जल शोधन, खाद्य तथा पेय प्रसंस्करण और गंध निवारण जैसे उद्देश्यों के लिए किया जा सकता है। इस नई विकसित प्रक्रिया के उपयोग से सक्रिय कार्बन का संश्लेषण करने के लिए किसी भी विषैले कारक के उपयोग की आवश्यकता नहीं पड़ती है, जिससे किफायती एवं गैरविषाक्त उत्पाद बनाये जा सकते हैं।-

सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते

हैं।सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी, डिकैफ़िनेशन कॉफी बीन्स), कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरकता थी।विषैली प्रक्रिया की आवश्य-

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थानइंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी गुवाहाटी के शोधकर्ताओं द्वारा किया गया है। विज्ञान एवं (आईएएसएसटी) प्रौद्योगिकी मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।



Synthesis of Activated Carbon from Tea Waste

केले के पौधे से सक्रिय करने वाले एजेंट का संश्लेषण

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूरचूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े - से राख के चूर्ण से पानी को छान लिया जाता है और अंतमें जो घोल मिलता है, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार'या 'कोला खार'कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एनतालुकदारऔर एसो .सी.सिएट प्रोफेसरडॉ देवाशीष चौधरी शामिल हैं। शोधकर्ताओं का कहना है कि ."सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट व)िषैले एसिड और बेसके उपयोग से बचा जा सकता है। इस प्रकारयह एक हरित प्रक्रिया है (, जिसमेंपौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। (इंडिया साइंस वायर)

वैज्ञानिकों ने विकसित की कचरे से गैरविषाक्त सक्रिय - कार्बन बनाने की तकनीक

By RD Times Hindi | October 13, 2021

डॉ मानस ज्योयति डेका, डॉदेवाशीष चौधरी, डा(बाएं से दाएं) तालुकदार .एन .

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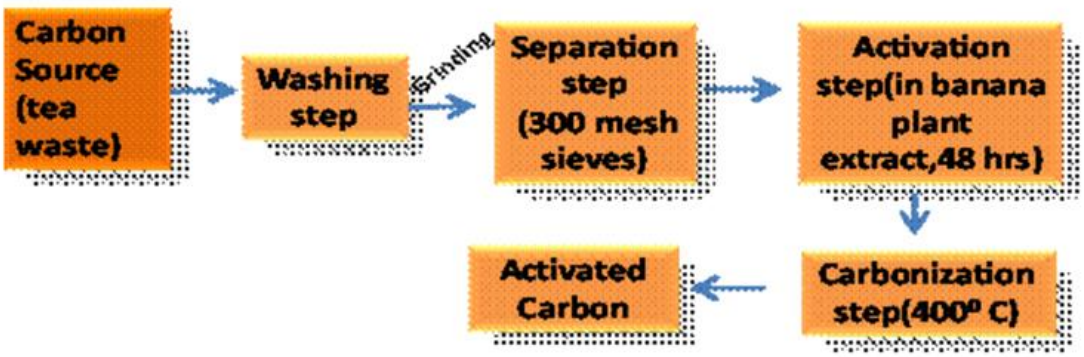
सक्रिय कार्बन, जिसे सक्रिय चारकोल भी कहा जाता है, कार्बन का एक रूप है, जिसमें छोटे, कम मात्रा वाले छिद्र होते हैं, जो अवशोषण या रासायनिक प्रतिक्रियाओं के लिए उपलब्ध सतह क्षेत्र को बढ़ाने के लिए जाने जाते हैं।सक्रिय कार्बन का उपयोग मीथेन और हाइड्रोजन भंडारण, वायु शोधन, विलायकों की रिकवरी,

डिकैफ़िनेशन ब कॉफी)ीन्स, कोको, चाय पत्ती और अन्य कैफीन युक्त सामग्री से कैफीन को हटाना(, स्वर्ण शोधन, धातु निष्कर्षण, जल शोधन, दवा, सीवेज उपचार, श्वासयंत्र में एयर फिल्टर, संपीड़ित हवा में फिल्टर, दांतों को सफेद करने, हाइड्रोजन क्लोराइड के उत्पादन में किया जाता है।

शोधकर्ताओं ने चाय के कचरे से सक्रिय कार्बन तैयार करने के लिए एक वैकल्पिक सक्रिय एजेंट के रूप में केले के पौधे के अर्क का इस्तेमाल किया है। उनका कहना है कि चाय के प्रसंस्करण से आमतौर पर चाय की धूल के रूप में ढेर सारा कचरा निकलता है। इसे उपयोगी वस्तुओं में बदला जा सकता है। चाय की संरचना उच्च गुणवत्ता वाले सक्रिय कार्बन में परिवर्तन के लिए लाभदायक है। हालांकि, सक्रिय कार्बन के परिवर्तन में महत्वपूर्ण एसिड और आधार संरचना का उपयोग शामिल है, जिससे उत्पाद विषाक्त हो जाता है। इसीलिए, अधिकांश अनुप्रयोगों के लिए यह अनुपयुक्त हो जाता है। इस चुनौती से निपटने के लिए एक गैरकता थी।विषैली प्रक्रिया की आवश्य-

यह अध्ययन भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग के एक स्वायत्त संस्थानइंस्टीट्यूट ऑफ एडवांस्ड स्टडी इन साइंस ऐंड टेक्नोलॉजी गुवाहाटी के शोधकर (आईएएसएसटी)्ताओं द्वारा किया गया है। विज्ञान एवं प्रौद्योगिकी मंत्रालय द्वारा बुधवार को जारी एक वक्तव्य में बताया गया है कि केले के पौधे के अर्क में मौजूद ऑक्सीजन के साथ मिलने वाला पोटेशियम यौगिक चाय के कचरे से तैयार कार्बन को सक्रिय करने में मदद करता है।



Synthesis of Activated Carbon from Tea Waste

केले के पौधे से सक्रिय करने वाले एजेंट का संश्लेषण

इस प्रक्रिया में उपयोग किए जाने वाले केले के पौधे का अर्क पारंपरिक तरीके से तैयार किया गया है, जिसे खार के नाम से जाना जाता है। यह जले हुए सूखे केले के छिलके की राख से प्राप्त एक क्षारीय अर्क होता है। इसके

लिए सबसे पसंदीदा केले को असमी भाषा में 'भीम कोल' कहा जाता है। भीम कोल केले की एक स्वदेशी किस्म है, जो केवल असम और पूर्वोत्तर भारत के कुछ हिस्सों में पायी जाती है।

खार बनाने के लिए सबसे पहले केले का छिलका सुखाया जाता है और फिर राख बनाने के लिए उसे जला दिया जाता है। फिर राख को चूरचूर करके एक महीन पाउडर बना लिया जाता है। इसके बाद एक साफ सूती कपड़े - में जो घोल मिलता है से राख के चूर्ण से पानी को छान लिया जाता है और अंत, उसे खार कहते हैं। केले से निकलने वाले प्राकृतिक खार को 'कोल खार'या 'कोला खार'कहा जाता है। इस अर्क का उपयोग सक्रिय करने वाले एजेंट के रूप में किया गया है।

इस अध्ययन से जुड़े शोधकर्ताओं में आईएएसएसटी पूर्व निदेशक डॉ एनसिएट तालुकदारऔर एसो .सी. देवाशीष चौधरी शामिल हैं। शोधकर्ता .प्रोफेसरडॉओं का कहना है कि "सक्रिय कार्बन के संश्लेषण के लिए चाय के उपयोग का कारण यह है कि इसकी संरचना में, कार्बन के कण संयुग्म होते हैं और उनमें पॉलीफेनोल्स बॉन्ड होता है। यह अन्य कार्बन अग्रगामियों की तुलना में सक्रिय कार्बन की गुणवत्ता को बेहतर बनाता है।"

इस प्रक्रिया का मुख्य लाभ यह है कि प्रारंभिक सामग्री, साथ ही सक्रिय करने वाले एजेंट, दोनों ही कचरा हैं। इस नई विकसित प्रक्रिया में सक्रिय कार्बन को संश्लेषित करने के लिए किसी भी विषैले सक्रिय करने वाले एजेंट के उपयोग से बचा जा सकता है। इस (विषैले एसिड और बेस) प्रकारयह एक हरित प्रक्रिया है, जिसमेंपौधों की सामग्री को सक्रिय करने वाले एजेंट के रूप में उपयोग किया गया है। इसके लिए हाल ही में एक भारतीय पेटेंट दिया गया है। (इंडिया साइंस वायर)

DownToEarth | डाउन टू अर्थ

IIT-Madras researchers design white light emitters for LED applications

The innovation has been patented by the researchers and was recently granted the Government of India's 'SERB-Technology Translation Award'

By India Science Wire

Published: Monday 18 October 2021

Conventional LED materials cannot emit white light and specialised techniques such as coating blue LED with yellow phosphor and combining blue, green and red LEDs, have been used to produce white light.

There has been a worldwide search for materials that can directly emit white light rather than through these indirect techniques that can cause loss of efficiency.

Researchers at the Indian Institute of Technology (IIT) Madras have successfully developed a white light emitter for use in LEDs. The development of energy-efficient Light Emitting Diodes or LEDs replaced the energy-inefficient incandescent lamps in lighting and display applications.

While LEDs have been available in almost all colours, white LEDs are a more recent development.

The innovation has been patented by the researchers and was recently granted the Government of India's 'SERB-Technology Translation Award.'

The Science and Engineering Research Board (SERB) provides financial assistance to researchers, academic institutions, research and development laboratories, industrial concerns, and other agencies.

The team proposes to use the grant money of Rs 30 lakh to produce LEDs using their distorted perovskite materials.

This study was led by Aravind Kumar Chandiran, assistant professor, department of chemical engineering, IIT Madras and Ranjit Kumar Nanda B, department of physics, IIT Madras.

Chandiran explained the practical applications of the research:

> **The indigenously-developed bright white light emitters can potentially replace the conventional high-cost materials and phenomenally save the energy cost per lumens.**

"We believe that our work contributes to the Government of India's 'Make in India' programme and we hope to become a technology leader in light emitters in the near future," Chandiran added.

Researchers, in addition to reporting the details of the specific perovskite material, have also proposed a clear design strategy that scientists can employ to develop white light emitters.

Ranjit Kumar Nanda B highlighted the impact this research could have in the field:

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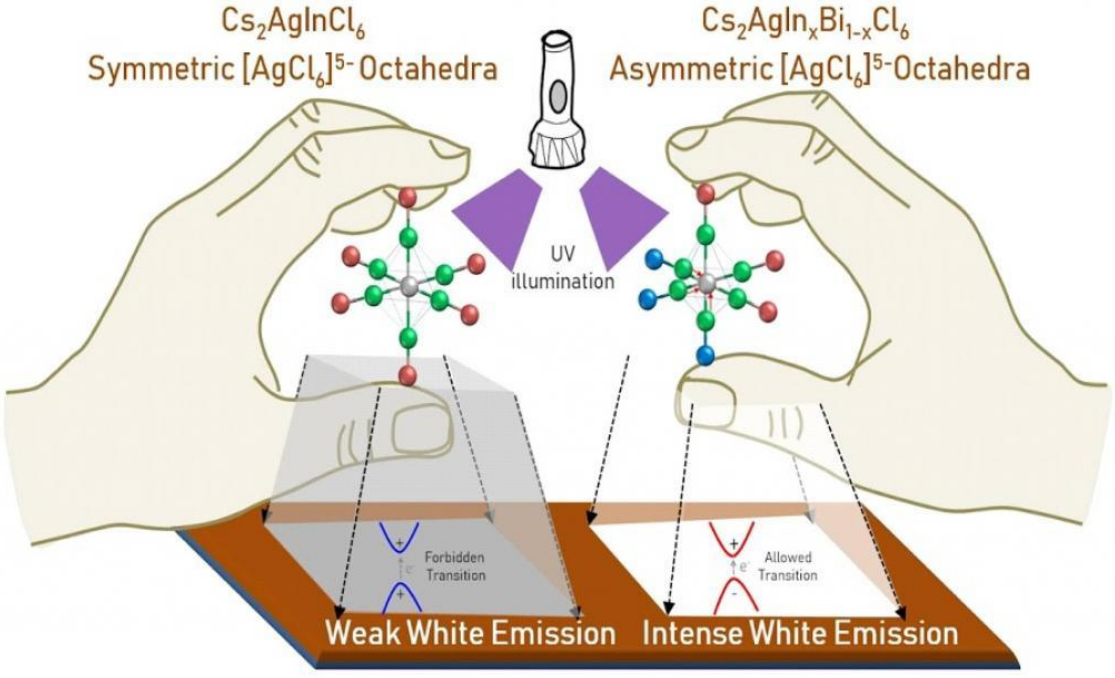

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“The strategic introduction of distortion in halide perovskite generated intense light covering the complete visible spectrum. These materials show at least eight times intense white light emission compared to the conventional Ce:YAG emitters,” Chandiran added.

This distorted perovskite can be used independently as a white light emitter or as a phosphor in combination with blue LEDs to produce white light.

Unlike other recently developed white LED materials, this distorted perovskite showed phenomenal stability under ambient conditions.

The emission of intense light and stability make them useful in long-lasting, energy-saving lighting applications.

Apart from general lighting, white LEDs can potentially be used in liquid crystal display backlights, display mobile lighting and medical and communication equipment.

The study has been published in the research journal *Communications Materials*. Apart from Ranjit Kumar Nanda B and Aravind Kumar Chandiran, Tamilselvan Appadurai, Ravi Kashikar, Poonam Sikarwar and Sudhadevi Antharjanam were involved in the study. (**India Science Wire**)

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October 19, 2021

India Science Wire

Conventional LED materials cannot emit white light and specialized techniques such as coating blue LED with yellow phosphor and combining blue, green, and red LEDs, have been used to produce white light. There has been a worldwide search for materials that can directly emit white light rather than through these indirect techniques that can cause loss of efficiency.

Researchers at Indian Institute of Technology (IIT) Madras have successfully developed a white light emitter for use in LEDs. The development of energy-efficient Light Emitting Diodes or LEDs replaced the energy-inefficient incandescent lamps in lighting and display applications. While LEDs have been available in almost all colours, white LEDs are a more recent development.

The innovation has been patented by the researchers and was recently granted the Government of India's 'SERB-Technology Translation Award.' The Science and Engineering Research Board (SERB) provide financial assistance to researchers, academic institutions, research and development laboratories, industrial concerns, and other agencies. The team proposes to use the grant money of Rs. 30 lakh to produce LEDs using their distorted perovskite materials.

This study was led by Dr.Aravind Kumar Chandiran, Assistant Professor, Department of Chemical Engineering, IIT Madras, and Prof.Ranjit Kumar Nanda B., Department of Physics, IIT Madras.

Explaining the practical applications of this Research, Dr.Aravind Kumar Chandiran, Assistant Professor, Department of Chemical Engineering, IIT Madras, said, "The indigenously-developed bright white light emitters can potentially replace the conventional high-cost materials and phenomenally save the energy cost per lumens.""We believe that our work contributes to Government of India's 'Make in India' programme and we hope to become a technology leader in light emitters in the near future", Dr.Chandiran added.

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DELHI POST
Politics | Democracy | Development

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Kashmir Convener
Voice of Courage

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By Online Editor On Oct 18, 2021

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Republic NewsIndia

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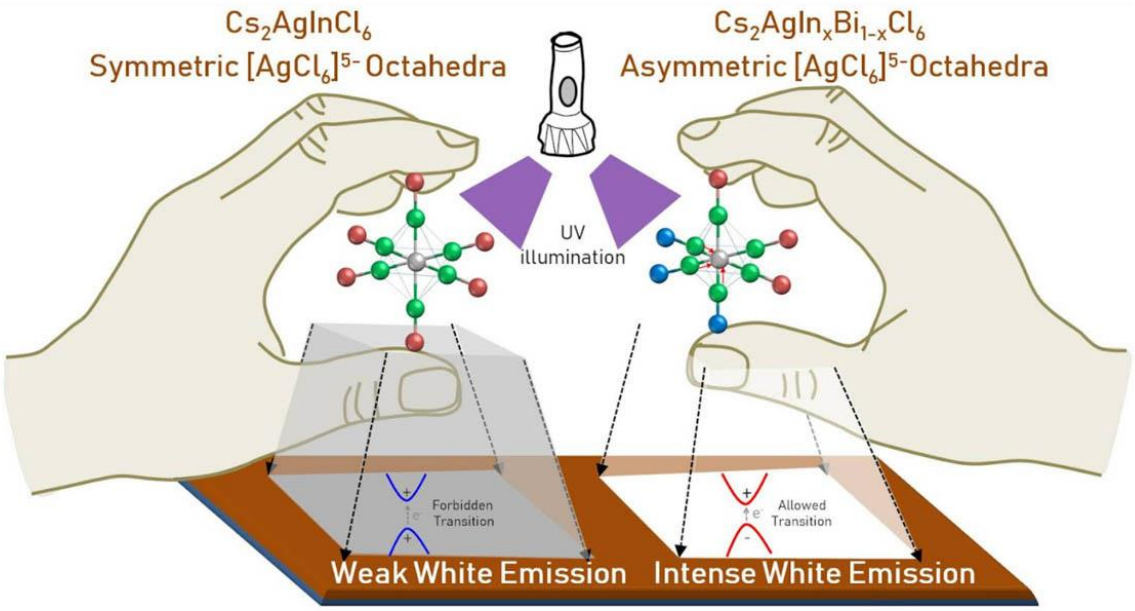

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by **Indus Scrolls Bureau** October 18, 2021 in **Featured**, **Indian Sciences**

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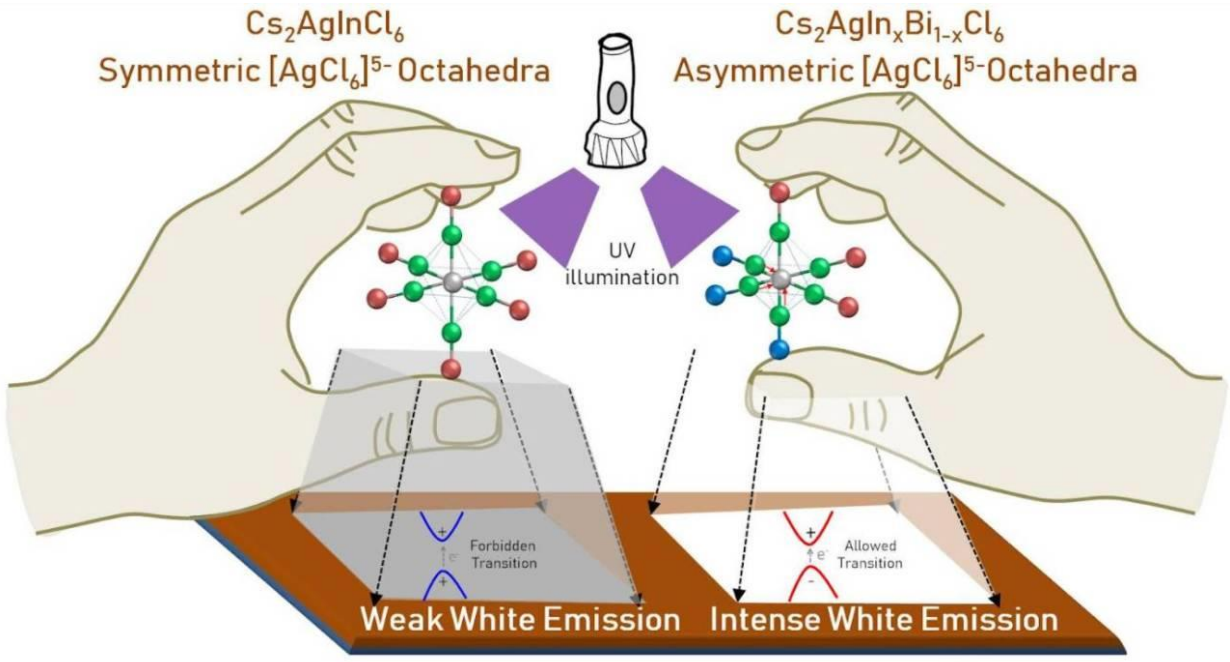
ISW/USM/IIT Madras /Eng/18/10/2021

Keywords: LED, materials, light, techniques, blue LED, yellow phosphor, red LEDs, white light, IIT Madras



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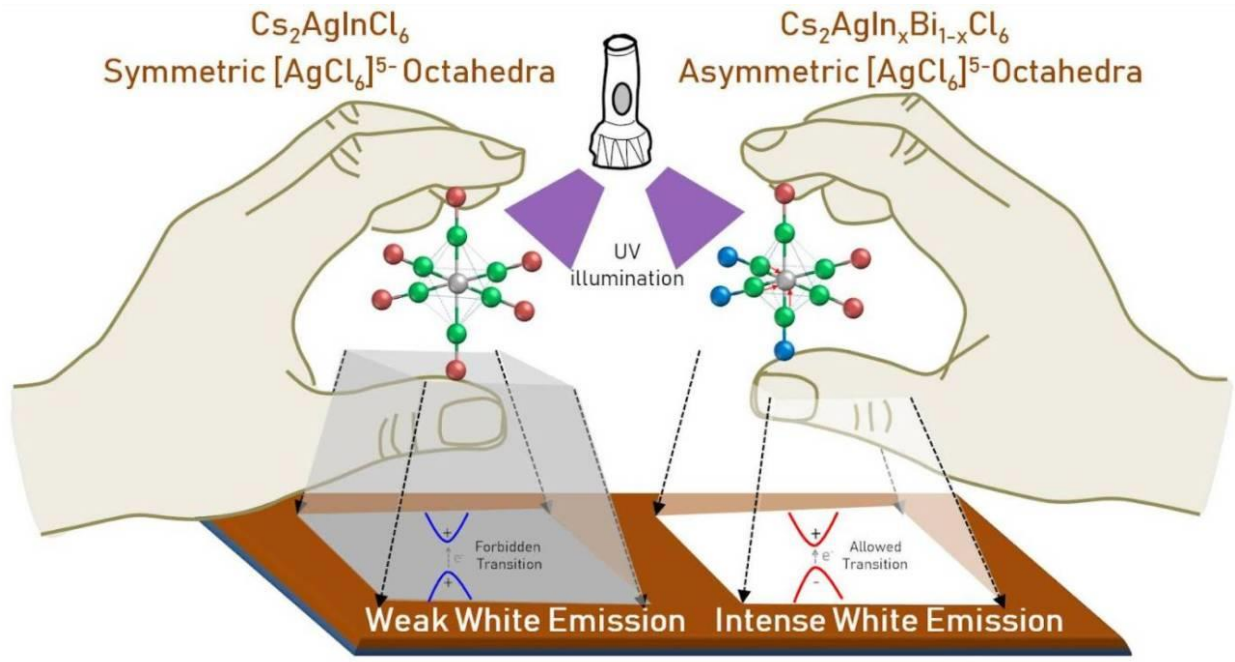

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Republic NewsIndia

Taking science to lay public

By **Rupesh Dharmik** - October 20, 2021

New Delhi, Oct 20: Schooling in mother tongue is vital for grasping knowledge related to science and technology. However, in a world of rapid development of science and technology research, school education alone is not adequate. It can get outdated very fast. Informal learning spaces such as science clubs, popular science books, science news in newspapers, social media messages provide opportunities for nurturing a learning society.

Vigyan Prasar has been working to kindle interest in science among the masses using all physical and multimedia touchpoints. Public response for VigyanPrasar's efforts to promote science communication through regional languages has always been immense and is likely to grow further.

Going forward, VigyanPrasar plans to reach every district headquarters with field-level activities. Taking the baton forward would be the numerous

volunteers from various government, nongovernment, media, and educational institutes who have come forward to assist these initiatives in various states and UTs.

Vigyan Prasar (VP) organized a day-long workshop to review and further plan its flagship project called Science Communication, Popularisation and Extension (SCoPE)-in-Indian Languages (also known as VigyanBhasha) at the India International Centre, New Delhi on October 20. Participants from all over the country working in various languages under the project joined the meeting.

Besides Hindi & English, 50 SCoPE experts/representatives from Urdu, Kashmiri, Dogri, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Maithili & Nepali attended it.

Eminent science Communicators from different parts of the country also came forward to plan actionable items going forward and reviewed the work done so far. These included representatives from universities, science and technology centers, and state S&T departments from across the country.

"To ensure quick and effective implementation of Science Communication & Popularisation at all levels in the society, connecting through one's own language is the first step. This is why we chose all media products to be designed & developed in Indian languages," said Dr NakulParashar, Director of VigyanPrasar and brain behind the project.

He noted that challenges are many but with effective processes and a devoted team of science communicators, the project has achieved numerous milestones in a very short period.

Dr T V Venkateswaran, Scientist F and the National Coordinator for the project said- "VigyanBhasha would mobilise various agencies, both governmental and nongovernmental to create a national effort to develop materials in Indian languages".

VigyanPrasar has chosen Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English in its first phase of enhancing its science outreach programmes.

From monthly popular science magazines to regular lectures on latest development and cutting edge research; from publication of popular science books to harnessing social media to capture the imagination of youth; from producing television programmes to the latest science news, the Project VigyanBhasha initiative has unleashed the science communication,

popularisation and extension in chosen Indian languages in the past two years.

One of the successful and massive efforts, under the project was the celebration of 'RamanujanYatra – a nationwide popularisation effort to communicate the strife, struggle and glorious achievement of mathematician Ramanujan and the same time address the maths phobia by presenting various facets of advanced mathematics in a way that is appealing and intelligible.

Sensitising and training media people towards science communication helps position science news and popular science in print and television. With this aim capacity building programmes were conducted for media & journalism students as well as working journalists on how to communicate science to the general public. These skill development programmes have attracted wide appreciation and demand.

Publication of popular science books in Indian languages on advanced topics has already commenced in a modest way. Soon, VP would bring out publications in various Indian languages and also make an effort to disseminate the publications through book fairs, melas, and regular sales through booksellers including online sales.

In the years to come, the activities would be expanded into other languages, including tribal dialects in phase II. Together with resources persons and local support in the respective districts, VigyanPrasar is poised to become a torchbearer of science popularization, under the umbrella of Project VigyanBhasha initiative. (India Science Wire)

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Voice of the Nation
ORGANISER

Taking science to lay public

WEBDESK Oct 21, 2021, 09:05 AM IST

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Courtesy: India Science Wire

indianScoops

Taking science to lay public

October 20, 2021

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The IndianBulletin
www.theindianbulletin.com

Taking science to lay public

By **The Indian Bulletin Online** - October 20, 2021

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A NEWS OF INDIA
beyond the words...

Science Communication, Popularisation and Extension (ScoPE) in Indian Languages: Kashmir to Kanyakumari

By **admin** - October 20, 2021

@ Vikash Sharma | Sr Journalist

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• Conversations focused on recognizing the accomplishments of various organizations and movements in science popularization, communication and extension activities.
• Analyse the impact of the activities undertaken by various initiatives, and also act as a bridge to strengthen the relationship between institutions and movements that involve in science popularization, communication and extension activities, and plan future activities.
• Examine the role played by lead ScoPE activities during the COVID communication, in particular address the issue of vaccine hesitancy.
• Initiate and conduct science clubs, launch hands-on activities and learning kits, conduct science communication through poetry & other literary forms, film and documentary screenings.

• Extend its outreach through its own channels across social media platforms in various Indian languages.

Why Indian languages:
• Science communication in the various Indian language goes back decades, translating scientific concepts and terms into their native tongue. Efforts in communicating science in mother tongue was part of the national freedom movements.
• Millions of students undergo their schooling in Indian languages, and providing contemporary information on science & technology in their own mother tongue is imperative to build knowledge society and nurture scientific temper.
• Studying and thinking in mother tongue enhances innovative capacity.
• The policy of the Government of India is to promote all Indian Languages, and the ambitious initiative of Vigyan Prasar is aligned with this policy.

Road Ahead:
Schooling in mother tongue is vital for grasping a knowledge related to science and technology; however, in a world of rapid development of science and technology research, school education received in the past alone is not adequate, and soon would become outdated. Continuous updating of our knowledge as citizens is vital for us to be able to function as a full member in the modern society. Informal learning spaces such as science clubs, science meals, popular science books, science news in newspapers, social media messages provide opportunity for nurturing a learning society. Vigyan Prasar has been created solely for the purpose of kindling interest in science among the masses using all physical and multimedia touchpoints. Public response for Vigyan Prasar's current activities in regional languages has always been immense and is likely to grow further.

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https://vigyanprasar.gov.in/

ISMATIMES

Science Communication, Popularisation and Extension (ScoPE) in Indian Languages:Kashmir to Kanyakumari

Posted by ismatimes On October 20, 2021

Report : Sunit Narula :

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About Vigyan Prasar and Indian Language initiatives:

Vigyan Prasar(VP), is 32-year old autonomous organization of the Department of Science & Technology. It is also the National institute for science communication, popularisation and extension that caters to nationwide needs. VPhas chosen Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English in its first phase of enhancing its science outreach programmes. From monthly popular science magazines to regular lectures on latest development and cutting edge research; from publication of popular science books to harnessing social media to capture the imagination of youth; from producing television programmes to latest science news, the Project Bhasha initiative has unleashed the science communication, popularisation and extension in these Indian languages in the past two years.

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Expanding its outreach in regional languages is now a prime endeavour of Vigyan Prasar. In a linguistically diverse nation as India whose population is skewed towards the youth, the vitality of informal means of learning scientific concepts in the regional tongue cannot be overstated.

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Science Communication, Popularisation and Extension (ScoPE) in Indian Languages: Kashmir to Kanyakumari

desk1 day ago

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BRIGHTER KASHMIR

Media's role in popularizing mother tongue crucial for its survival: Director SCoPE

One-day conference on Indian languages

'Science subject can be better understood in mother tongue'

October 21, 2021 | Daanish Bin Nabi

Vigyan Prasar, in national capital New Delhi, on Wednesday conducted a one - day conference titled Science and Communication Popularisation and its Extension (SCoPE) in Indian Languages from Kashmir to Kanyakumari

While stressing on the mother tongue, the Director SCoPE Nukul Prashar said that mother tongue holds an important aspect for the upbringing of the child future and that the science can mould the future of the student in a more proper manner if the subject is taught in mother tongue

“The mother tongue is important. The media should give first preference to the mother tongue of their own regions so that people on the whole and students in particular can understand the science subject in a better way,” Prashar said.

Talking about Kashmir, Director SCoPE said that the organization will soon be launching a magazine namely Ghaash in Kashmir for the promotion of local languages and Kashmiri language.

“Newsletter will work as ‘Silent seller’ in remote areas if the media gives proper attention to these areas in their respective states,” the Director said.

He said that schooling is fundamental for education in any area. “If knowledge is to be explored in a better way than one has to understand his/her mother tongue,” Prashar said.

He said that however at the government level ‘public policy is lacking’. “To make a better environment for the students to understand the science in their mother tongue, citizens have an important role to play,” he said.

He said that for learning science, it is important to understand the subject in its own dialects.

“Mother tongue plays an important role in spreading the science language, however, we need to debate about introducing mother tongue in our social circles to understand the subject,” he said.

He said that the society needs experts to discuss and debate the languages like Urdu and Kashmir.

Talking about the role of print media, he said that the print media has a lasting impression.

“Print media is very important as it leaves a long lasting impression on the minds of people. Written words always play an important role in peoples’ lives,” the Director said.

He said that, soon after Covid hit, the online lectures gave a new dimension in shaping students and also changed the course of education.

He said that India has a total of 19569 dialects and 121 languages are spoken by the majority of the people. “Every language must be respected,” the Director said.

Former Vice Chancellor of Central University of Kashmir Mehraj-ud-Din also participated in the one-day conference at New Delhi.

He said that technology has taken the new generation to the next level. “While technology has taken us to the next level, at the same time we must not ignore our mother tongue. And should always prefer to talk in mother tongue with our children at home,” the former VC said at the conference.

He said that scientific methods have changed roles in our society. However, in our part of the society we lack scientific method.

“Look at Israel. They have such a system in place that even when a child is still in the mother's womb, such an atmosphere is created around him/her that their children have to go through a proper method. Also, the children from a very tiny age have to learn everything in Hebrew, which is their mother tongue,” the former VC said.

He said whatever they (Israel) teach their children in all in Hebrew and it (Hebrew) language is an important part of their curriculum.

He further said that the great Sufi Saint Shiekh-ul-Aalam (RA) is the fountainhead of knowledge and research in Kashmir.

“We need to dig more in his works to understand our mother tongue. If we want to excel in our mother tongue and want a connection between science and our Kashmiris then reading, researching and understanding the legendary Sufi Saint Shiekh-ul-Aalam is a must,” Mehraj-ud-Din.

He said that as of today, Kashmir is far behind all this and not only Kashmiri but Ladakhi and Gujjar languages should be taken forward with all the zeal, in which the administration must play an important role.

Dean School of Media Studies Central University of Kashmir Shahid Rasool said that youngsters are too much into social and digital media which is shaping up their perspective towards life and career.

He said that there are around 100 million Urdu speaking people in Jammu and Kashmir and 60 million Kashmiri speaking people who are regular watchers of social media and digital media platforms.

“We are resource starved and we need to have a target audience to make these online portals more viable for our students,” Rasool said.

He emphasized on promotion of science through local languages and electronic media could play a vital role among rural youth who are deprived of exposure to developments globally.

“I call youngsters who are active on social media as digital natives and they as the target audience could play an important role in spreading scientific knowledge in rural settings,” Rasool said.

Prof Mehfooza Jan, head of Department of Kashmiri in Kashmir University traced the importance of Kashmiri language in shaping the history of Kashmir.

Dr Irfan Alam, Head of Department Kashmiri in Central University Kashmir highlighted the role of Urdu in the sub-continent and termed it a sweet language which promotes harmony and respect towards each other.

Chief Editor Brighter Kashmir newspaper Farooq Ahmad Wani expressed his delight over participation in the national conference on mother tongue.

“Youth along Line of Control are totally bereft of the situation in other parts of the country and we should focus on them through means of communication and newsletters could be one form which could help them evolve as conscious citizens who know what is happening around the world,” Farooq Ahmad Wani said.

Participants from other states of India also participated in the one-day conference in New Delhi.

The participants shed light about their state of affairs in their respective states on the topic and how they toil hard day-in-day out to work for the betterment of their students.

DownToEarth | डाउन टू अर्थ

Bringing science to layman: Vigyan Prasar workshops tries to rekindle public interest in science

Vigyan Prasar, an autonomous organisation under the Department of Science and Technology, has been working to kindle interest in science among the masses

By India Science Wire

Published: Thursday 21 October 2021

Schooling in mother tongue is vital to grasp knowledge related to science and technology. In a world of rapid development, however, school education alone is not adequate. It can get out-dated pretty fast.

Informal learning spaces such as science clubs, popular science books, science news in newspapers as well as social media messages nurture a learning society.

Vigyan Prasar, an autonomous organisation under the Department of Science and Technology, has been working to kindle the public's interest in science by using physical and multimedia touch points.

Public response for Vigyan Prasar's efforts to promote science communication through regional languages has always been immense and is likely to grow further.

The body plans to reach all district headquarters with field-level activities. Taking the baton forward would be numerous volunteers from various government, non-government, media and educational institutes.

The organisation conducted a day-long workshop to review and further plan its flagship project called Science Communication, Popularisation and Extension (SCoPE)-in-Indian Languages (also known as Vigyan Bhasha) at the India International Centre, New Delhi on October 20, 2021.

Participants from all over the country working in various languages under the project joined the meeting.

Besides Hindi and English, 50 SCoPE experts / representatives from Urdu, Kashmiri, Dogri, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Maithili and Nepali origins attended it.

Eminent science communicators from different parts of the country came forward to plan actionable items and reviewed the work done so far. These included representatives from universities, science and technology centers as well as state S&T departments from across the country.

"To ensure quick and effective implementation of science communication and popularisation at all levels in the society, connecting through one's own language is the first step. This is why we chose all media products to be designed and developed in Indian languages," said Nakul Parashar, director, Vigyan Prasar.

He noted that challenges are many but with effective processes and a devoted team of science communicators, the project has achieved numerous milestones in a very short time.

TV Venkateswaran, scientist F and national coordinator for the project, said: “Vigyan Bhasha would mobilise various agencies, both governmental and nongovernmental to create a national effort to develop materials in Indian languages”.

Vigyan Prasar has chosen Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English in its first phase of enhancing its science outreach programmes.

Project Vigyan Bhasha initiative has unleashed the science communication, popularisation and extension in chosen Indian languages in the last two years: From monthly popular science magazines to regular lectures on latest development and cutting edge research; from publication of popular science books to harnessing social media to capture the imagination of youth; from producing television programmes to the latest science news.

One of the successful efforts under the project was the celebration of ‘Ramanujan Yatra — a nationwide popularisation effort to communicate the strife, struggle and glorious achievement of mathematician Ramanujan.

It addressed the math phobia faced by many by presenting various facets of advanced mathematics in an intelligible way. Sensitising and training media people towards science communication helps position science news and popular science in print and television.

Capacity building programmes were conducted for media and journalism students as well as working journalists on ways to communicate science to the general public. These skill development programmes have attracted wide appreciation and demand.

Publication of popular science books in Indian languages on advanced topics has already commenced in a modest way.

Soon, Vigyan Parasar would bring out publications in various Indian languages and also make an effort to disseminate the publications through book fairs, melas, and regular sales through booksellers including online sales.

In the years to come, the activities would be expanded into other languages, including tribal dialects in phase II. Together with resources persons and local support in the respective districts, Vigyan Prasar is poised to become a torchbearer of science popularisation, under the umbrella of Project Vigyan Bhasha initiative.

THE WEEK

Vigyan Prasar plans to reach every district headquarters with field-level activities

PTI Updated: October 20, 2021 22:29 IST

New Delhi, Oct 20 (PTI) Vigyan Prasar, an autonomous body under the Department of Science and Technology (DST), on Wednesday said it plans to reach every district headquarters with field-level activities and in the coming years, its activities would be expanded into other languages, including tribal dialects.

In a statement, it said schooling in mother tongue is vital for grasping knowledge related to science and technology.

"However, in a world of rapid development of science and technology research, school education received in the past alone is not adequate and soon would become outdated. Continuous updating of our knowledge as citizens is vital for us to be able to function as full members in the modern society," it said.

Going forward, Vigyan Prasar said it plans to reach every district headquarters with field-level activities.

Numerous volunteers from various government, non-government, media and educational institutes, who have come forward to assist these initiatives in various states and Union territories, would take the baton forward, it added.

"In the years to come, the activities would be expanded into other languages, including tribal dialects in the phase II. Together with resources and local support in the respective districts, Vigyan Prasar is poised to become a torchbearer of science popularisation under the umbrella of Project Bhasha initiative," it said.

"To ensure quick and effective implementation of science communication and popularisation at all levels in the society, connecting through one's own language is the first step in this direction. This is why we chose all media products to be designed and developed in Indian languages," said Dr Nakul Parashar, Director of Vigyan Prasar. PTI UZM RC

ScoPE in Indian Languages

Webdunia

புதன், 20 அக்டோபர் 2021 (21:21 IST)

Science Communication, Popularisation and Extension (ScoPE) in Indian Languages:

Vigyan Prasar (VP) is organizing/organized a day-long workshop to review and further plan its flagship project called Science Communication, Popularisation and Extension (SCoPE)-in-Indian Languages (also known as Vigyan Bhasha) at the India International Centre, New Delhi on 20th Oct 2021. Participants from all over the country working in various languages under the project will join/joined this important one-day meeting.

Besides Hindi & English, 50 SCoPE experts/representatives from Urdu, Kashmiri, Dogri, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telegu, Bengali, Assamese, Maithili & Nepali joined the meeting. Science Communicators of national importance came forward to plan actionable items going forward and reviewed the work done so far. These included representatives from universities, science and technology centers and state S&T departments from across the country. A fabulous display of print publications in these projects produced so far was put forth, which was highly appreciated by one and all.

"To ensure quick and effective implementation of Science Communication & Popularisation at all levels in the society, connecting through one's own language is the first step in this direction. This is why we chose all media products to be designed & developed in Indian languages, " says Dr Nakul Parashar, Director of Vigyan Prasar and brain behind the project SCoPE-in-Indian Languages. Challenges many but with effective process and devoted team of science communicators, the project has achieved numerous milestones in a very short time period, commented Parashar.

Dr T V Venkateswaran, Scientist F and the National Coordinator for SCoPE-in-Indian Language said "With the arrival of television medium, some predicted the demise of written word. However from whatsapp to twitter, the written words are is seeing a revival in the emerging social media communication. Conversations in the mother tongue is necessary for comprehension of the messages; Project Vigyan Bhasha would mobilise various agencies, both governmental and non-governmental to create a national effort to develop materials in Indian languages"

Purposes / Objectives of this seminar:

• Conversations focused on recognizing the accomplishments of various organizations and movements in science popularization, communication and extension activities.

• Analyse the impact of the activities undertaken by various initiatives, and also act as a bridge to strengthen the relationship between institutions and movements that involve in science popularization, communication and extension activities, and plan future activities.

• Examine the role played by lead ScoPE activities during the COVID communication, in particular address the issue of vaccine hesitancy.

• Initiate and conduct science clubs, launch hands-on activities and learning kits, conduct science communication through poetry & other literary forms, film and documentary screenings.

• Extend its outreach through its own channels across social media platforms in various Indian languages.

Why Indian languages:

• Science communication in the various Indian language goes back decades, translating scientific concepts and terms into their native tongue. Efforts in communicating science in mother tongue was part of the national freedom movements.

• Millions of students undergo their schooling in Indian languages, and providing contemporary information on science & technology in their own mother tongue is imperative to build knowledge society and nurture scientific temper.

• Studying and thinking in mother tongue enhances innovative capacity.

• The policy of the Government of India is to promote all Indian Languages, and the ambitious initiative of Vigyan Prasar is aligned with this policy.

Road Ahead:

Schooling in mother tongue is vital for grasping a knowledge related to science and technology; however, in a world of rapid development of science and technology research, school education received in the past alone is not adequate, and soon would become outdated. Continuous updating of our knowledge as citizens is vital for us to be able to function as a full member in the modern society. Informal learning spaces such as science clubs, science meals, popular science books, science news in newspapers, social media messages provide opportunity for nurturing a learning society. Vigyan Prasar has been created solely for the purpose of kindling interest in science among

the masses using all physical and multimedia touchpoints. Public response for Vigyan Prasar's current activities in regional languages has always been immense and is likely to grow further.

Going forward, Vigyan Prasar plans to reach every district headquarters with field level activities. Taking the baton forward would be the numerous volunteers from various government, non-government, media and educational institutes who have come forward to assist these initiatives in various states and UTs. In years to come, the activities would be expanded into other languages, including tribal dialects in the phase II. Together with resources persons and local support in the respective districts, Vigyan Prasar is poised to become a torchbearer of science popularization, under the umbrella of Project Bhasha initiative.

About Vigyan Prasar and Indian Language initiatives:

Vigyan Prasar(VP), is 32-year old autonomous organization of the Department of Science & Technology. It is also the National institute for science communication, popularisation and extension that caters to nationwide needs. VPhas chosen Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English in its first phase of enhancing its science outreach programmes. From monthly popular science magazines to regular lectures on latest development and cutting edge research; from publication of popular science books to harnessing social media to capture the imagination of youth; from producing television programmes to latest science news, the Project Bhasha initiative has unleashed the science communication, popularisation and extension in these Indian languages in the past two years.

One of the successful and massive effort, under the Project Vigyan Bhasha, was the celebration of 'Ramanujan Yatra'; a nationwide popularisation effort to communicate the strife, struggle and glorious achievement of mathematician Ramanujan and the same time address the maths phobia by presenting various facets of advanced mathematics in a way that is appealing and intelligible.

Sensitising and training media people towards science communication helps position science news and popular science in print and television. With this aim, under the Project Bhasha, capacity building programmes were conducted for media & journalism students as well as working journalist and media personal on how to communicate science to general public. These skill development programme has attracted wide appreciation and demand.

Publication of popular science books in Indian languages on advanced topics has commenced in a modest way and the growth was hampered by the COVID pandemic. Soon, VP would bring out publications in various Indian languages and also take effort to disseminate the publications through bookfairs, melas and regular sales through book sellers including online sales.

Expanding its outreach in regional languages is now a prime endeavour of Vigyan Prasar. In a linguistically diverse nation as India whose population is skewed towards the youth, the vitality of informal means of learning scientific concepts in the regional tongue cannot be overstated.

https://vigyanprasar.gov.in/

Vigyan Prasar workshops

October 21, 2021 | Posted by: admin1 | Category: DPN Topics

Vigyan Prasar workshops

Subject – Science and Tech

Context – Bringing science to layman: VigyanPrasar workshops tries to rekindle public interest in science

Concept –

- VigyanPrasar, an autonomous organisation under the Department of Science and Technology, has been working to kindle the public's interest in science by using physical and multimedia touch points.
- Public response for VigyanPrasar's efforts to promote science communication through regional languages has always been immense and is likely to grow further.
- The body plans to reach all district headquarters with field-level activities. Taking the baton forward would be numerous volunteers from various government, non-government, media and educational institutes.
- The organisation conducted a day-long workshop to review and further plan its flagship project called Science Communication, Popularisation and Extension (SCoPE)-in-Indian Languages (also known as Vigyan Bhasha) at the India International Centre, New Delhi on October 20, 2021.
- Participants from all over the country working in various languages under the project joined the meeting.
- Besides Hindi and English, 50 SCoPE experts / representatives from Urdu, Kashmiri, Dogri, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Maithili and Nepali origins attended it.

- Eminent science communicators from different parts of the country came forward to plan actionable items and reviewed the work done so far. These included representatives from universities, science and technology centers as well as state S&T departments from across the country.
- VigyanPrasar has chosen Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English in its first phase of enhancing its science outreach programmes.
- Project Vigyan Bhasha initiative has unleashed the science communication, popularisation and extension in chosen Indian languages in the last two years: From monthly popular science magazines to regular lectures on latest development and cutting edge research; from publication of popular science books to harnessing social media to capture the imagination of youth; from producing television programmes to the latest science news.
  - Vigyan Bhasha would mobilise various agencies, both governmental and nongovernmental to create a national effort to develop materials in Indian languages.
- One of the successful efforts under the project was the celebration of 'Ramanujan Yatra — a nationwide popularisation effort to communicate the strife, struggle and glorious achievement of mathematician Ramanujan.
  - It addressed the math phobia faced by many by presenting various facets of advanced mathematics in an intelligible way. Sensitising and training media people towards science communication helps position science news and popular science in print and television.
- Capacity building programmes were conducted for media and journalism students as well as working journalists on ways to communicate science to the general public. These skill development programmes have attracted wide appreciation and demand.
- Publication of popular science books in Indian languages on advanced topics has already commenced in a modest way.
- In the years to come, the activities would be expanded into other languages, including tribal dialects in phase II. Together with resources persons and local support in the respective districts, VigyanPrasar is poised to become a torchbearer of science popularisation, under the umbrella of Project Vigyan Bhasha initiative.

SOCIALNEWS.XYZ
The Millennial Media

Science in mother language to every district: SCoPE's plan ahead

POSTED BY: GOPI OCTOBER 20, 2021

New Delhi, Oct 21 (SocialNews.XYZ) Apart from science clubs, popular science books, science through newspapers and science outreach through social media for science popularisation, Vigyan Prasar now plans to reach every district with field level activities.

After a day-long deliberations on Wednesday, Vigyan Prasar - an autonomous organisation of the Department of Science and Technology, announced that in years to come, all the existing activities would be expanded into other Indian languages, including tribal dialects.

Languages chosen in this phase are -- Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English.

As next phase of the SCoPE - Science Communication, Popularisation and Extension (SCoPE) - programme, Vigyan Prasar has embarked on a Project Vigyan Bhasha for SCoPE in Indian languages.

Work would be carried out with science communicators in all official languages.

"From WhatsApp to Twitter, the written word is seeing a revival in the emerging social media communication. Conversations in mother tongue is necessary for comprehension of the message. Project Vigyan Bhasha would mobilise various agencies, including NGOs, to create a national effort to develop science popularisation content in all formats in all Indian languages," national coordinator SCoPE in Indian Languages, TV Venkateswaran said at a media conference.

Describing the many challenges and how devoted the team of science communicators from across the country helped achieve the goals, Director, Vigyan Prasar, Nakul Parashar said, "All media products are designed and developed in Indian languages."

The activities planned include, initiate and conduct science clubs, launch hands-on activities (which can be taken to areas without internet), develop learning kits, conduct science communication through literary forms, films and documentaries.

Source: IANS

REPUBLICWORLD.COM

Last Updated: 20th October, 2021 22:33 IST

Vigyan Prasar Plans To Reach Every District Headquarters With Field-level Activities

Vigyan Prasar plans to reach every district headquarters with field-level activities

Written By Press Trust Of India

New Delhi, Oct 20 (PTI) Vigyan Prasar, an autonomous body under the Department of Science and Technology (DST), on Wednesday said it plans to reach every district headquarters with field-level activities and in the coming years, its activities would be expanded into other languages, including tribal dialects.

In a statement, it said schooling in mother tongue is vital for grasping knowledge related to science and technology.

"However, in a world of rapid development of science and technology research, school education received in the past alone is not adequate and soon would become outdated. Continuous updating of our knowledge as citizens is vital for us to be able to function as full members in the modern society," it said. Going forward, Vigyan Prasar said it plans to reach every district headquarters with field-level activities.

Numerous volunteers from various government, non-government, media and educational institutes, who have come forward to assist these initiatives in various states and Union territories, would take the baton forward, it added.

"In the years to come, the activities would be expanded into other languages, including tribal dialects in the phase II. Together with resources and local support in the respective districts, Vigyan Prasar is poised to become a torchbearer of science popularisation under the umbrella of Project Bhasha initiative," it said.

"To ensure quick and effective implementation of science communication and popularisation at all levels in the society, connecting through one's own language is the first step in this direction. This is why we chose all media products to be designed and developed in Indian languages," said Dr Nakul Parashar, Director of Vigyan Prasar. PTI UZM RC

Vigyan Prasar plans to reach every district headquarters with field-level activities

| Wednesday | 20th October, 2021

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India News | Vigyan Prasar Plans to Reach Every District Headquarters with Field-level Activities

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Agency News PTI| Oct 20, 2021 10:30 PM IST

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(This is an unedited and auto-generated story from Syndicated News feed, LatestLY Staff may not have modified or edited the content body)

daijiworld.com
A portal linking the West Coast of India and the World

Science in mother language to every district: SCoPE's plan ahead

Thu, Oct 21 2021 08:46:09 AM

New Delhi, Oct 21 (IANS): Apart from science clubs, popular science books, science through newspapers and science outreach through social media for science popularisation, Vigyan Prasar now plans to reach every district with field level activities.

After a day-long deliberations on Wednesday, Vigyan Prasar - an autonomous organisation of the Department of Science and Technology, announced that in years to come, all the existing activities would be expanded into other Indian languages, including tribal dialects.

Languages chosen in this phase are -- Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepali, Maithili besides Hindi and English.

As next phase of the SCoPE - Science Communication, Popularisation and Extension (SCoPE) - programme, Vigyan Prasar has embarked on a Project Vigyan Bhasha for SCoPE in Indian languages.

Work would be carried out with science communicators in all official languages.

"From WhatsApp to Twitter, the written word is seeing a revival in the emerging social media communication. Conversations in mother tongue is necessary for comprehension of the message. Project Vigyan Bhasha would mobilise various agencies, including NGOs, to create a national effort to develop science popularisation content in all formats in all Indian languages," national coordinator SCoPE in Indian Languages, TV Venkateswaran said at a media conference.

Describing the many challenges and how devoted the team of science communicators from across the country helped achieve the goals, Director, Vigyan Prasar, Nakul Parashar said, "All media products are designed and developed in Indian languages."

The activities planned include, initiate and conduct science clubs, launch hands-on activities (which can be taken to areas without internet), develop learning kits, conduct science communication through literary forms, films and documentaries.

sify.com

Science in mother language to every district: SCoPE's plan ahead

Source :IANS

Author :IANS

Last Updated: Thu, Oct 21st, 2021, 09:00:19hrs

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--IANS

niv/pgh

தமிழ்நாடு
Tamil Nadu

அறிவியலை பிராந்திய மொழிகளில் வளர்க்க நடந்த ஒரு நாள் பயிற்சிப்பட்டறை!

Published on: 15 hours ago

அறிவியலை பிராந்திய மொழிகளில் வளர்க்க, விக்யான் பிரசார் அமைப்பு சார்பாக ஒரு நாள் பயிற்சிப்பட்டறை டெல்லியில் நேற்று நடந்துள்ளது.

விக்யான் பிரசார் அமைப்பின் விக்யான் பாஷா திட்டமானது, இந்திய மொழிகளில் அறிவியல் தகவல் தொடர்பு, அறிவியலை மக்களிடம் பிரபலப்படுத்துதல், அதனை விரிவுபடுத்துதல் ((**Science Communication, Popularisation and Extension - (SCoPE))** எனும் திட்டத்தின் மூலம் இதுவரையான செயல்பாடுகளை ஆய்வு செய்யவும், மேற்கொண்டு திட்டமிடவும் டெல்லி இந்தியப் பன்னாட்டு மையத்தில், ஒரு நாள் பயிற்சிப் பட்டறையை விக்யான் பிரசார் அமைப்பு சார்பாக நேற்று (அக்.20) நடத்தியது.

இந்த **SCoPE** திட்டத்தின் கீழ், பல்வேறு மொழிகளில் செயலாற்றி வரும் பங்கேற்பாளர்கள் நாடு முழுவதுமிருந்து இந்த ஒரு நாள் கூட்டத்தில் கலந்துகொள்கின்றனர்.

இவர்களுடன் இந்தி, ஆங்கிலம், உருது, காஷ்மீரி, டோக்ரி, பஞ்சாபி, குஜராத்தி, மராத்தி, கன்னடம், தமிழ், தெலுங்கு, வங்காளி, அஸ்ஸாமி, மைதிலி, நேபாளி ஆகிய 50 ஸ்கோப் **(SCoPE))** நிபுணர்கள் கூட்டத்தில் கலந்துகொண்டனர்.

"சமூகத்தின் அனைத்து நிலைகளிலும் அறிவியல் தகவல் தொடர்பையும், அறிவியலை பிரபலமடையச் செய்வதையும் திறம்படவும், விரைவாகவும் செயல்படுத்துவதை உறுதி செய்வதற்கான முதல் படி என்பது, அவரவரின் தாய்மொழியின் துணையுடன் அறிவியலை தொடர்புபடுத்துவதே ஆகும்.

இதனால் தான் ஊடகங்களுக்கான எங்களது தயாரிப்புகள் அனைத்தையும் இந்திய மொழிகளில் வடிவமைத்து, மேம்படுத்தி உருவாக்க வேண்டும் என்று நாங்கள் தெரிவு செய்தோம்"என்கிறார், இந்நிகழ்வில் கலந்துகொண்டு பேசிய விக்யான் பிரசார் அமைப்பின் இயக்குநர் டாக்டர். நகுல் பராசர்.

"காட்சி ஊடகங்கள் பெருகிவிட்டதால், யாரும் இனி அதிகமாக எழுதமாட்டார்கள். எழுத்துப் படைப்புகள் அழிந்துபோய்விடும் என்றும் சிலர் முன்னறிவிப்பு செய்தனர். இருப்பினும், வளர்ந்து வரும் சமூக ஊடகத் தகவல் தொடர்புகளில் வாட்ஸ்அப் முதல் ட்விட்டர் வரை எழுத்துக்கள் மறுமலர்ச்சி கண்டுவருகின்றன.

தகவல்களை நன்றாகப் புரிந்துகொள்வதற்கு தாய்மொழி வழி உரையாடல்கள் அவசியம்; அரசு மற்றும் அரசு சாரா அமைப்புகள் பலவற்றையும் ஒன்று திரட்டி அறிவியல் தகவல்களை இந்திய மொழிகளில் உருவாக்குவதற்கு விக்யான் பாஷா திட்டம் தேசிய அளவிலான முயற்சியை மேற்கொண்டு வருகிறது" என்று ஸ்கோப் திட்டத்தின் இந்திய மொழிகளுக்கான தேசிய ஒருங்கிணைப்பாளருமான டாக்டர். டி. வி. வெங்கடேஸ்வரன் தெரிவித்தார்.

இந்தக் கருத்தரங்கில் பகிரப்பட்ட முக்கிய சில விஷயங்கள்

கோவிட் நோய்ப்பரவல் பற்றிய தகவல் தொடர்பின் போது, குறிப்பாக தடுப்பூசி செலுத்திக் கொள்வதில் தென்பட்ட தயக்கம் தொடர்பான சிக்கலைத் தீர்ப்பதில் ஸ்கோப் திட்டத்தின் முன்னணிச் செயல்பாடுகளின் பங்களிப்பு, அறிவியல் குழுக்களைத் தொடங்கி நடத்துதல், பிற இலக்கிய வடிவங்களான திரைப்படம், கவிதைகள், ஆவணப்படக் காட்சிகள் மூலமும் அறிவியல் தகவல்களைப் பகிரச் செய்தல், சமூக ஊடகத் தளங்களின் மூலம் அறிவியல் தகவல் பரவலைப் பல்வேறு இந்திய மொழிகளில் விரிவுபடுத்துவது ஆகியப் பணிகள் குறித்தும் இந்த ஒரு நாள் பயிற்சிப்பட்டறையில் விவாதிக்கப்பட்டது.

భారతదేశంలో కాశ్మీర్ నుంచి కన్యాకుమారి వరకూ శాస్త్ర ప్రచారం, ప్రజాదరణ, వ్యాప్తి

విజ్ఞాన్ ప్రసార్(వి.పి) తన పతాక యోజనగా చేపట్టిన/ చేపడుతున్న 'భారతీయ భాషల్లో శాస్త్ర ప్రచారం, ప్రజాదరణ&వ్యాప్తి (స్కోప్) లేక విజ్ఞాన్ భాష యోజనలో దేశంలోని పలు భాషల ప్రతినిధులు అక్టోబర్ 20, 2021 న భారత అంతర్జాతీయ కేంద్రం,

న్యూఢిల్లీలో ఒకరోజు కార్యశాలకు హాజరయ్యారు.

హిందీ, ఆంగ్లంలోనే కాక ఉర్దూ, కాశ్మీరీ, డోగ్రీ, పంజాబీ, గుజరాతీ, మరాఠీ, కన్నడ, తమిళ,తెలుగు, బెంగాలీ,అస్సామీ, మైథిలి, నేపాలీ భాషల నిష్ణాతులైన 50 మంది ప్రతినిధులు ఈ కార్యశాలలో పాల్గొన్నారు. జాతీయ ప్రాముఖ్యత కలిగిన శాస్త్ర ప్రచారకులు అమలు పర్చదగిన కార్యాలను రూపొందించడమే కాకుండా ఇప్పటి వరకు జరిగిన కార్యాచరణను సమీక్షించారు.

ఈ ప్రతినిధుల్లో విశ్వ విద్యాలయాల, విజ్ఞాన శాస్త్ర, సాంకేతిక కేంద్రాల, దేశంలోని రాష్ట్ర శాస్త్ర, సాంకేతిక విభాగాల ప్రచురణకర్తల ప్రతినిధులు ఉన్నారు. వారందరూ వివిధ యోజనలలోని అద్భుతమైన ప్రచురణలను అందరూ ఎంతగానో మెచ్చుకొనే విధంగా ప్రదర్శించారు.

త్వరితగతిన ప్రభావ భరితంగా తమ తమ మాతృభాషల్లో అన్ని సామాజిక స్థాయిల్లో శాస్త్ర ప్రచారం నిర్వహించడానికి ఇది తొలిమెట్టు. అందుకే అన్ని మాధ్యమాల నుపయోగించి వస్తుసామాగ్రిని తీర్చిదిద్ది అభివృద్ధి చేయడానికి మన దేశంలో విజ్ఞాన్ ప్రసార్ శ్రీకారం చుట్టింది.' అని వివిధ భాషల్లో స్క్రోప్ రూపకర్త, విజ్ఞాన్ ప్రసార్ సంచాలకులు శ్రీ నకుల్ పరాశర్ ఉద్ఘాటించారు.

ఈ కార్యాచరణలో ఎన్నో సవాళ్లు ఎదుర్కొనప్పటికీ వాటిని అతి స్వల్పకాలంలో అంకిత భావం కలిగిన శాస్త్ర ప్రచార బృందం అధిగమించిందని వారు వ్యాఖ్యానించారు. డా. టి వి వెంకటేశ్వరన్, స్పైంటిస్ట్ ఎఫ్, భారతీయ భాషల్లో స్క్రోప్ సమన్వయకర్త 'టెలివిజన్ మాధ్యమం ఉనికిలోకి రాగానే రాతప్రతులు ఉనికి కోల్పోతాయని కొంతమంది సూత్రీకరించారని కానీ వాట్సాప్ నుంచి ట్విట్టర్ వరకూ వ్రాతయే ముఖ్యంగా మాతృభాషలో రాయడమే ప్రాముఖ్యంగా సోషల్ మీడియాలో ప్రచార వ్యాప్తికి మానుకుంద'ని తెలియజేశారు. 'విజ్ఞాన్ భాష' యోజనలో ప్రభుత్వ, ప్రభుత్వేతర సంస్థలతో కలిసి తగిన వస్తుసామాగ్రిని భారతీయ భాషల్లో తెస్తామని వారన్నారు.

సదస్సు ఉద్దేశాలు, లక్ష్యాలు

* శాస్త్రప్రచారం, ప్రజాదరణ కార్యక్రమ విస్తరణలో వివిధ సంస్థల సాఫల్యతలను గుర్తించడం.

* శాస్త్రప్రచారం, ప్రజాదరణ, విస్తరణలో ఆయా సంస్థల కార్యకలాపాలను విశ్లేషించి ఆ సంస్థల ఉద్యమాలను, వివిధ సంస్థల మధ్య గల సంబంధాలను బలోపేతం చేసి భవిష్యత్ ప్రణాళికలు రూపొందించడం.

*కోవిడ్- 19 సమయంలో స్కోప్ ముందడుగు వేసిన కార్యకలాపాలను సమీక్షించి ప్రజలు వ్యాక్సిన్ వేసుకోవడంలో మన్న అపోహలు తొలగించడం.

*స్పేస్ క్లబ్బులను మొదలుపెట్టి నిర్వహించడం, చేతులనుపయోగించి చేయదగిన స్పేస్ కార్యకలాపాలను మొదలుపెట్టడం, స్పేస్ అభ్యసన కిట్ల రూపకల్పన, కవితలు ఇతర సాహిత్య ప్రక్రియలతో స్పేస్ ప్రచారం, సినిమాలు, డాక్యుమెంటరీల ప్రదర్శనలు.

*వివిధ భాషల్లో తమ సొంత ఛానెళ్ల ద్వారా విస్తృతంగా దేశం నలుమూలలా శాస్త్ర ప్రచారం చేరుకోవడం.

ఎందుకు భారతీయ భాషలు వాడాలి?

శతాబ్దాల క్రితం వేర్వేరు భాషల్లో గల శాస్త్ర భావనలను, పద సంచయాలను స్థానిక భాషల్లోకి అనువదించాలి. భారత స్వాతంత్ర్య సమర సమయంలోనే ఈ ప్రయత్నాలు జరిగాయి.

* లక్షల కొలది విద్యార్థులు తమ పాఠశాల విద్య తమ మాతృభాషలోనే అభ్యసిస్తున్నారు. వారికి సమకాలీన శాస్త్ర సాంకేతిక పరిజ్ఞానం విజ్ఞాన సమాజం నిర్మించడానికి, శాస్త్రీయ దృక్పథం అలవడడానికి తప్పనిసరి అవసరం.

* మాతృభాషలో చదవడం, అలోచించడం వారి వినూత్న ఊహాశక్తిని ద్విగుణీకృతం చేస్తుంది.

اردو اور کشمیری میں سائنس کو عام آدمی تک پہنچانے کی کامیاب پہل

Published on: Oct 22, 2021, 3:50 PM IST

بھارتی زبانوں میں سائنس مواصلات ایک لازمی ضرورت ہے۔ بھارتی زبانوں میں سائنس مواصلات آبادی کی اکثریت میں سائنسی شعور پیدا کرنے میں موثر کردار ادا کر سکتی ہے۔ اس بات کو نظر میں رکھتے ہوئے سائنس اور ٹیکنالوجی ڈیپارٹمنٹ کی ایک خود مختار تنظیم، وگیان پرسار نے 'سائنس کمیونیکیشن، پاپولرائزیشن اینڈ ایکسٹینشن (SCOPE) انڈین لینگویجز' کے نام سے ایک پروجیکٹ شروع کیا ہے۔

پروجیکٹ مختصر طور پر 'اسکوپ' اور 'سائنس لینگویج' کے نام سے بھی جانا جاتا ہے۔ اس کے تحت نئی دہلی میں ایک دن کی ورکشاپ کا انعقاد کیا گیا تاکہ 'وگیان بھاشا' پروجیکٹ اور اس کے آنے والے منصوبے کا جائزہ لیا جاسکے۔ اس ورکشاپ میں ملک بھر میں مختلف زبانوں میں کام کرنے والے ماہر نمائندوں نے منصوبے کے حصے کے طور پر حصہ لیا۔ ہندی اور انگریزی کے علاوہ اردو، کشمیری، ڈوگری، پنجابی، گجراتی، مراٹھی، کناڈا، تامل، تیلگو، بنگالی، آسامی، میتھلی اور نیپالی سے زبانوں سے تعلق رکھنے والے

تقریباً 50 نمائندوں نے اجلاس میں شرکت کی۔ ان میں ملک بھر کی یونیورسٹیوں، سائنس اور ٹیکنالوجی مراکز اور ریاستی سائنس اور ٹیکنالوجی کے شعبوں کے نمائندے شامل ہیں۔ اب تک اس پراجیکٹ میں چھپی ہوئی اشاعتوں کی کارکردگی شاندار رہی ہے ، جسے ملک کے ریاستی اور علاقائی ماہرین تعریف کر رہے ہیں۔ بھارتی زبانوں میں سائنس مواصلات سے متعلق اس پروجیکٹ کے سہولت کار اور وگیان پرسار کے ڈائریکٹر ڈاکٹر نکول پراشر نے کہا ہے کہ "معاشرے میں ہر سطح پر سائنس مواصلات اور مقبولیت کے تیز اور موثر نفاذ کو یقینی بنانے کے لیے اپنے پہلے زبان سے جڑنا پہلا قدم ہے۔ یہی وجہ ہے کہ ہم نے تمام میڈیا مصنوعات کو بھارتی زبانوں میں ڈیزائن اور تیار کرنے کا انتخاب کیا ہے۔ "انہوں نے کہا کہ راستے میں کئی چیلنجز ہیں لیکن مؤثر عمل اور سائنس کمیونیکیٹرز سے سرشار ٹیم کے ساتھ پروجیکٹ نے بہت مختصر وقت میں بہت سے سنگ میل عبور کیے ہیں۔ انہوں نے کہا کہ اردو میں تجسس کے نام سے 16 صفحات پر مشتمل سائنسی ماہانہ پرچہ شائع ہو رہا ہے جس میں بچوں کے لیے سائنسی علوم اردو میں دستیاب ہے جبکہ اردو والے اس سے فیض حاصل کر سکتے ہیں۔ اس کے ایڈیٹر ڈاکٹر نکول پراشر اور ڈاکٹر عرفانہ بیگم ایسوسی ایٹ ایڈیٹر ہیں۔ وہیں سائنس داں نیمیش کپور اردو اور کشمیری زبان کی ترویج و ترقی اور اشاعت و فروغ کے سربراہ ہیں۔

اردو اور کشمیری میں سائنس کو عام آدمی تک پہنچانے کی کامیاب پہل

ڈاکٹر ٹی وی وینکٹیشورن، سائنسدان-ایف اور 'اسکوپ' پروجیکٹ کے قومی کوآرڈینیٹر نے کہا "ڈیجیٹل میڈیا کی آمد کے ساتھ کچھ لوگ پرنٹ شدہ لفظ کے ختم ہونے کی پیش گوئی کر رہے ہیں لیکن ایسا نہیں ہے۔ مادری زبان میں بات چیت پیغامات کو سمجھنے کے لیے ضروری ہے۔ 'اسکوپ' یا 'وگیان بھاشا' پروجیکٹ ہندوستانی زبانوں میں مواد تیار کرنے کی قومی کوششوں میں سرکاری اور غیرسرکاری ایجنسیوں کو متحد کرنے کی کوشش کرے گا۔

وگیان پرسار کے زیراہتمام اس مباحثے کا بنیادی مقصد سائنس کی مقبولیت کے ساتھ ساتھ سائنس مواصلات اور توسیع کی سرگرمیوں میں مختلف تنظیموں اور تحریکوں کی کامیابیوں کی نشاندہی اور ان پر عمل درآمد کرنا ہے۔ اس دوران ماہرین نے سائنس کو مقبول بنانے، مواصلات کے تجزیہ اور توسیع کی سرگرمیوں اور مستقبل کی سرگرمیوں کی منصوبہ بندی پر زور دیا ہے۔

ڈاکٹر پراشر نے کہا کہ غیر رسمی سیکھنے کی جگہیں جیسے سائنس کلب، سائنس کی مشہور کتابیں، اخبارات میں سائنس کی خبریں، سوشل میڈیا پیغامات سیکھنے والے معاشرے کو پروان چڑھانے کا موقع فراہم کرتے ہیں۔ وگیان پرسار مکمل طور پر تخلیق کیا گیا ہے جس کا مقصد تمام جسمانی اور ملٹی میڈیا ٹچ پوائنٹس کا استعمال کرتے ہوئے لوگوں میں سائنس کے حوالے سے دلچسپی پیدا کرنا ہے۔ علاقائی زبانوں میں وگیان پراسر کی موجودہ سرگرمیوں پر عوامی ردعمل حوصلہ افزا رہا ہے ، جو کہ مزید آگے بڑھنے کا امکان ہے۔

وگیان پرسار ہر ضلع ہیڈ کوارٹر تک فیلڈ لیول کی سرگرمیوں کے ساتھ پہنچنے کا ارادہ رکھتا ہے۔ مختلف سرکاری، غیرسرکاری، میڈیا اور تعلیمی اداروں کے رضاکار کارکن اس مہم کی قیادت کریں گے جو مختلف ریاستوں اور مرکز کے زیرانتظام علاقوں میں ان اقدامات کی مدد کے لیے آگے آئے ہیں۔ آنے والے برسوں میں فیز II میں سرگرمیوں کو قبائلی بولیوں سمیت دیگر زبانوں تک بڑھایا جائے گا۔

اس پروجیکٹ کے تحت وگیان پرسار بطور گائیڈ متعلقہ اضلاع میں ریسورس پرسن اور مقامی تعاون کے ساتھ سائنس کو مقبول بنانے کی طرف گامزن ہے۔وگیان پرسار ایک خود مختار ادارہ ہے جو 32 سال سے محکمہ سائنس و ٹیکنالوجی، حکومت ہند کے تحت کام کر رہا ہے۔ یہ نیشنل انسٹی ٹیوٹ آف سائنس کمیونیکیشن ، پاپولرائزیشن اور ایکسٹینشن بھی ہے۔

وگیان پراسر نے اپنے سائنس کے آؤٹ ریچ پروگراموں کو آگے بڑھانے کے پہلے مرحلے میں ہندی اور انگریزی کے علاوہ کشمیری، ڈوگری، اردو، پنجابی، گجراتی، مراٹھی، کنڑ، تامل، تیلگو، بنگالی، آسامی، نیپالی، میتھلی کا انتخاب کیا ہے۔ ماہانہ مشہور سائنس جریدوں سے لے کر تازہ ترین پیش رفت اور جدید تحقیق پر باقاعدہ لیکچرز تک مشہور سائنس کی کتابوں کی اشاعت سے لے کر نوجوانوں کے تخیل کو پکڑنے کے لیے سوشل میڈیا کے استعمال تک ٹیلی ویژن پروگراموں کی تیاری سے لے کر سائنس کی تازہ ترین خبروں تک، پروجیکٹ بھاشا پہل نے گزشتہ دو سالوں میں ان ہندوستانی زبانوں میں سائنس مواصلات، مقبولیت اور توسیع کو ہوا دی ہے۔

'وگیان بھاشا' پروجیکٹ کے تحت منعقد مختلف پروگراموں میں سے ایک، 'رامانوجن یاترا' فیسٹیول ایک کامیاب اور بڑے پیمانے پر کاوش رہی ہے۔ 'رامانوجن یاترا' ریاضی دان رامانوجن کی جدوجہد اور شاندار کامیابی کے بارے میں بات چیت کے لیے ملک گیر مقبولیت کی کوشش کی گئی۔ اس میں ریاضی کے خوف کو دور کرنے کا ایک اقدام بھی شامل ہے جس میں جدید ریاضی کے مختلف پہلوؤں کو ایک دلچسپ اور سمجھنے میں آسان انداز میں پیش کیا گیا ہے۔

بھاشا پروجیکٹ کے تحت میڈیا اور صحافت کے طلباء کے ساتھ ساتھ صحافیوں اور میڈیا پروفیشنلز کے لیے صلاحیتوں کی تعمیر کے پروگرام منعقد کیے جا رہے ہیں تاکہ عام لوگوں تک سائنس کے مواد کو پہچاننا سیکھیں۔ اسکیل ڈیولپمنٹ کے ان پروگراموں کو وسیع پیمانے پر پذیرائی ملی ہے اور طلب میں اضافہ ہوا ہے۔

یہ بھی پڑھیں:

ڈاکٹر نکول پراشر نے کہا کہ وگیان پرسار ہندوستانی زبانوں میں سائنس اور ٹیکنالوجی سے متعلق مختلف موضوعات پر سائنس کی کتابیں شائع کر رہا ہے۔ جلد ہی وگیان پرسار مختلف ہندوستانی زبانوں میں اشاعتیں لائے گا اور کتاب میلوں بشمول آن لائن فروخت اور کتاب فروشوں کے ذریعے باقاعدہ فروخت کے ذریعے اشاعت کو پھیلانے کی کوشش کرے گا۔ انہوں نے کہا کہ علاقائی زبانوں میں اپنی رسائی کو بڑھانا اب وگیان پرسار کی ایک بڑی کوشش ہے۔ بھارت جیسے لسانی لحاظ سے متنوع ملک میں جہاں نوجوانوں کی بڑی آبادی ہے ، علاقائی زبانوں میں سائنسی تصورات سیکھنے کے لیے غیر رسمی ذرائع کی اہمیت کو نظر انداز نہیں کیا جاسکتا۔

یو این آئی اردو سروس
ایشیاء کی اولین اردو خبر رساں ایجنسی
UNI BREVITY ACCURACY SPEED

Posted at: Oct 22 2021 7:03PM

اردو سمیت تمام ہندوستانی زبانوں میں سائنس کو مقبول بنانا وقت کی اہم ضرورت: نکل پراشرا

نئی دہلی، 22اکتوبر(یو این آئی) حکومت ہند کی وزارت سائنس و ٹیکنالوجی کے تحت سائنس کو عوام میں مقبول بنانے کی غرض سے قائم شدہ ادارہ وگیان پرسار کے زیر اہتمام یہاں انڈیا انٹرنیشنل سنٹر میں ایک ورکشاپ کا اہتمام کیا گیا، جس میں اردو سمیت تمام ہندوستانی زبانوں کے ذریعہ سائنسی علوم کو عوام تک پہنچانے کی حکمت عملی اور اب تک کی کارکردگی کا جائزہ لیا گیا۔

ورکشاپ سے خطاب کرتے ہوئے وگیان پرسار کے ڈائرکٹرنکل پراشر نے کہا کہ ہندوستانی زبانوں کا ذریعہ استعمال کئے بغیر سائنس کو عوام تک نہیں پہنچایاجاسکتا۔
عام لوگوں سے مخاطب ہونے کے لئے ان کی زبان میں گفتگو کرنا ضروری ہے۔

Popularizing Science To General Public – Project Vigyan Bhasha Initiative

October 22, 2021

Project Vigyan Bhasha: An Initiative For Promoting Science Education In Mother Tongue

Education in one's first language is crucial for easy understanding grasping concepts associated with technology & science. Nonetheless, in the current world with the rapid growth of technology & science research, simply learning from school is not sufficient. It could get out of date immediately. Informal education spaces like science news in social media messages & newspapers,

popular science books, and science clubs, give opportunities for fostering a learning society.

Vigyan Prasar (VP) has been striving to ignite curiosity in science within people employing every kind of multimedia & physical touchpoints. Mass response for the Vigyan Prasar's initiatives to boost scientific communication via regional languages has consistently been huge and is mostly going increase more.

Image Credits: Vigyan Prasar

In the future, VP is aiming to introduce field-level activities in all distinct headquarters. Accepting the responsibility for the upcoming future would be undertaken by several volunteers from different educational, media, nongovernment, and government institutes who have played a major role in helping with these efforts in different UTs and states.

VP held a one-day workshop on Wednesday at the IIC (India International Centre), New Delhi for reviewing and

planning ahead its primary project known as SCoPE (Science Communication, Popularisation and Extension) in Indian languages (also referred to as Vigya

Bhasha). International participants who spoke in different languages also joined the meeting.

Apart from English & Hindi, 50 SCoPE representatives/experts from Nepali, Maithili, Assamese, Bengali, Telugu, Tamil, Kannada, Marathi, Gujarati, Punjabi, Dogri, Kashmiri, and Urdu participated in the workshop.

Additionally, elite scientific speakers from all around India came to plan & prepare actionable items for the projects and to review the work carried out till then. These comprised delegates from S&T departments, state, technology & science centers, and universities all over India.

The brain behind this study and VP's Director, Dr. Nakul Parashar stated that to assure effective & quick imposition of science popularization & communication at every societal level, associating with one's own mother tongues is the first and foremost step.

He remarked that there are several challenges however, with a devoted team of scientific communicators & effective processes, the project has accomplished many goals in a small time period.

The project's National Coordinator & Scientist F, Dr. T V Venkateswaran mentioned that Vigyan Bhasha would kindle different agencies, both non-governmental & governmental to shape a national effort to create materials in Indian languages.

VP has selected Maithili, Nepali, Assamese, Bengali, Telugu, Tamil, Kannada, Marathi, Gujarati, Punjabi, Urdu, Dogri, and Kashmiri apart from English & Hindi for its initial phase of bringing science to laymen its science outreach events.

From making television programs for the recent scientific news; from the publication of leading science books to using social media for understanding the youth's imagination; from leading science magazines to routine periodic lectures on recent cutting edge research & development, the project Vigyan Bhasha has released science extension, popularization, and communication in selected Indian languages in the last 2 years.

One of the massive & successful initiatives, under this project was the gathering for Ramanujan Yatra- a national popularization initiative to convey the glorious accomplishment, struggle, and strife of Ramanujan, the mathematician, and simultaneously tackle the mathematic phobia by introducing different aspects of advanced mathematics in a means that is intelligible and appealing.

Training & sensitizing media professionals towards scientific communication facilitate positioning popular science and science news in television & print. With this vision in bringing science to laymen, skill upgrading programs were organized on how to express science to the general mass for journalism &

media students and working journalists. These capacity-building programs have captured extensive demand and appreciation.

Releasing leading science books on advanced concepts in Indian languages has already started in a small manner. Shortly, VP would release publications in different Indian languages and even make an initiative to circulate publication via bookseller-mediated regular sales like online sales, meals, and book fairs.

In the upcoming years, the work would spread to other languages like tribal dialects in the second phase. Along with local support, people, and resources in the specific districts, VP is on the verge to become a bellwether of science popularization, under the governance of the project Vigyan Bhasha (SCopE in Indian languages).

Source

Project Vigyan Bhasha Initiative, Bringing Science To Laymen, SCoPE In Indian Languages

CanIndia News – Science In The Mother Tongue Of Every District: SCoPE's Plan Ahead

By **Alison K. Thomas** Last updated **Oct 20, 2021**

Besides science clubs, popular science books, science through journals, and science outreach through social media for popular science, Vigyan Prasar now plans to reach every district with field activities.

After a day of deliberations on Wednesday, Vigyan Prasar – an autonomous organization of the Department of Science and Technology, announced that in the coming years all existing activities will be extended to other Indian languages, including tribal dialects.

The languages chosen in this phase are Kashmiri, Dogri, Urdu, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telugu, Bengali, Assamese, Nepalese, Maithili in addition to Hindi and English.

As part of the next phase of the SCoPE – Communication, Popularization and Extension of Science (SCoPE) program, Vigyan Prasar has embarked on a Vigyan Bhasha project for SCoPE in Indian languages.

The work would be carried out with science communicators in all official languages.

“From WhatsApp to Twitter, the written word is experiencing a revival in the emerging communication of social media. Conversations in the mother tongue are necessary to understand the message. The Vigyan Bhasha Project would mobilize various agencies, including NGOs, to create a national effort to develop popular science content in all Indian formats and languages, ”said SCoPE National Indian Languages Coordinator TV Venkateswaran at a press conference.

Describing the many challenges and how the team of science communicators from across the country contributed to achieving the goals, Director, Vigyan Prasar, Nakul Parashar said, “All media products are designed and developed in Indian languages.

Planned activities include, initiating and running science clubs, launching hands-on activities (which can be carried out in areas without internet), developing learning kits, conducting science communication through literary forms, films and documentaries .

–IANS

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One-day conference on Indian languages

Media's role in popularizing mother tongue crucial for its survival: Director SCoPE

'Science subject can be better understood in mother tongue'

DAANISH BIN NABI

New Delhi, Oct 20: Vigyan Prasar, in national capital New Delhi, on Wednesday conducted a one-day conference titled Science and Communication Popularisation and its Extension (SCoPE) in Indian Languages from Kashmir to Kanyakumari

While stressing on the mother tongue, the Director SCoPE Nukul Prashar said that mother tongue holds an important aspect for the upbringing of the child future and that the science can mould the future of the student in a more proper manner if the subject is taught in mother tongue

"The mother tongue is important. The media should give first preference to the mother tongue of their own regions so that people on the whole and students in particular can understand the science subject in a better way," Prashar said.

Talking about Kashmir, Director SCoPE said that the organization will soon be launching a magazine namely Ghaash in Kashmir for the promotion of local languages and Kashmiri language.

"Newsletter will work as 'Silent seller' in remote areas if the media gives proper attention to these areas in their respective states," the Director said.

He said that schooling is fundamental for education in any area. "If knowledge is to be explored in a better way than one has to understand his/her mother tongue," Prashar said.

He said that however at the government level 'public policy is lacking'. "To make a better environment for the students to understand the science in their mother tongue, citizens have an important role to play," he said.

He said that for learning science, it is important to understand the subject in its own dialects.

"Mother tongue plays an important role in spreading the science language, however, we need to debate about introducing mother tongue in our social circles to understand the subject," he said.

He said that the society needs experts to discuss and debate the languages like Urdu and Kashmir.

Talking about the role of print media, he said that the print media has a lasting impression.

"Print media is very important as it leaves a long lasting impression on the minds of people. Written words always play an important role in peoples' lives," the Director said.

He said that, soon after Covid hit, the online lectures gave a new dimension in shaping students and also changed the course of education.

He said that India has a total of 1,9569 dialects and 121 languages are spoken by the majority of the people. "Every language must be respected," the Director said.

Former Vice Chancellor of Central University of Kashmir Mehraj-ud-Din also participated in the one-day conference at New Delhi.

He said that technology has taken the new generation to the next level. "While technology has taken us to the next level, at the same time we must not ignore our mother tongue. And should always prefer to talk in mother tongue with our children at home," the former VC said at the conference.

He said that scientific methods have changed roles in our society. However, in our part of the society we lack scientific method.

"Look at Israel. They have such a system in place that even when a child is still in the mother's womb, such an atmosphere is created around him/her that their children have to go through a proper method. Also, the children from a very tiny age have to learn everything in Hebrew, which is their mother tongue," the former VC said.

He said whatever they (Israel) teach their children in all in Hebrew and it (Hebrew) language is an important part of their curriculum.

He further said that the great Sufi Saint Shiekh-ul-Aalam (RA) is the fountainhead of knowledge

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Director SCoPE

and research in Kashmir.

"We need to dig more in his works to understand our mother tongue. If we want to excel in our mother tongue and want a connection between science and our Kashmir is then reading, researching and understanding the legendary Sufi Saint Shiekh-ul-Aalam is a must," Mehraj-ud-Din.

He said that as of today, Kashmir is far behind all this and not only Kashmiri but Ladakhi and Gujjar languages should be taken forward with all the zeal, in which the administration must play an important role.

Dean School of Media Studies Central University of Kashmir Shahid Rasool said that youngsters are too much into social and digital media which is shaping up their perspective towards life and career. He said that there are around 100 million Urdu speaking people in Jammu and Kashmir and 60 million Kashmiri speaking people who are regular watchers of social media and digital media platforms. "We are resource starved and we need to have a target audience to make these online portals more viable for our students," Rasool said. He emphasized on promotion of science through local languages and electronic media could play a vital role among rural youth who are deprived of exposure to developments globally.

"I call youngsters who are active on social media as digital natives and they as the target audience could play an important role in spreading scientific knowledge in rural settings," Rasool said.

Prof Mehfooza Jan, head of Department of Kashmiri in Kashmir University traced the importance of Kashmiri language in shaping the history of Kashmir.

Dr Irfan Alam, Head of Department Kashmiri in Central University Kashmir highlighted the role of Urdu in the sub-continent and termed it a sweet language which promotes harmony and respect towards each other.

Chief Editor Brighter Kashmir newspaper Farooq Ahmad Wani expressed his delight over participation in the national conference on mother tongue.

"Youth along Line of Control are totally bereft of the situation in other parts of the country and we should focus on them through means of communication and newsletters could be one form which could help them evolve as conscious citizens who know what is happening around the world," Farooq Ahmad Wani said.

Participants from other states of India also participated in the one-day conference in New Delhi.

The participants shed light about their state of affairs in their respective states on the topic and how they toil hard day-in-day out to work for the betterment of their students.

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

By **Ankit Tiwari** - October 21, 2021

नई दिल्ली, 20 अक्तूबर भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय :(इंडिया साइंस वायर) भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)SCoPE)' नामक एक परियोजना आरंभ की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल नकुल पाराशर ने कहा है कि "समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी

प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।" उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, "डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैरसरकारी एजेंसियों को एकजुट करने का प्रयास करेगी।-

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसा-थ विज्ञान संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्यवन का रोडमैप तैयार करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है।

डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग करके लोगों के बीच - विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों वर्षों में, चरण-II में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथप्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय सहयोग के - साथ विज्ञान को लोकप्रिय बनाने की ओर अग्रसर है।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल और व्यापक प्रयास रहा है। 'रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथसाथ पत्रकार और मीडिया पेशेवरों के लिए - क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

डॉ नकुल पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है। हालाँकि, कोविड महामारी से इसका विकास बाधित हुआ है। लेकिन, जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। उन्होंने कहा कि क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

UNI BREVITY ACCURACY SPEED
यूनीवार्ता
भारत की अग्रणी संवाद समिति

भारत

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डीएसटी की भारतीय भाषाओं में विज्ञान संचार को लोकप्रिय बनाने की परियोजना 'स्कोप'

नयी दिल्ली,20 अक्टूबरकी स्वायत्त संस्था विज्ञान (डीएसटी)केन्द्र सरकार के विज्ञान एवं प्रौद्योगिकी विभाग (वार्ता) प्रसार ने'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार स्कोप)') एक परियोजना आरंभ की है और 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया इसमें देशभर में विभिन्न भाषाओं में काम करने वाले विज्ञान विशेषज्ञों और प्रतिनिधियों ने इस बात पर जाेर दिया कि देश में भारतीय भाषाओं में वैज्ञानिक ज्ञान और शब्दावली को लोकप्रिय किए जाने की आवश्यकता है क्योंकि देश के हर व्यक्ति को अपनी भाषा में विज्ञान समझने का अधिकार है ताकि उसके निर्णय ज्ञान आधारित हो सकें। इसके अलावा भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के रिसाव में प्रभावी भूमिका निभा सकता है।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल

प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों राज्यों और क्षेत्रीय विशेषज्ञों से सराहना मिल रही है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल नकुल पाराशर ने इस कार्यक्रम में कहा कि समाज में सभी स्तरों पर विज्ञान संचार और इसे लोकप्रिय बनाने तथा तथा इसके कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना इस दिशा में पहला कदम है। है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है। उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम समर्पित टीम के साथ, परियोजना ने बहुत ही कम समय में कई उपलब्धियां हासिल की हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा कि डिजिटल मीडिया के मीडिया के आगमन के साथ कुछ लोग मुद्रित सामग्री के अंत की बात कर रहे थे लेकिन वाट्सऐप से लेकर ट्विटर तक तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों को समझने के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर सरकारी एजेंसियों को एकजुट करने का-प्रयास करेगी।

इस कार्यशाला में विज्ञान को लोकप्रिय बनाने, विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों में शामिल शामिल पहलों के अंतर्गत की गई गतिविधियों के प्रभाव तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर पर विचार विमर्श किया गया ।इसके अलावा कोविड संक्रमण के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका , विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा की गई।

इसमें विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, फिल्मों व फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार,विभिन्न भारतीय भाषाओं में सोशल मीडिया प्लेटफॉर्म पर प्लेटफॉर्म पर अपने चैनलों के माध्यम से पहुँच बढ़ाना आदि पर चर्चा की गई।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है, जो राष्ट्रव्यापी जरूरतों को पूरा को पूरा करता है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है।

क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है क्योंकि संगठन का यह मानना है कि क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया किया जा सकता।

जितेन्द्र वार्ता

स्कोप विज्ञान को भारतीय भाषाओं में आम : जन तक पहुँचाने की पहल

By Ram Bharose

अक्टूबर 20, 2021 विज्ञान

विज्ञान संचार की वैज्ञानिक चेतना के प्रसार में क्या भूमिका है ? What is the role of science communication in spreading scientific consciousness?

नई दिल्ली, 20 अक्तूबर**:** ***भारतीय भाषाओं में विज्ञान संचार (Science Communication in Indian Languages)*** एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार**,** लोकप्रियकरण और विस्तार)**SCoPE**)' नामक एक परियोजना आरंभ की है।

संक्षेप में इस परियोजना को 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है।

'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देश भर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि "समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।"

उन्होंने कहा कि इस राह में कई चुनौतियां हैं**,** लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा,

"डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर सरकारी-एजेंसियों को एकजुट करने का प्रयास करेगी।

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसाथ विज्ञान - संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और यान्यवन का रोडमैप तैयाक्रिर करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ

ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है।

डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग - करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न विभिन्न सरकारी, गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने आने वाले वर्षों में, चरण-II में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथप्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और - साथ विज्ञान को लोकप् स्थानीय सहयोग केरिय बनाने की ओर अग्रसर है।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल और व्यापक प्रयास रहा है।

रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथसाथ पत्-रकार और मीडिया पेशेवरों के लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान

विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

डॉ नकुल पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है। हालाँकि, कोविड महामारी से इसका विकास बाधित हुआ है। लेकिन, जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। उन्होंने कहा कि क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

(इंडिया साइंस वायर(

Topics: Mother tongue, Indian languages, Vigyan Bhasha, Urdu, Kashmiri, Dogri, Punjabi, Gujarati, Marathi, Kannada, Tamil, Telegu, Bengali, Assamese, Maithili, Nepali, Ramanujan Yatra, Science Communication, Popularisation, Extention, SCoPE, Vigyan Prasar.

भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)SCoPE*): कश्मीर से कन्याकुमारी तक

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प्रेस विज्ञप्ति

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लेख नवनीत कुमार गुप्ता -

*SCoPE – Science Communication, Popularisation and Extension

भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। देश के हर व्यक्ति को अपनी भाषा में विज्ञान समझने का अधिकार है ताकि उसके निर्णय ज्ञान आधारित हो सकें। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के रिसाव में प्रभावी भूमिका निभा सकता है। इसके मद्देनज़र विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)**SCoPE**)' नामक एक परियोजना आरंभ की है।

इस परियोजना कोसंक्षिप्त में 'स्कोप' और'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में 20 अक्तूबर 2021 को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहना मिल रही है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के जनक और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर कहते हैं कि "समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना इस दिशा में पहला कदम है।

यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।" उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ, परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, "डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैरकरेगी। सरकारी एजेंसियों को एकजुट करने का प्रयास-

इस कार्यशाला / संगोष्ठी के उद्देश्य:

- विज्ञान को लोकप्रिय बनाने, संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचानने पर केंद्रित विमर्श।
- विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों में शामिल पहलों के अंतर्गत की गई गतिविधियों के प्रभाव और विभिन्न संस्थानों एवं अभियानों के बीच संबंध मजबूत करने के लिए सेतु के रूप में कार्य। कार्यों का विश्लेषण, तथा भविष्य की गतिविधियों के लिए योजना निर्माण।
- कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा।
- विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार।
- विभिन्न भारतीय भाषाओं में सोशल मीडिया प्लेटफॉर्म पर अपने चैनलों के माध्यम से पहुँच बढ़ाना।

भारतीय भाषाएं क्यों:

- विभिन्न भारतीय भाषाओं में विज्ञान संचार दशकों से चला आ रहा है, जिसके अंतर्गत वैज्ञानिक अवधारणाओं और शब्दों को मातृभाषाओं में अनूदित किया जाता रहा है। विज्ञान को मातृभाषा में संप्रेषित करने के प्रयास राष्ट्रीय स्वतंत्रता आंदोलनों का हिस्सा थे।

- लाखों छात्र भारतीय भाषाओं में अपनी स्कूली शिक्षा प्राप्त करते हैं, और विज्ञान और प्रौद्योगिकी पर अपनी मातृभाषा में समकालीन जानकारी प्रदान करना ज्ञान आधारित समाज के निर्माण और वैज्ञानिक स्वभाव को पोषित करने के लिए अनिवार्य है।

- मातृभाषा में पढ़ने और सोचने से नवोन्मेषी क्षमता में वृद्धि होती है।

- भारत सरकार की नीति सभी भारतीय भाषाओं को बढ़ावा देने की है, और विज्ञान प्रसार की महत्वाकांक्षी पहल इस नीति के अनुरूप है।

भावी योजना:

विज्ञान एवं प्रौद्योगिकी से संबंधित ज्ञान को समझने के लिए मातृभाषा में स्कूली शिक्षा महत्वपूर्ण है; हालांकि, विज्ञान एवं प्रौद्योगिकी अनुसंधान के क्षेत्र में तेजी से हो रहे विकास के इस युग में, सिर्फ अतीत में प्राप्त स्कूली शिक्षा पर्याप्त नहीं है, और यह जल्द ही पुरानी हो जाएगी। आधुनिक समाज के एक पूर्ण सदस्य के रूप में कार्य करने में सक्षम होने के लिए नागरिकों के रूप में हमारे ज्ञान का निरंतर अद्यतन होते रहना महत्वपूर्ण होता है।

अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। - त्रीय भाषाओं में विक्षेज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैर-गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-II में जनजातीय बोलियों बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथप्रदर्शक के - रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय सहयोग के साथ विज्ञान को लोकप्रिय बनाने की ओर अग्रसर है।

विज्ञान प्रसार और भारतीय भाषा पहल के बारे में:

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है, जो राष्ट्रव्यापी जरूरतों को पूरा करता है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है।

मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल एक सफल और व्यापक प्रयास रहा है। 'रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित

संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

मीडिया के लोगों को विज्ञान संचार के प्रति संवेदनशील बनाने और प्रशिक्षण देने से प्रिंट और टेलीविजन में विज्ञान समाचार समाचार और लोकप्रिय विज्ञान की स्थिति को मज़बूत करने में मदद मिलती है। इस उद्देश्य से, भाषा परियोजना के तहत, तहत, मीडिया और पत्रकारिता के छात्रों के साथसाथ पत्रकार और मीडिया पेशेवरों के लिए क्षमता निर्माण कार्यक्रम - आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

उन्नत विषयों पर भारतीय भाषाओं में लोकप्रिय विज्ञान पुस्तकों का प्रकाशन साधारण तरीके से शुरू हुआ है, कोविड महामारी से इसका विकास बाधित हुआ है। जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा।

क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

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-निदेशक, विज्ञान प्रसार

कश्मीर से कन्याकुमारी तक क्षेत्रीय भाषाओं में विज्ञान पहुंचाने का काम करेगा विज्ञान प्रसार

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भारत सरकार की विज्ञान एवं प्रद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने भारतीय भारतीय भाषाओं में विज्ञान संचार लोकप्रियकरण और विस्तार के लिये SCoPE नामक एक परियोजना शुरू की है, जिसके तहत भारतीय भाषाओं में विज्ञान संचार को देश के सभी क्षेत्रों पहुंचाने पहुंचाने का लक्ष्य रखा गया है. इस मौके पर परियोजना में मुदित प्रकाशन का प्रदर्शन बेहतर बताते

बताते हुए विज्ञान प्रसार के निदेशक डॉ मुकुल पराशर ने कहा कि देश के सभी राज्यों और क्षेत्रीय क्षेत्रीय विशेषज्ञों से इस कार्यक्रम को सराहना मिल रही है.

नई दिल्ली : भारत सरकार की विज्ञान एवं प्रद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने भारतीय भाषाओं में विज्ञान संचार लोकप्रियकरण और विस्तार के लिये SCoPE नामक एक परियोजना शुरू की है, जिसके तहत भारतीय भाषाओं में विज्ञान संचार को देश के सभी क्षेत्रों पहुंचाने का लक्ष्य रखा गया है.

इसी क्रम में विज्ञान भाषा परियोजना किस समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया जिसमें परियोजना के साथ देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि भी शामिल हुए.

हिंदी अंग्रेजी के अलावा उर्दू ,कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगू ,बंगाली, असमिया, मैथिली और नेपाली के करीब 50 SCoPE प्रतिनिधि इस बैठक में शामिल हुए. इस कार्यक्रम में देशभर के विश्वविद्यालय, विज्ञान एवं प्रौद्योगिकी केंद्र, राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल है. परियोजना में मुदित प्रकाशन का प्रदर्शन बेहतर बताते हुए विज्ञान प्रसार के निदेशक डॉ मुकुल पराशर ने कहा कि देश के सभी राज्यों और क्षेत्रीय विशेषज्ञों से इस कार्यक्रम को सराहना मिल रही है.

कश्मीर से कन्याकुमारी तक क्षेत्रीय भाषाओं में विज्ञान पहुंचाने का काम करेगा विज्ञान प्रसार

उन्होंने कहा कि समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी क्रियान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना इस दिशा में पहला कदम है. यही कारण है कि हम सभी मीडिया उत्पादकों भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है.

उन्होंने कहा कि इस राह में कई चुनौतियां है लेकिन प्रभावी प्रक्रिया और विज्ञान संचार की समर्पित टीम के साथ परियोजना बहुत ही कम समय में मील के पत्थर पार किए हैं.

कश्मीर से कन्याकुमारी तक क्षेत्रीय भाषाओं में विज्ञान पहुंचाने का काम करेगा विज्ञान प्रसार

SCoPE परियोजना के राष्ट्रीय समन्वयक और वैज्ञानिक डॉ टीवी वेंकटेश्वरन ने कहा कि विज्ञान लगातार बदलता रहता है. बदलते समाजिक परिवेश में विज्ञान की बहुत अहम भूमिका होने वाली है और मौजूदा समय में तमाम समस्याएं जो सामने आ रही हैं जैसे कि साइबर सुरक्षा, जलवायु परिवर्तन, वैकल्पिक ईंधन इन सभी की जड़ में विज्ञान और प्रद्योगिकी है. इसलिये इनको सीखते और जानते रहने के लिये लगातार अनौपचारिक संचार की आवश्यकता है.

विज्ञान प्रसार हिन्दी और अंग्रेजी भाषा में इंडिया साइंस के नाम से अपना OTT प्लेटफॉर्म भी चला चला रही है जिसके अब तक देश भर में 20 करोड़ से ज्यादा यूजर हैं. OTT प्लेटफॉर्म पर 3200 से

ज्यादा वीडियो कंटेंट हिन्दी और अंग्रेजी में हैं जिन्हें अब अन्य 14 भाषाओं में रूपांतरित किये जाने का का काम विज्ञान प्रसार द्वारा शुरु किया जा चुका है.

विज्ञान प्रसार की भावी योजनाओं के बारे में बताते हुए पदाधिकारियों ने बताया कि विज्ञान एवं प्रद्योगिकी से संबंधित ज्ञान को समझने के लिए मातृभाषा में स्कूली शिक्षा महत्वपूर्ण है. हालांकि विज्ञान एवं प्रौद्योगिकी और अनुसंधान क्षेत्र में तेजी से हो रहे विकास के इस युग में केवल स्कूली शिक्षा पर्याप्त नहीं है और यह समय के साथ पुरानी हो जाएगी.

इसके लिये लगातार जानते और सीखते रहना जरूरी है. इसके लिए अनौपचारिक शिक्षण संस्थान जैसे कि विज्ञान क्लब, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में विज्ञान समाचार, और सोशल मीडिया संदेश इत्यादि बेहतर अवसर देते हैं. विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टच पॉइंट का उपयोग करके लोगों के बीच विज्ञान में रूचि जगाने के उद्देश्य से बनाया गया क्षेत्र भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिकृया भी मिली है जो उत्साहजनक है जिसके और आगे बढ़ने की संभावना है.

सर्व चिंतन न्यूज़

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने अनूठी पहल की शुरुवात

sanjay October 20, 2021

नई दिल्ली भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय :(इंडिया साइंस वायर) वैज्ञानिक चेतना के प्रसार में प्रभा भाषाओं में विज्ञान संचार बहुसंख्य आबादी मेंवी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)SCoPE)' नामक एक परियोजना आरंभ की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि "समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।" उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, "डिजिटल मीडिया मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैरयों को सरकारी एजेंसि- एकजुट करने का प्रयास करेगी।

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसाथ विज्ञान - संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और है। इस क्रियान्यवन का रोडमैप तैयार करनादौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है।

डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग - करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-II में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथप्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय सहयोग के साथ - बनाने की विज्ञान को लोकप्रियओर अग्रसर है।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल और व्यापक प्रयास रहा है। 'रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथमीडिया पे साथ पत्रकार और-शेवरों के लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

गाँव कनेक्शन

विज्ञान को भारतीय भाषाओं में आम लोगों तक पहुंचाने की पहल

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भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान का संचार देश की एक बड़ी आबादी तक वैज्ञानिक चेतना के प्रसार में अहम भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)SCoPE)' नाम की एक परियोजना शुरू की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार, 20 अक्टूबर को एक

एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान व प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है, "समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।उन्होंने " कहा कि इस राहमें कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, "डिजिटल मीडिया मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालांकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों

संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैरसरकारी एजेंसियों- को एकजुट करने का प्रयास करेगी।

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसाथ विज्ञान - संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्यवन का रोडमैप तैयार करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है।

डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग - करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की नवर्तमागतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न विभिन्न सरकारी, गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-II में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथप्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय - सहयोग के साथ विज्ञान कोलोकप्रिय बनाने की ओर अग्रसर है।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल और व्यापक प्रयास रहा है। 'रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथसाथ पत्रकार और मीडिया पेशेवरों के - लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

डॉ नकुल पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है। हालाँकि, कोविड महामारी से इसका विकास बाधित हुआ है। लेकिन, जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। उन्होंने कहा कि क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता। (इंडिया साइंस वायर)

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

इंडिया साइंस वायर

अक्टूबर 22, 2021 19:03

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसाथ विज्ञान - संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्यवन का रोडमैप तैयार करना है।

भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार)SCoPE)' नामक एक परियोजना आरंभ की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय

कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि न संचार और लोकप्रियकरण के त्वरितसमाज में सभी स्तरों पर विज्ञा"और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।उन्होंने " चुनौतियां हैं कहा कि इस राह में कई, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।

डॉ टीवेंकटेश्वरन .वी., वैज्ञानिक एफ और-'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, "डिजिटल मीडिया मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैरसरकारी एजेंसियों को एकजुट करने - का प्रयास करेगी।

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथसाथ विज्ञान - धियों में विभिन्न संगठनों और आंदोलनसंचार एवं विस्तार गतिवि ोंं की उपलब्धियों को पहचान और क्रियान्यवन का रोडमैप तैयार करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है।

डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसेविज्ञान क्लब -, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टचप्वाइंट का उपयोग - करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की के बारे में जनता की प्रतिक्रिया उत वर्तमान गतिविधियों्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैरसरकारी-, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-II में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथदर्शक के रूप में संबंधित जिलों मेंप्र-ं संसाधन व्यक्ति और स्थानीय सहयोग के साथ विज्ञान को लोकप्रिय बनाने की ओर अग्रसर है।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है।

'विज्ञान भाषा' परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक 'रामानुजन यात्रा' उत्सव एक सफल और व्यापक प्रयास रहा है। 'रामानुजन यात्रा'; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथसाथ पत्रकार और मीडिया पेशेवरों के -लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है।

डॉ नकुल पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है। हालाँकि, कोविड महामारी से इसका विकास बाधित हुआ है। लेकिन, जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। उन्होंने कहा कि क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

(इंडिया साइंस वायर(

रफ़्तार

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

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भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण क्लिक »- www.prabhasakshi.com

उत्कल मेल

भारतीय भाषाओं में विज्ञान संचार,लोकप्रियकरण और विस्तार कश्मीर से कन्याकुमारी तक

नई दिल्ली, भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। देश के हर व्यक्ति को अपनी भाषा में विज्ञान समझने का अधिकार है ताकि उसके निर्णय ज्ञान आधारित हो सकें। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के रिसाव में प्रभावी भूमिका निभा सकता है। इसके मद्देनजर विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 39 भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार नामक एक परियोजना आरंभ की है। इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में 20 अक्तूबर 2021 को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए। हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहना मिल रही है। भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के जनक और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर कहते हैं कि समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना इस दिशा में पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है। उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ, परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं। डॉ टी.वी. वेंकटेश्वरन, वैज्ञानिक-एफ और 'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर- सरकारी एजेंसियों को एकजुट करने का प्रयास करेगी। विज्ञान को लोकप्रिय बनाने, संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचानने पर केंद्रित विमर्श। विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों में शामिल पहलों के अंतर्गत की गई गतिविधियों के प्रभाव और विभिन्न संस्थानों एवं अभियानों के बीच संबंध मजबूत करने के लिए सेतु के रूप में कार्य। कार्यों का विश्लेषण, तथा भविष्य की गतिविधियों के लिए योजना निर्माण। कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा। विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार। विभिन्न भारतीय भाषाओं में सोशल मीडिया प्लेटफॉर्म पर अपने चौनलों के माध्यम से पहुँच बढ़ाना। विभिन्न भारतीय भाषाओं में विज्ञान संचार दशकों से चला आ रहा है, जिसके अंतर्गत वैज्ञानिक अवधारणाओं और शब्दों को मातृभाषाओं में अनूदित किया जाता रहा है। विज्ञान को मातृभाषा में संप्रेषित करने के प्रयास राष्ट्रीय स्वतंत्रता आंदोलनों का हिस्सा थे। लाखों छात्र भारतीय भाषाओं में अपनी स्कूली शिक्षा प्राप्त करते हैं, और विज्ञान और प्रौद्योगिकी पर अपनी मातृभाषा में समकालीन जानकारी प्रदान करना ज्ञान आधारित समाज के निर्माण और वैज्ञानिक स्वभाव को पोषित करने के लिए अनिवार्य है। मातृभाषा में पढ़ने और सोचने से नवोन्मेषी क्षमता में वृद्धि होती है। भारत सरकार की नीति सभी भारतीय भाषाओं को बढ़ावा देने की है, और विज्ञान प्रसार की महत्वाकांक्षी पहल इस नीति के अनुरूप है। विज्ञान एवं प्रौद्योगिकी से संबंधित ज्ञान को समझने के लिए मातृभाषा में स्कूली शिक्षा महत्वपूर्ण है,य हालाकि, विज्ञान एवं प्रौद्योगिकी अनुसंधान के क्षेत्र में तेजी से हो रहे विकास के इस युग में, सिर्फ अतीत में प्राप्त स्कूली शिक्षा पर्याप्त नहीं है, और यह जल्द ही पुरानी हो जाएगी। आधुनिक समाज के एक पूर्ण सदस्य के रूप में कार्य करने में सक्षम होने के लिए नागरिकों के रूप में हमारे ज्ञान का निरंतर अद्यतन होते रहना महत्वपूर्ण होता है। अनौपचारिक शिक्षण स्थान जैसे- विज्ञान क्लब, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टच-प्वाइंट का उपयोग करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है। क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है। विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैर-सरकारी, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-2 में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथ-प्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय सहयोग के साथ विज्ञान को लोकप्रिय बनाने की ओर अग्रसर है। विज्ञान प्रसार और भारतीय भाषा पहल के बारे में विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान सचार, लोकप्रियकरण और विस्तार संस्थान भी है, जो राष्ट्रव्यापी जरूरतों को पूरा करता है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तकय लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तकय टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है। मीडिया के लोगों को विज्ञान संचार के प्रति संवेदनशील बनाने और प्रशिक्षण देने से प्रिंट और टेलीविजन में विज्ञान समाचार और लोकप्रिय विज्ञान की स्थिति को मजबूत करने में मदद मिलती है। इस उद्देश्य से, भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथ-साथ पत्रकार और मीडिया पेशेवरों के लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है। उन्नत विषयों पर भारतीय भाषाओं में लोकप्रिय विज्ञान पुस्तकों का प्रकाशन साधारण तरीके से शुरू हुआ है, कोविड महामारी से इसका विकास बाधित हुआ है। जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

सबकी खबर ले, सबको खबर दे
खोड़ा प्रहरी
हिन्दी दैनिक

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

नई दिल्ली। भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने %भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार (स्कोप)' नामक एक परियोजना आरंभ की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है।

भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि ÷समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है÷ उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए है।

डॉ टी.वी. वेंकटेश्वरन, वैज्ञानिक-एफ और 'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, ÷डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालांकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर-सरकारी एजेंसियों को एकजुट करने का प्रयास करेगी।

विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथ-साथ विज्ञान संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्वयन का रोडमैप तैयार करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है। डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसे- विज्ञान क्लब, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टच-प्वाइंट का उपयोग करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है।

क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है।

विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैर-सरकारी, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-दर-चरण में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा।

अमृत इंडिया
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भारतीय भाषाओं में विज्ञान, संचार और लोकप्रियकरण को आमजन में प्रभावी कार्यान्वयन में अग्रणी इंडिया साइंस वायरः डॉ. नकुल पाराशर

नई दिल्ली। इंडिया साइंस वायर भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार नामक एक परियोजना आरंभ की है। इस परियोजना को संक्षिप्त में स्कोप और विज्ञान भाषा के रूप में भी जाना जाता है। विज्ञान भाषा परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में परियोजना के तहत देशभर में

विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए। भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है। उन्होंने कहा कि इस राह में कई चुनौतियां हैं लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं। डॉ टीवी वेंकटेश्वरन वैज्ञानिक.एफ और स्कोप परियोजना के राष्ट्रीय समन्वयक ने कहा कि समझ के लिए मातृभाषा में बातचीत आवश्यक है, स्कोप या विज्ञान भाषा परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर.सरकारी एजेंसियों को एकजुट करने का प्रयास करेगी।

विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचारए लोकप्रियकरण और विस्तार संस्थान भी है। डॉ. पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है।

दैनिक
विचार टाइम्स

विज्ञान को भारतीय भाषाओं में आम जन तक पहुंचाने की पहल

सुनीत नरूला

दिल्ली। भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है । भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने %भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार (स्टेपक्स)' नामक एक परियोजना आरंभ की है ।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है। भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि ÷समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है।÷ उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं।डॉ टी.वी. वेंकटेश्वरन, वैज्ञानिक-एफ और 'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, ÷डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर-सरकारी एजेंसियों को एकजुट करने का प्रयास करेगी। विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथ-साथ विज्ञान संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्वयन का रोडमैप तैयार करना है।

दैनिक भास्कर

दैनिक भास्कर नई दिल्ली 21-10-2021

इंडिया साइंस ओटीटी चैनल के लिए दो साल में 3 हजार फिल्में

- फिल्मों में 13 भारतीय भाषाओं के साथ विज्ञान से जुड़ा कंटेंट शामिल

नई दित्ती| विज्ञान प्रसार ने साइंस कम्युनिकेशन पॉपुलराइजेशन एंड इट्स एक्सटेंशन (स्कोप) कार्यक्रम के तहत हिंदी, अंग्रेजी के अलावा 13 भारतीय भाषाओं में विज्ञान से जुड़ा कंटेंट विकसित किया है। दो साल पहले इंडिया साइंस नाम से एक ओटीटी चैनल की शुरूआत की गई जिसके लिए अब तक 3128 फिल्में बनाई गईं। चैनल को अब तक चार लाख लोगों ने सब्सक्राइव किया है और 25 करोड़ से ज्यादा बार इसे देखा जा चुका है। यह जानकारी विज्ञान प्रसार के निदेशक डॉ. नकुल पाराशर ने बुधवार को दिल्ली के इंडिया इंटरनेशनल सेंटर एनेक्सी में आयोजित विज्ञान संचारकों की कार्यशाला में दी। इस कार्यशाला का आयोजन में उर्दू, काश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथली व नेपाली के करीब 50 विज्ञान संचारकों ने हिस्सा लिया। विज्ञान प्रसार बीते 32 वर्षों से विज्ञान को लोकप्रिय व प्रसारित करने की गतिविधियों में शामिल है।

अब तक 375 से अधिक विज्ञान संबंधी विषयों पर किताबों का प्रकाशन भी किया गया है और हिंदी के अलावा उर्दू, बंगाली, असमिया, तमिल, तेलुगु आदि भाषाओं में मासिक पत्रिका भी प्रकाशित की जा रही हैं। कोविड महामारी के दौरान 400 से अधिक कोविड वीडियो बुलेटिन बनाए गए, जिसमें हर दिन की गतिविधियों का ब्यौरा है, ये वीडियो 8 से 10 मिनट की अवधि के हैं।

इस मौके पर बताया गया कि देशभर में विज्ञान क्लबों की स्थापना की जा रही है, विश्वविद्यालयों के साथ समझौते किए जा रहे हैं।

वैज्ञानिक दृष्टिकोण

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दैनिक वैज्ञानिक दृष्टिकोण

देश का पहला और एकमात्र विज्ञान समाचार-पत्र

"यदि आपकी नफरत को बिजली में परिवर्तित कर दिया जाए तो वह पूरी दुनिया को रोशन कर देगी।
-निकोला टेस्ला"

ई.सी. जॉर्ज सुदर्शनः 9 बार नोबेल के लिए नामित भौतिक विज्ञानी

03

इंडिया साइंस ओटीटी चैनल के लिए दो साल में बनाई 3128 फिल्में, 4 लाख सब्सक्रिप्शन के साथ अब तक 25 करोड़ बार देखा गया

● वैज्ञानिक दृष्टिकोण

विज्ञान प्रसार ने साइंस कम्युनिकेशन पॉपुलराइजेशन एंड इट्स एक्सटेंशन (स्कोप) कार्यक्रम के तहत हिंदी, अंग्रेजी के अलावा 13 भारतीय भाषाओं में विज्ञान से जुड़ा कंटेंट विकसित किया है। दो साल पहले इंडिया साइंस नाम से एक ओटीटी चैनल की शुरुआत की गई जिसके लिए अब तक 3128 फिल्में बनाई गईं। चैनल को अब तक चार लाख लोगों ने सब्सक्राइब किया है और 25 करोड़ से ज्यादा बार इसे देखा जा चुका है। यह जानकारी विज्ञान प्रसार के निदेशक डॉ. नकुल पाराशर ने बुधवार को दिल्ली के इंडिया इंटरनेशनल सेंटर एनेक्सी में आयोजित विज्ञान संचारकों की कार्यशाला में दी। इस कार्यशाला का आयोजन विभिन्न भारतीय भाषाओं में किए जा रहे प्रयासों की समीक्षा के लिए कश्मीर से कन्याकुमारी तक के विज्ञान संचारकों की कार्यशाला का आयोजन किया गया, इसमें उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथली व नेपाली के करीब 50 विज्ञान संचारकों ने हिस्सा लिया।

विज्ञान प्रसार बीते 32 वर्षों से विज्ञान को लोकप्रिय व प्रसारित करने की गतिविधियों में शामिल है। अब तक 375 से अधिक विज्ञान संबंधी विषयों पर किताबों का प्रकाशन भी किया गया है और हिंदी के अलावा उर्दू, बंगाली, असमिया, तमिल, तेलुगु आदि भाषाओं में मासिक पत्रिका भी प्रकाशित की जा रही हैं। कोविड महामारी के दौरान 400 से अधिक कोविड वीडियो बुलेटिन बनाए गए, जिसमें हर दिन की गतिविधियों का ब्यौरा है, ये वीडियो 8 से 10 मिनट की अवधि के हैं।

इस मौके पर बताया गया कि देशभर में विज्ञान क्लबों की स्थापना की जा रही है, विश्वविद्यालयों के साथ समझौते किए जा रहे हैं। दिल्ली यूनीवर्सिटी के रामलाल आनंद कॉलेज में साइंस कम्युनिकेशन पर 42 घंटे का एक कोर्स भी लांच किया गया है जिसे आने वाले दिनों में देश के अन्य विश्वविद्यालयों तक विभिन्न भाषाओं में पहुंचाया जाएगा।

राष्ट्रीय हिन्दी दैनिक
तिजारत

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

नई दिल्ली। भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार' नामक एक परियोजना आरंभ की है।

इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए। हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है। भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है। उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं। डॉ टी.वी. वेंकटेश्वरन, वैज्ञानिक-एफ और 'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है।

मयूर संवाद

नई दिल्ली, शुक्रवार, 22 अक्टूबर 2021

विज्ञान को भारतीय भाषाओं में आम जन तक पहुँचाने की पहल

नई दिल्ली (संवाददाता)= भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के प्रसार में प्रभावी भूमिका निभा सकता है। इस बात को केंद्र में रखते हुए विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार (SCoPE)' नामक एक परियोजना आरंभ की है। इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है।'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में बुधवार को एक दिवसीय कार्यशाला का आयोजन किया गया। इस कार्यशाला में, परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए। हिंदी और अंग्रेजी के अलावा, उर्दू, कश्मीरी, डोगरी, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, मैथिली और नेपाली के करीब 50 स्कोप प्रतिनिधि इस बैठक में शामिल हुए। इनमें देशभर के विश्वविद्यालयों, विज्ञान एवं प्रौद्योगिकी केंद्रों और राज्य के विज्ञान और प्रौद्योगिकी विभागों के प्रतिनिधि शामिल हैं। अब तक इस परियोजना में मुद्रित प्रकाशनों का प्रदर्शन शानदार रहा है, जिसे देश के राज्यों और क्षेत्रीय विशेषज्ञों से सराहा जा रहा है। भारतीय भाषाओं में विज्ञान संचार से संबंधित इस परियोजना के सूत्रधार और विज्ञान प्रसार के निदेशक डॉ नकुल पाराशर ने कहा है कि समाज में सभी स्तरों पर विज्ञान संचार और लोकप्रियकरण के त्वरित और प्रभावी कार्यान्वयन को सुनिश्चित करने के लिए अपनी भाषा के माध्यम से जुड़ना पहला कदम है। यही कारण है कि हमने सभी मीडिया उत्पादों को भारतीय भाषाओं में डिजाइन और विकसित करने के लिए चुना है। उन्होंने कहा कि इस राह में कई चुनौतियां हैं, लेकिन प्रभावी प्रक्रिया और विज्ञान संचारकों की समर्पित टीम के साथ इस परियोजना ने बहुत ही कम समय में कई मील के पत्थर पार किए हैं। डॉ टी.वी. वेंकटेश्वरन, वैज्ञानिक-एफ और 'स्कोप' परियोजना के राष्ट्रीय समन्वयक ने कहा, डिजिटल मीडिया के आगमन के साथ कुछ लोग मुद्रित शब्दों के अंत की भविष्यवाणी कर रहे हैं। हालाँकि, वाट्सऐप से लेकर ट्विटर तक नये उभरते हुए सोशल मीडिया संचार में लिखित शब्दों का पुनरुद्धार देखा जा रहा है। संदेशों की समझ के लिए मातृभाषा में बातचीत आवश्यक है। 'स्कोप' या 'विज्ञान भाषा' परियोजना भारतीय भाषाओं में सामग्री विकसित करने के राष्ट्रीय प्रयासों में सरकारी और गैर-सरकारी एजेंसियों को एकजुट करने का प्रयास करेगी। विज्ञान प्रसार द्वारा आयोजित इस विमर्श का मुख्य उद्देश्य विज्ञान को लोकप्रिय बनाने के साथ-साथ विज्ञान संचार एवं विस्तार गतिविधियों में विभिन्न संगठनों और आंदोलनों की उपलब्धियों को पहचान और क्रियान्वयन का रोडमैप तैयार करना है। इस दौरान विशेषज्ञों ने विज्ञान लोकप्रियकरण, संचार तथा विस्तार गतिविधियों के विश्लेषण तथा भविष्य की गतिविधियों के लिए योजना निर्माण पर जोर दिया है। इसके साथ ही, कोविड संचार के दौरान प्रमुख 'स्कोप' गतिविधियों की भूमिका की पड़ताल, विशेष रूप से वैक्सीन लेने में हिचकिचाहट से संबंधित मुद्दों पर चर्चा भी की गई। विशेषज्ञों ने विज्ञान क्लबों की शुरुआत एवं संचालन, व्यावहारिक गतिविधियों तथा शिक्षण किट्स की लॉन्चिंग, कविता एवं अन्य साहित्यिक रूपों, फिल्मों व वृत्तचित्र स्क्रीनिंग के माध्यम से विज्ञान संचार को आवश्यक बताया है। डॉ पाराशर ने कहा कि अनौपचारिक शिक्षण स्थान जैसे- विज्ञान क्लब, लोकप्रिय विज्ञान पुस्तकें, समाचार पत्रों में विज्ञान समाचार, सोशल मीडिया संदेश किसी सीखने वाले समाज को पोषित करने का अवसर प्रदान करते हैं। विज्ञान प्रसार पूरी तरह से सभी भौतिक और मल्टीमीडिया टच-प्वाइंट का उपयोग करके लोगों के बीच विज्ञान में रुचि जगाने के उद्देश्य से बनाया गया है।

क्षेत्रीय भाषाओं में विज्ञान प्रसार की वर्तमान गतिविधियों के बारे में जनता की प्रतिक्रिया उत्साहजनक रही है, जिसके और आगे बढ़ने की संभावना है। विज्ञान प्रसार की योजना क्षेत्र स्तरीय गतिविधियों के साथ हर जिला मुख्यालय तक पहुँचने की है। विभिन्न सरकारी, गैर-सरकारी, मीडिया और शैक्षणिक संस्थानों के स्वयंसेवी कार्यकर्ता इस अभियान को आगे बढ़ाएंगे, जो विभिन्न राज्यों और केंद्र शासित प्रदेशों में इन पहलों की सहायता के लिए आगे आए हैं। आने वाले वर्षों में, चरण-द्वितु में जनजातीय बोलियों सहित अन्य भाषाओं में गतिविधियों का विस्तार किया जाएगा। इस परियोजना के तहत विज्ञान प्रसार पथ-प्रदर्शक के रूप में संबंधित जिलों में संसाधन व्यक्ति और स्थानीय सहयोग के साथ विज्ञान को लोकप्रिय बनाने की ओर अग्रसर है। विज्ञान प्रसार, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अंतर्गत 32 वर्ष से संचालित स्वायत्त संगठन है। यह राष्ट्रीय विज्ञान संचार, लोकप्रियकरण और विस्तार संस्थान भी है। विज्ञान प्रसार ने अपने विज्ञान आउटरीच कार्यक्रमों को बढ़ाने के अपने पहले चरण में कश्मीरी, डोगरी, उर्दू, पंजाबी, गुजराती, मराठी, कन्नड़, तमिल, तेलुगु, बंगाली, असमिया, नेपाली, मैथिली के अलावा हिंदी और अंग्रेजी को चुना है। मासिक लोकप्रिय विज्ञान पत्रिकाओं से लेकर नवीनतम विकास और अत्याधुनिक शोध पर नियमित व्याख्यान तक; लोकप्रिय विज्ञान पुस्तकों के प्रकाशन से लेकर युवाओं की कल्पना को पकड़ने के लिए सोशल मीडिया का उपयोग करने तक; टेलीविजन कार्यक्रमों के निर्माण से लेकर नवीनतम विज्ञान समाचारों तक, परियोजना भाषा पहल ने पिछले दो वर्षों में इन भारतीय भाषाओं में विज्ञान संचार, लोकप्रियता और विस्तार को बढ़ावा दिया है। विज्ञान भाषा परियोजना के तहत आयोजित किये जाने वाले विभिन्न कार्यक्रमों में से एक %रामानुजन यात्रा% उत्सव एक सफल और व्यापक प्रयास रहा है। %रामानुजन यात्रा%; गणितज्ञ रामानुजन के संघर्ष और गौरवशाली उपलब्धि को संप्रेषित करने के लिए आयोजित एक राष्ट्रव्यापी लोकप्रियकरण प्रयास था। इसमें उन्नत गणित के विभिन्न पहलुओं को आकर्षक और सुगम तरीके से प्रस्तुत करके गणित के भय को दूर करने की पहल भी शामिल थी।

भाषा परियोजना के तहत, मीडिया और पत्रकारिता के छात्रों के साथ-साथ पत्रकार और मीडिया पेशेवरों के लिए क्षमता निर्माण कार्यक्रम आयोजित किए जा रहे हैं, जिसमें यह बताया जाता है कि आम जनता को विज्ञान की विषयवस्तु कैसे संप्रेषित की जाए। इन कौशल विकास कार्यक्रमों को व्यापक प्रशंसा मिली है और इनकी माँग बढ़ी है। डॉ नकुल पाराशर ने कहा कि विज्ञान प्रसार विज्ञान एवं प्रौद्योगिकी से जुड़े विभिन्न विषयों पर भारतीय भाषाओं में विज्ञान पुस्तकों का प्रकाशन कर रहा है। हालाँकि, कोविड महामारी से इसका विकास बाधित हुआ है। लेकिन, जल्द ही, विज्ञान प्रसार विभिन्न भारतीय भाषाओं में प्रकाशन लाएगा और ऑनलाइन बिक्री सहित पुस्तक मेलों, और पुस्तक विक्रेताओं के माध्यम से नियमित बिक्री के माध्यम से प्रकाशनों का प्रसार करने का प्रयास करेगा। उन्होंने कहा कि क्षेत्रीय भाषाओं में अपनी पहुँच का विस्तार करना अब विज्ञान प्रसार का एक प्रमुख प्रयास है। भारत जैसे भाषाई विविधता वाले देश में, जिसकी आबादी में युवाओं की संख्या अधिक है, क्षेत्रीय भाषाओं में वैज्ञानिक अवधारणाओं को सीखने के लिए अनौपचारिक साधनों के महत्व को अनदेखा नहीं किया जा सकता।

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क्षेत्रीय भाषाओं में विज्ञान संचार कार्यक्रम शुरू होंगे

पहल

नई दिल्ली | विशेष संवाददाता

विज्ञान एवं प्रौद्योगिकी विभाग के उपक्रम विज्ञान प्रसार ने सभी भारतीय भाषाओं में विज्ञान से जुड़ी सामग्री के संचार का निर्णय लिया है। इसके लिए कई नए कार्यक्रम तैयार किए जाएंगे।

विज्ञान प्रसार द्वारा अभी 15 भाषाओं में विज्ञान संचार संबंधी सामग्री तैयार की जा रही है। विज्ञान प्रसार द्वारा भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार योजना के तहत कश्मीर से कन्याकुमारी तक की सभी भारतीय भाषाओं में विज्ञान संचार के लिए बुधवार को एक गोष्ठी का आयोजन किया गया। इसमें विभिन्न भाषाओं के 50 से अधिक प्रतिनिधि शामिल हुए। इस दौरान क्षेत्रीय भाषाओं में विज्ञान प्रसार की रणनीति पर चर्चा की गई। विज्ञान प्रसार के निदेशक नकुल पराशर ने बताया कि अभी मराठी, बांग्ला, मैथिली, हिन्दी, अंग्रेजी, असमी, उर्दू, कश्मीर समेत 15 भाषाओं में विज्ञान जर्नल और अन्य सामग्री का प्रकाशन किया जा रहा है।

राजस्थान पत्रिका

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कार्यशाला आयोजित

चेन्नई. भारतीय भाषाओं में विज्ञान संचार एक अनिवार्य आवश्यकता है। देश के हर व्यक्ति को अपनी भाषा में विज्ञान समझने का अधिकार है ताकि उसके निर्णय ज्ञान आधारित हो सकें। भारतीय भाषाओं में विज्ञान संचार बहुसंख्य आबादी में वैज्ञानिक चेतना के रिसाव में प्रभावी भूमिका निभा सकता है। इसके मद्देनजर विज्ञान एवं प्रौद्योगिकी विभाग की स्वायत्त संस्था विज्ञान प्रसार ने 'भारतीय भाषाओं में विज्ञान संचार, लोकप्रियकरण और विस्तार' नामक एक परियोजना आरंभ की है। इस परियोजना को संक्षिप्त में 'स्कोप' और 'विज्ञान भाषा' के रूप में भी जाना जाता है। 'विज्ञान भाषा' परियोजना की समीक्षा और इससे संबंधित आगामी योजना के लिए नई दिल्ली में एक दिवसीय कार्यशाला में परियोजना के तहत देशभर में विभिन्न भाषाओं में काम करने वाले विशेषज्ञ प्रतिनिधि शामिल हुए।

उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल

By RD Times Hindi | October 21, 2021

नई दिल्ली, 21 अक्तूबर:अलीगढ़ मुस्लिम विश्वविद्यालय और विश्व की प्रमुख तकनीकी कंपनी गूगल (एएमयू) अब साथ मिलकर काम करेंगे। इस संबंध में हाल में एएमयू और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड के न कंप्यूटर एवं इंटरनेट के क्षेत्र में उन्नत बीच एक साझेदारी हुई है। इस साझेदारी के अंतर्गत दोनों संस्था प्रौद्योगिकी वि◌कास और सूचना प्रौद्योगिकी आधारित ज्ञान को साझा करने के उद्देश्य से साथ मिलकर काम करेंगे।

एएमयूके कंप्यूटर विज्ञान विभाग और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड कीइस साझेदारी के साथ सूचना प्रौद्योगिकी सक्षम ज्ञान से जुड़े संसाधनों को साझा करने का (आईटी)मार्ग प्रशस्त हो सकता है। इससे तकनीकी प्लेटफार्म को उन्नत करने और छात्रों को नौकरी के अवसर प्रदान करने के रास्ते भी खुल सकते हैं।

एएमयूके कंप्यूटर विज्ञान विभाग के अध्यक्षआसिम जफर ने कहा है कि “यह साझेदारी,संकाय सदस्यों और अंततविश्वविद्यालय के छात्रों को : आगामी गूगलआधारित प्रौद्योगिकियों और अनुप्रयोग के विकास में अपने - करेगी। कौशल को बेहतर करने में मदद” उन्होंने भावी प्रौद्योगिकियों में संकाय सदस्यों और छात्रों के कौशल के निरंतर विकास के लिए अन्य प्रसिद्ध उद्योगों और संस्थानों के साथ इस तरह के सहयोग की आवश्यकता पर बल दिया।

इस परियोजना के पीओसी ओर से संसाधनों फैसल अनवर ने कहा है कि गूगल की (प्वाइंट ऑफ कॉन्टैक्ट) एवंसामग्री को साझा किया जाएगा। जहाँ आवश्यकता होगी, वहाँ शिक्षकों को विभिन्न गूगलआधारित - तकनीकों के बारे में प्रशिक्षित भी किया जाएगा। उन्होंने बताया कि निकट भविष्य में शिक्षकों और विश्वविद्यालय के अन्य स्टाफ सदस्यों को प्रशिक्षित करने के लिए गूगल के सहयोग से एक संकाय विकास कार्यक्रम (इंडिया साइंस वायर) आयोजित करने की भी योजना है। (एफडीपी)

भारत हेराल्ड

उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल

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एएमयूके कंप्यूटर विज्ञान विभाग और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड कीइस साझेदारी के साथ सूचना प्रौद्योगिकी इससे है। सकता हो प्रशस्त मार्ग का करने साझा को संसाधनों जुड़े से ज्ञान सक्षम (आईटी) हैं। सकते खुल भी रास्ते के करने प्रदान अवसर के नौकरी को छात्रों और करने उन्नत को प्लेटफार्म तकनीकी

एएमयूके कंप्यूटर विज्ञान विभाग के अध्यक्षआसिम जफर ने कहा है कि "यह साझेदारी,संकाय सदस्यों और अंतत अपने में विकास के अनुप्रयोग और गिकियोंप्रौद्यो आधारित-गूगल आगामी को छात्रों के विश्वविद्यालय : करेगी। मदद में करने बेहतर को कौशल" उन्होंने भावी प्रौद्योगिकियों में संकाय सदस्यों और छात्रों के कौशल के निरंतर विकास के लिए अन्य प्रसिद्ध उद्योगों और संस्थानों के साथ इस तरह के सहयोग की आवश्यकता पर बल दिया।

इस परियोजना के पीओसी संसाधनों से ओर की गूगल कि है कहा ने अनवर फैसल (कॉन्टैक्ट ऑफ प्वाइंट) होगी आवश्यकता जहाँ जाएगा। किया साझा को एवंसामग्री, वहाँ शिक्षकों को विभिन्न गूगलआधार-ित तकनीकों के बारे में प्रशिक्षित भी किया जाएगा। उन्होंने बताया कि निकट भविष्य में शिक्षकों और विश्वविद्यालय के अन्य स्टाफ सदस्यों को प्रशिक्षित करने के लिए गूगल के सहयोग से एक संकाय विकास कार्यक्रम (वायर साइंस इंडिया) है। योजना भी की करने आयोजित (एफडीपी)

दी इंडियन बुलेटिन

उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल

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नई दिल्ली, 21 अक्तूबर:अलीगढ़ मुस्लिम विश्वविद्यालय गूगल कंपनी तकनीकी प्रमुख की विश्व और (एएमयू) प्राइवेट पैसिफिक एशिया गूगल और एएमयू में हाल में संबंध इस करेंगे। काम मिलकर साथ अबलिमिटेड के बीच एक साझेदारी हुई है। इस साझेदारी के अंतर्गत दोनों संस्थान कंप्यूटर एवं इंटरनेट के क्षेत्र में उन्नत प्रौद्योगिकी विकास और सूचना प्रौद्योगिकी आधारित ज्ञान को साझा करने के उद्देश्य से साथ मिलकर काम करेंगे।

एएमयूके कंप्यूटर विज्ञान विभाग और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड कीइस साझेदारी के साथ सूचना प्रौद्योगिकी इससे है। सकता हो प्रशस्त मार्ग का करने साझा को संसाधनों जुड़े से ज्ञान सक्षम (आईटी) है सकते खुल भी रास्ते के करने प्रदान अवसर के नौकरी को छात्रों और करने उन्नत को प्लेटफार्म तकनीकी।

एएमयूके कंप्यूटर विज्ञान विभाग के अध्यक्षआसिम जफर ने कहा है कि "यह साझेदारी,संकाय सदस्यों और अंतत अपने में विकास के अनुप्रयोग और प्रौद्योगिकियों आधारित-गूगल आगामी को छात्रों के विश्वविद्यालय : करेगी। मदद में करने बेहतर को कौशल" उन्होंने भावी प्रौद्योगिकियों में संकाय सदस्यों और छात्रों के कौशल के निरंतर विकास के लिए अन्य प्रसिद्ध उद्योगों और संस्थानों के साथ इस तरह के सहयोग की आवश्यकता पर बल दिया।

इस परियोजना के पीओसी संसाधनों से ओर की गूगल कि है कहा ने अनवर फैसल (कॉन्टैक्ट ऑफ प्वाइंट) साझा को एवंसामग्रीकिया जाएगा। जहाँ आवश्यकता होगी, वहाँ शिक्षकों को विभिन्न गूगल आधारित- और शिक्षकों में भविष्य निकट कि बताया उन्होंने जाएगा। किया भी प्रशिक्षित में बारे के तकनीकों विकास संकाय एक से सहयोग के गूगल लिए के करने प्रशिक्षित को सदस्यों स्टाफ अन्य के विश्वविद्यालय कार्यक्रम (वायर साइंस इंडिया) है। योजना भी की करने आयोजित (एफडीपी)

उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल

21/10/2021 V3news India

नई दिल्ली, 21 अक्तूबर इंडिया साइंस)वायरऔर विश्व की प्रमुख (एएमयू) अलीगढ़ मुस्लिम विश्वविद्यालय :(मिलकर काम करेंगे। इस संबंध में हाल में एएमयू और गूगल एशिया पैसिफिक तकनीकी कंपनी गूगल अब साथ प्राइवेट लिमिटेड के बीच एक साझेदारी हुई है। इस साझेदारी के अंतर्गत दोनों संस्थान कंप्यूटर एवं इंटरनेट के क्षेत्र में उन्नत प्रौद्योगिकी विकास और सूचना प्रौद्योगिकी आधारित ज्ञान को साझा करने के उद्देश्य से साथ मिलकर काम करेंगे।

एएमयू के कंप्यूटर विज्ञान विभाग और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड की इस साझेदारी के साथ सूचना प्रौद्योगिकी सक्षम ज्ञा (आईटी)न से जुड़े संसाधनों को साझा करने का मार्ग प्रशस्त हो सकता है। इससे

इससे तकनीकी प्लेटफार्म को उन्नत करने और छात्रों को नौकरी के अवसर प्रदान करने के रास्ते भी खुल सकते सकते हैं।

एएमयू के कंप्यूटर विज्ञान विभाग के अध्यक्ष आसिम जफर ने कहा है कि "यह साझेदारी, संकाय सदस्यों और और अंततविकास में आधारित प्रौद्योगिकियों और अनुप्रयोग के-विश्वविद्यालय के छात्रों को आगामी गूगल : अपने कौशल को बेहतर करने में मदद करेगी।" उन्होंने भावी प्रौद्योगिकियों में संकाय सदस्यों और छात्रों के कौशल के निरंतर विकास के लिए अन्य प्रसिद्ध उद्योगों और संस्थानों के साथ इस तरह के सहयोग की आवश्यकता पर बल दिया।

इस परियोजना के पीओसी फैसल अनवर ने कहा है कि गूगल की ओर से संसाधनों एवं (ऑफ कॉन्टैक्ट प्वाइंट) सामग्री को साझा किया जाएगा। जहाँ आवश्यकता होगी, वहाँ शिक्षकों को विभिन्न गूगलआधारित तकनीकों - के बारे मेंप्रशिक्षित भी किया जाएगा। उन्होंने बताया कि निकट भविष्य में शिक्षकों और विश्वविद्यालय के अन्य स्टाफ सदस्यों को प्रशिक्षित करने के लिए गूगल के सहयोग से एक संकाय विकास कार्यक्रम (एफडीपी) (इंडिया साइंस वायर) आयोजित करने की भी योजना है।

उन्नत प्रौद्योगिकी पर मिलकर काम करेंगे एएमयू और गूगल

By **Rupesh Dharmik** - October 21, 2021

नई दिल्ली, 21 अक्तूबर:अलीगढ़ मुस्लिम विश्वविद्यालय और विश्व की प्रमुख तकनीकी कंपनी गूगल (एएमयू) अब साथ मिलकरकाम करेंगे। इस संबंध में हाल में एएमयू और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड के बीच एक साझेदारी हुई है। इस साझेदारी के अंतर्गत दोनों संस्थान कंप्यूटर एवं इंटरनेट के क्षेत्र में उन्नत प्रौद्योगिकी विकास और सूचना प्रौद्योगिकी आधारित ज्ञान को साझा करने के उद्देश्य से साथ मिलकर काम करेंगे।

एएमयूके कंप्यूटर विज्ञान विभाग और गूगल एशिया पैसिफिक प्राइवेट लिमिटेड कीइस साझेदारी के साथ सूचना प्रौद्योगिकी सक्षम ज्ञान से जुड़े संसाधनों को साझा करने का मार्ग प्रशस्त हो सकता है। इससे (आईटी) तकनीकी प्लेटफार्म को उन्नत करने और छात्रों को नौकरी के अवसर प्रदान करने के रास्ते भी खुल सकते हैं।

एएमयूके कंप्यूटर विज्ञान विभाग के अध्यक्षआसिम जफर ने कहा है कि "यह साझेदारी,संकाय सदस्यों और अंततआधारित प्रौद्योगिकियों और अनुप्रयोग के विकास में-विश्वविद्यालय के छात्रों को आगामी गूगल : अपने कौशल को बेहतर करने में मदद करेगी।" उन्होंने भावी प्रौद्योगिकियों में संकाय सदस्यों और छात्रों के कौशल के निरंतर विकास के लिए अन्य प्रसिद्ध उद्योगों और संस्थानों के साथ इस तरह के सहयोग की आवश्यकता पर बल दिया।

इस परियोजना के पीओसी संसाधनों फैसल अनवर ने कहा है कि गूगल की ओर से (प्वाइंट ऑफ कॉन्टैक्ट) एवंसामग्री को साझा किया जाएगा। जहाँ आवश्यकता होगी, वहाँ शिक्षकों को विभिन्न गूगलआधारित - तकनीकों के बारे में प्रशिक्षित भी किया जाएगा। उन्होंने बताया कि निकट भविष्य में शिक्षकों और विश्वविद्यालय के अन्य स्टाफसदस्यों को प्रशिक्षित करने के लिए गूगल के सहयोग से एक संकाय विकास कार्यक्रम (इंडिया साइंस वायर) आयोजित करने की भी योजना है। (एफडीपी)

Telangana Today
FOR LOCAL TO GLOBAL NEWS

New computation model to help diagnose autism

BY INDIA SCIENCE WIRE PUBLISHED: 22ND OCT 2021 8:05 PM

New Delhi: Improved diagnosis of neurodevelopmental disorders, better road safety while driving and enhanced reliability of eyewitness testimonies could be in the offing with the development of a new computational model that can predict a person's ability to detect changes in the visual environment.

Human brains have a remarkable ability to pay attention to details but may sometimes fail to notice even marked differences. This phenomenon of overlooking a visual change is called change blindness. It is of particular importance for improving the reliability of the testimonies of eyewitnesses, among other things.

A research group at the Centre for Neuroscience and the Department of Computer Science and Automation at the Bengaluru-based Indian Institute of Science (IISc) has been studying the issue and has come up with a computational model of eye movement that can predict a person's ability to detect changes in the visual environment.

In the study, the team first checked for change blindness among 39 people by showing them an alternately flashing pair of images that have a minor difference between them. "We expected some complex differences in eye movement patterns between subjects who could do the task well and those who could not. Instead, we found some very simple gaze-metrics that could predict the

success of change detection," recounts Sridharan Devarajan, Associate Professor at the Centre for Neuroscience and a member of the research team.

Successful change detection was found to be linked to two metrics: how long the subjects' gaze was fixated at a point, and the variability in the path taken by their gaze between two specific points. Subjects who fixated for longer at a particular spot, and whose eye movements were less variable were found to detect changes more effectively.

Other researchers have previously developed models that focus either only on eye movement or on change detection. The new model goes one step further. It combines both aspects.

The researchers tested their model against a state-of-the-art deep neural network called DeepGaze II and found that their model performed better than it at predicting human gaze patterns in free-viewing conditions – when the subjects were casually viewing the images. While DeepGaze II could predict where a person will look if presented with an image, it did not work as well as the IISc-developed model at predicting the eye movement pattern of a person searching for a difference in the images. "It's not enough to just predict where a subject will look, the model also has to take into consideration the goals of the subject when they view images," explains Sridharan.

In the future, the researchers plan to incorporate artificial neural networks with "memory" into the model – to more realistically mimic the way our brains retain recollections of past events to detect changes.

The authors noted that the insights into understanding change blindness provided by their model could help scientists better understand visual attention and its limitations and said that some examples of areas where such insights can be applied include diagnosing neurodevelopmental disorders like autism, improving road safety while driving or enhancing the reliability of eyewitness testimonies.

Deccan News

New calculation model to help diagnose autism

October 22, 2021

New Delhi: Improved diagnosis of neurodevelopmental disorders, better road safety during driving, and improved reliability of eyewitness testimonials can lead to the development of a new arithmetic model that can predict a person's ability to detect changes in the visual environment.

Human brain has a remarkable ability to pay attention to detail, but can sometimes even notice noticeable differences. This phenomenon of overlooking a visual change is called change blindness. It is especially important to improve the reliability of, among other things, the testimony of eyewitnesses.

A research group at the Center for Neuroscience and the Department of Computer Science and Automation at the Bengaluru-based Indian Institute of Science (IISc) studied the issue and developed a computational model for eye movement that can predict a person's ability to make changes in the visual. to detect environment.

In the study, the team first looked at change blindness among 39 people by showing an alternately flashing pair of images with a slight difference between them. 'We expected some complicated differences in eye movement patterns between subjects who could do the job well and those who could not. Instead, we have found some simple eye-catching methods that can predict the success of change detection, 'says Sridharan Devarajan, an associate professor at the Center for Neuroscience and a member of the research team.

Successful change detection was found to be linked to two statistics: how long the subjects' gaze was fixed on a point, and the variability in the path their gaze takes between two specific points. Subjects who were fixed longer at a

particular location, and whose eye movements were less variable, were found to detect more effectively.

Other researchers have previously developed models that focus only on eye movement or on change detection. The new model goes a step further. It combines both aspects.

The researchers tested their model against a modern, deep neural network DeepGaze II and found that their model performed better than the prediction of human gaze patterns in free viewing conditions — when the subjects happened to look at the images. While DeepGaze II could predict where a person would look when presented with an image, it did not work as well as the IISc-developed model of predicting the eye movement pattern of a person seeking a difference in the images. "It's not enough to just predict where a subject is going to look, the model must also take into account the objectives of the subject when viewing images," explains Sridharan.

In the future, the researchers plan to incorporate artificial neural networks with 'memory' into the model – to more realistically mimic the way our brains recall past events to detect changes.

The authors noted that the insight into understanding change blindness provided by their model can help scientists better understand visual attention and its limitations, and said that some examples of areas in which such insights can be applied, improving the diagnosis of neurodevelopmental disorders such as autism, improving road safety while driving or improving the reliability of eyewitnesses.

Source: Telangana Today

Voice of the Nation
ORGANISER

New computation model to help diagnose autism

WEBDESK Oct 23, 2021, 11:43 AM IST

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The researchers tested their model against a state-of-the-art deep neural network called DeepGaze II and found that their model performed better than predicting human gaze patterns in free-viewing conditions–when the subjects were casually viewing the images.

While DeepGaze II could predict where a person will look if presented with an image, it did not work as well as the IISc-developed model at predicting the eye movement pattern of a person searching for a difference in the images. "It's not enough to just predict where a subject will look, the model also has to take into consideration the goals of the subject when they view images," explains Sridharan.

In the future, the researchers plan to incorporate artificial neural networks with memory into the model–to more realistically mimic the way our brains retain recollections of past events to detect changes.

The authors noted that the insights into understanding change blindness provided by their model could help scientists better understand visual attention and its limitations and said that some examples of areas where such insights can be applied include diagnosing neurodevelopmental disorders like autism, improving road safety while driving or enhancing the reliability of eyewitness testimonies.

Courtesy: India Science Wire

DELHI POST
Politics | Democracy | Development

New Computation Model to Help Diagnose Autism

By **ISW Desk** On **Oct 24, 2021**

Improved diagnosis of neuro-developmental disorders, better road safety while driving and enhanced reliability of eyewitness testimonies could be in the offing with the development of a new computational model that can predict a person's ability to detect changes in the visual environment.

Spot the difference

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In the future, the researchers plan to incorporate artificial neural networks with “memory” into the model – to more realistically mimic the way our brains retain recollections of past events to detect changes.

The authors noted that the insights into understanding change blindness provided by their model could help scientists better understand visual attention and its limitations and said that some examples of areas where such insights can be applied include diagnosing neuro-developmental disorders like autism, improving road safety while driving or enhancing the reliability of eyewitness testimonies.

New computation model to help diagnose autism

By **Rupesh Dharmik** - October 22, 2021

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The Indian Bulletin
www.theindianbulletin.com

New computation model to help diagnose autism

By **The Indian Bulletin Online** - October 22, 2021

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Telangana Today
FOR LOCAL TO GLOBAL NEWS

Researchers develop new machine for road cleaning with sewage water

BY INDIA SCIENCE WIRE PUBLISHED: 22ND OCT 2021 7:54 PM

New Delhi: Littering on the roads/streets is a major problem in India. The debris (generated by vehicles and pedestrian), biomass (leaves, twigs, etc., causing microbial action in bitumen) and stagnate water enhance road surface abrasion, which is becoming the main bottleneck for maintaining good cleanliness and hygienic standards of Indian roads/streets.

Researchers at the CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur, have developed a machine that could be useful in maintaining good cleanliness and hygienic standards of Indian roads/streets. This machine sucks out the wastewater from drain/manhole using slurry pump. The drain water passes through multiple chambers and screened by different mesh size sieves, before it is finally treated with chemical disinfectant. The treated water is stored in a separate chamber that is used in jetting operation. The water intake capacity of the machine from one manhole is more than 1000 litres. The machine can utilize the water to clean the road up to next available manhole within 50-70 meters.

“During the preliminary tests carried out by the CSIR-CMERI, sprayed water quality was within the surface discharge limit and may not harm the bitumen in the road and the environment. The treated water passes through jetting hose and sprayed on the road at appropriate pressure and flow rate to push the debris so that all of it is collected to be picked up and transported. The discharged water flows back into the drainage/manhole system. The collected debris is then lifted using grab bucket

and dropped in the hopper of the vehicle", said Prof. (Dr.) Harish Hirani, director, CSIR-CMERI, in a statement released by the institution.

Various methods for cleaning of roadsides and streets are in practice. The manual sweeping with bamboo brooms (the most commonly used technique for road cleaning in India) disintegrates the debris in to small granules and possibly contributes towards particulate matters. With time, a worn-out broom/brush can induce micro cracking in roads/streets, leading to abrasion and damage, researchers said.

Vacuum sweeping is another technique used in road cleaning which becomes inefficient in wet or moist environment and ineffective to remove stubborn road debris. The large size turbine of vacuum sweeping machine agitates the nearby dust and increases the suspended particles in the air. The vacuumed air is to be exhausted to the outside environment, but the residence time is generally insufficient to allow gravitational settling of PM10 and even after installing exhaust filters, the fine dust particles escape into the nearby atmosphere, which may increase PM 2.5 and PM 10 levels. Also, the large moving parts and the turbine system for creating vacuum increase the noise levels.

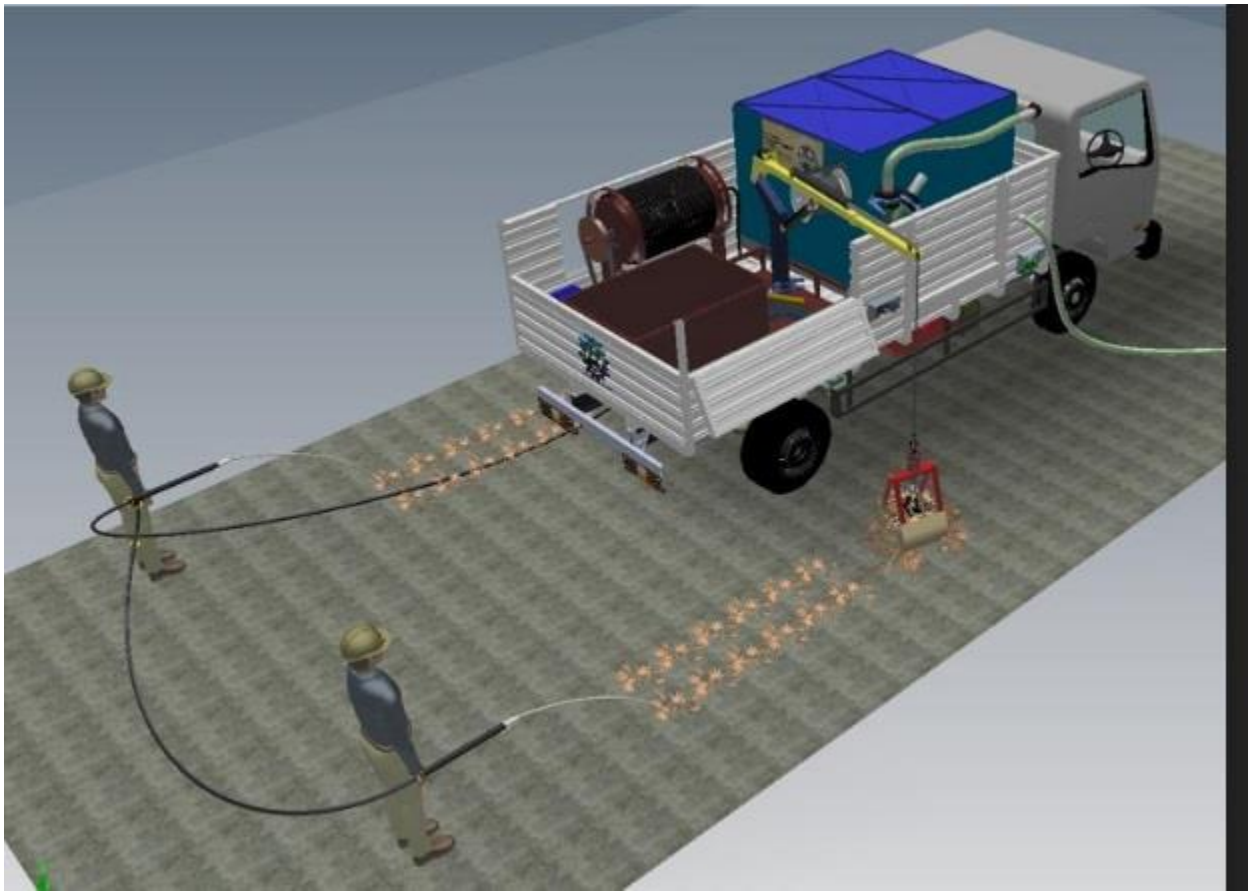
It is also noticed that particulate matter due to non-exhaust sources such as emissions from wear of vehicle parts, road surface, resuspension of dust deposited on the road surface, etc., have been increasing. Tyres and road wear particles contribute majorly towards PM10. Not only particles from tyres and roads, but street sweeping also contribute towards bitumen wear micro plastics. As compared to sweeping the road manually and through vacuum cleaning machines, water spraying (at 2 to 10 bar pressure to wash out the dust/debris) reduces the curbside PM10 level significantly. As per the available reports, street cleaning through water jet reduces particulate matter PM10 by 90% during first hour of washing and around 18% on daily basis. After the water flushing operation, slurry must be collected to avoid the bitumen roads getting damaged by prolonged exposure to water and same should be recycled to minimize the water stress.

Performance of this machine depends on water pressure, water volume, and orientation of nozzles, collection of slurry water and its in-situ treatment. In addition, water evaporation during hot days contributes towards evaporative cooling effects. As the drain water is recycled and reutilized responsibly for road cleaning operations, the machine is well suited for regular and safe maintenance of roads/streets.

Voice of the Nation
ORGANISER

Researchers develop a new machine for road cleaning with sewage water

WEBDESKOct 23, 2021, 12:19 PM IST



Researchers developed a machine that sucks out the wastewater from the drain/manhole using a slurry pump and passes through multiple chambers and is screened by different mesh size sieves before it is finally treated with a chemical disinfectant.

New Delhi: Littering on the roads/streets is a major problem in India. The debris (generated by vehicles and pedestrians), biomass (leaves, twigs, etc., causing microbial action in bitumen), and stagnate water enhance road surface abrasion, which is becoming the main bottleneck for maintaining good cleanliness and hygienic standards of Indian roads/streets.

Researchers at the CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur, have developed a machine that could be useful in maintaining good cleanliness and hygienic standards of Indian roads/streets. This machine sucks out the wastewater from the drain/manhole using a slurry pump. The drain water passes through multiple chambers and is screened by different mesh size sieves before it is finally treated with a chemical disinfectant.

The treated water is stored in a separate chamber that is used in the jetting operation. The water intake capacity of the machine from one manhole is more than 1000 litres. The machine can utilize the water to clean the road up to the next available manhole within 50-70 meters.

"During the preliminary tests carried out by the CSIR-CMERI, sprayed water quality was within the surface discharge limit and may not harm the bitumen in the road and the environment. The treated water passes through jetting hose and sprayed on the road at appropriate pressure and flow rate to push the debris so that all of it is collected to be picked up and transported. The discharged water flows back into the drainage/manhole system. The collected debris is then lifted using grab bucket and dropped in the hopper of the vehicle," said Prof. (Dr.) Harish Hirani, director, CSIR-CMERI, in a statement released by the institution.

Various methods for cleaning roadsides and streets are in practice. The manual sweeping with bamboo brooms (the most commonly used technique for road cleaning in India) disintegrates the debris into small granules and possibly contributes towards particulate matters. With time, a worn-out broom/brush can induce microcracking in roads/streets, leading to abrasion and damage, researchers said.

Vacuum sweeping is another technique used in road cleaning which becomes inefficient in a wet or moist environment and ineffective to remove stubborn road debris. The large size turbine of the sweeping vacuum machine agitates the nearby dust and increases the suspended particles in the air. The vacuum air is to be exhausted to the outside environment, but the residence time is generally insufficient to allow gravitational settling of PM10, and even after installing exhaust filters, the fine dust particles escape into the nearby atmosphere, which may increase PM 2.5 and PM 10 levels. Also, the large moving parts and the turbine system for creating a vacuum increase the noise levels.

It is also noticed that particulate matter due to non-exhaust sources such as emissions from wear of vehicle parts, road surface, resuspension of dust deposited on the road surface, etc., has been increasing. Tyres and road wear particles contribute majorly towards PM10. Not only particles from tyres and roads, but street sweeping also contributes towards bitumen wear microplastics. As compared to sweeping the road manually and thorough vacuum cleaning machines, water spraying (at 2 to 10 bar pressure to wash out the dust/debris) reduces the curbside PM10 level significantly.

As per the available reports, street cleaning through water jets reduces particulate matter PM10 by 90% during the first hour of washing and around 18% on a daily basis. After the water flushing operation, slurry must be collected to avoid the bitumen roads getting damaged by prolonged exposure to water, and the same should be recycled to minimize the water stress.

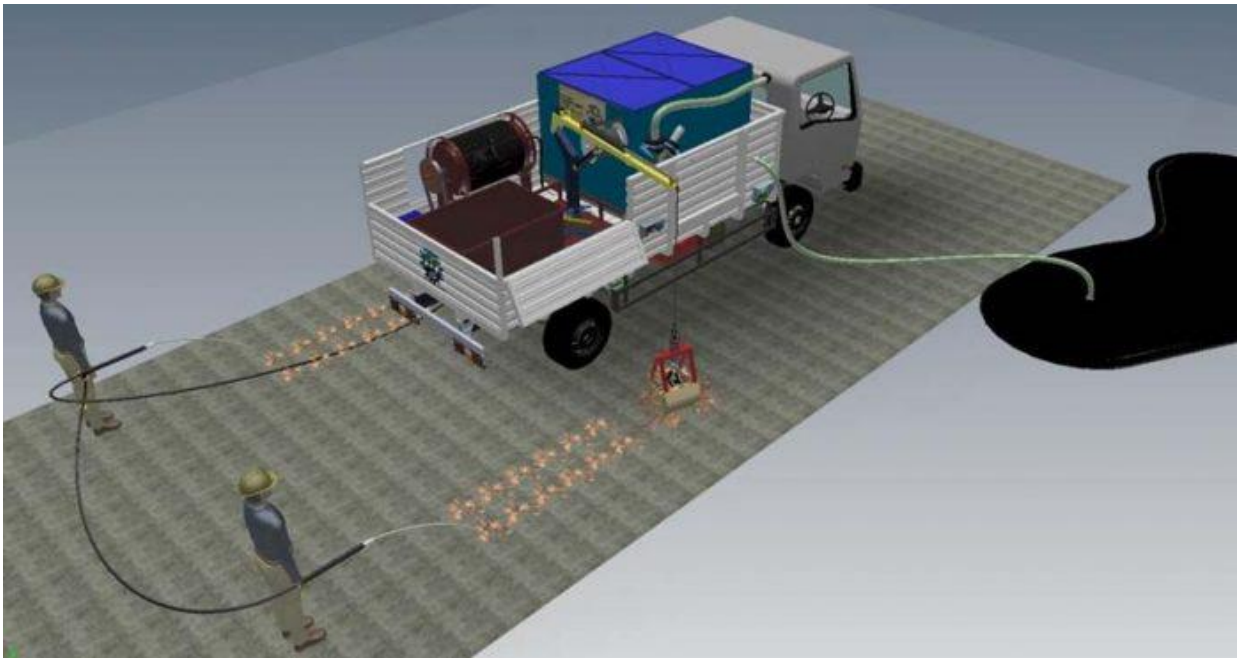
The performance of this machine depends on water pressure, water volume, and orientation of nozzles, collection of slurry water and its in situ treatment. In addition, water evaporation during hot days contributes to evaporative cooling effects. As the drain water is recycled and reutilized responsibly for road cleaning operations, the machine is well suited for regular and safe maintenance of roads/streets.

Courtesy: India Science Wire

RD TIMES.in

Researchers develop new machine for road cleaning with sewage water

By **RD Times Online** - October 22, 2021



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DELHI POST
Politics | Democracy | Development

Researchers Develop New Machine for Road Cleaning With Sewage Water

By **ISW Desk** On **Oct 25, 2021**

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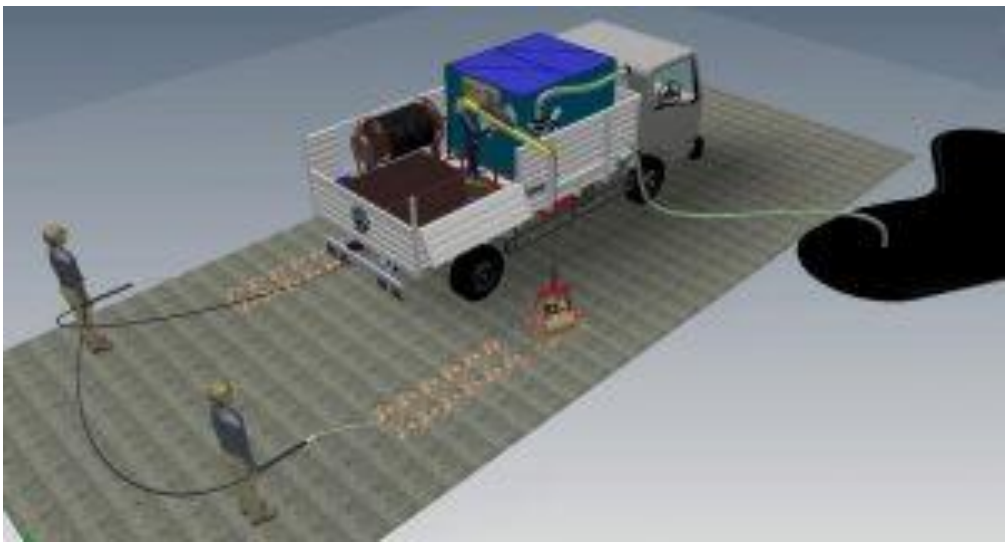

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“During the preliminary tests carried out by the CSIR-CMERI, sprayed water quality was within the surface discharge limit and may not harm the bitumen in the road and the environment. The treated water passes through jetting hose and sprayed on the road at appropriate pressure and flow rate to push the debris so that all of it is collected to be picked up and transported. The discharged water flows back into the drainage/manhole system. The collected debris is then lifted using grab bucket and dropped in the hopper of the vehicle”, said Prof. (Dr.) Harish Hirani, director, CSIR-CMERI, in a statement released by the institution.

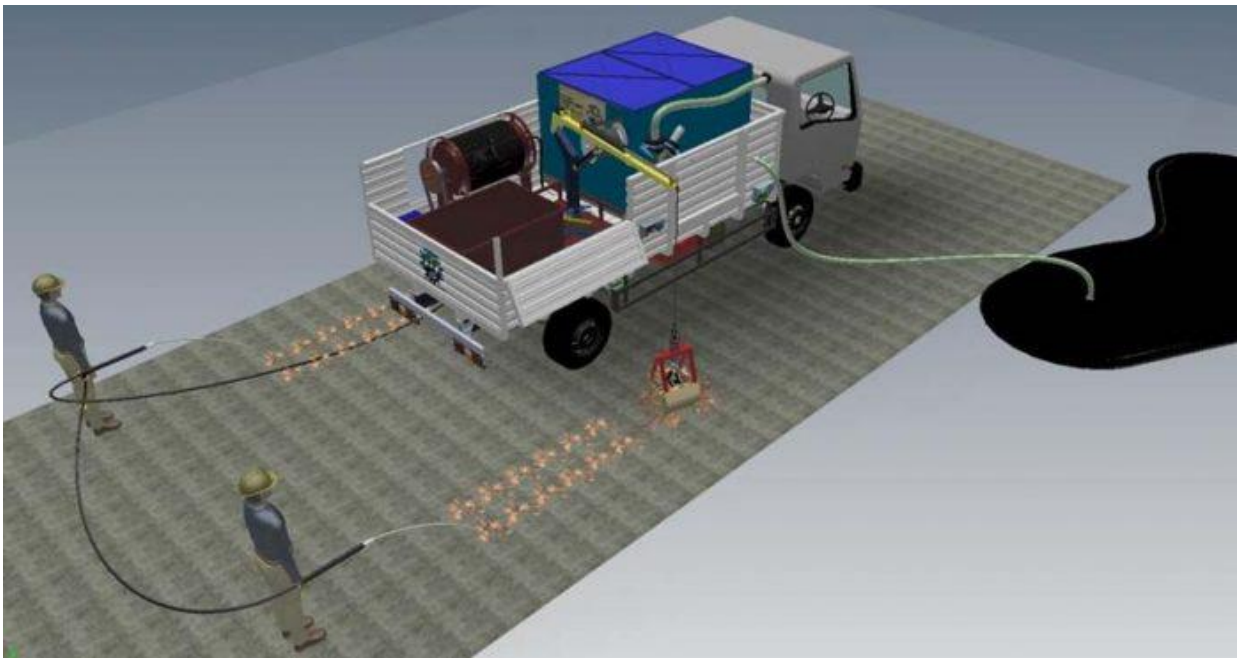
Various methods for cleaning of roadsides and streets are in practice. The manual sweeping with bamboo brooms (the most commonly used technique for road cleaning in India) disintegrates the debris in to small granules and possibly contributes towards particulate matters. With time, a worn-out broom/brush can induce micro cracking in roads/streets, leading to abrasion and damage, researchers said.

Vacuum sweeping is another technique used in road cleaning which becomes inefficient in wet or moist environment and ineffective to remove stubborn road debris. The large size turbine of vacuum sweeping machine agitates the nearby dust and increases the suspended particles in the air. The vacuumed air is to be exhausted to the outside environment, but the residence time is generally insufficient to allow gravitational settling of PM10 and even after installing exhaust filters, the fine dust particles escape into the nearby atmosphere, which may increase PM 2.5 and PM 10 levels. Also, the large moving parts and the turbine system for creating vacuum increase the noise levels.

It is also noticed that particulate matter due to non-exhaust sources such as emissions from wear of vehicle parts, road surface, resuspension of dust deposited on the road surface, etc., have been increasing. Tyres and road wear particles contribute majorly towards PM10. Not only particles from tyres and roads, but street sweeping also contribute towards bitumen wear micro plastics. As compared to sweeping the road manually and through vacuum cleaning machines, water spraying (at 2 to 10 bar pressure to wash out the dust/debris) reduces the curbside PM10 level significantly. As per the available reports, street cleaning through water jet reduces particulate matter PM10 by 90% during first hour of washing and around 18% on daily basis. After the water flushing operation, slurry must be collected to avoid the bitumen roads getting damaged by prolonged exposure to water and same should be recycled to minimize the water stress.

Performance of this machine depends on water pressure, water volume, and orientation of nozzles, collection of slurry water and its in-situ treatment. In addition, water evaporation during hot days contributes towards evaporative cooling effects. As the drain water is recycled and reutilized responsibly for road cleaning operations, the machine is well suited for regular and safe maintenance of roads/streets.(India Science Wire)

AbhyudayTimes



Researchers develop new machine for road cleaning with sewage water

By **Abhyuday Times** - October 22, 2021

New Delhi, Oct. 22: Littering on the roads/streets is a major problem in India. The debris (generated by vehicles and pedestrian), biomass (leaves, twigs, etc., causing microbial action in bitumen) and stagnate water enhance road surface abrasion, which is becoming the main bottleneck for maintaining good cleanliness and hygienic standards of Indian roads/streets.

Researchers at the CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur, have developed a machine that could be useful in maintaining good cleanliness and hygienic standards of Indian roads/streets. This machine sucks out the wastewater from drain/manhole using slurry pump. The drain water passes through multiple chambers and screened by different mesh size sieves, before it is finally treated with chemical

disinfectant. The treated water is stored in a separate chamber that is used in jetting operation. The water intake capacity of the machine from one manhole is more than 1000 litres. The machine can utilize the water to clean the road up to next available manhole within 50-70 meters.

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Various methods for cleaning roadsides and streets are in practice. The manual sweeping with bamboo brooms (the most commonly used technique for road cleaning in India) disintegrates the debris into small granules and possibly contributes towards particulate matters. With time, a worn-out broom/brush can induce microcracking in roads/streets, leading to abrasion and damage, researchers said.

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The performance of this machine depends on water pressure, water volume, and orientation of nozzles, collection of slurry water and its in-situ treatment. In addition, water evaporation during hot days contributes towards evaporative cooling effects. As the drain water is recycled and reutilized responsibly for road cleaning operations, the machine is well suited for regular and safe maintenance of roads/streets. (India Science Wire)

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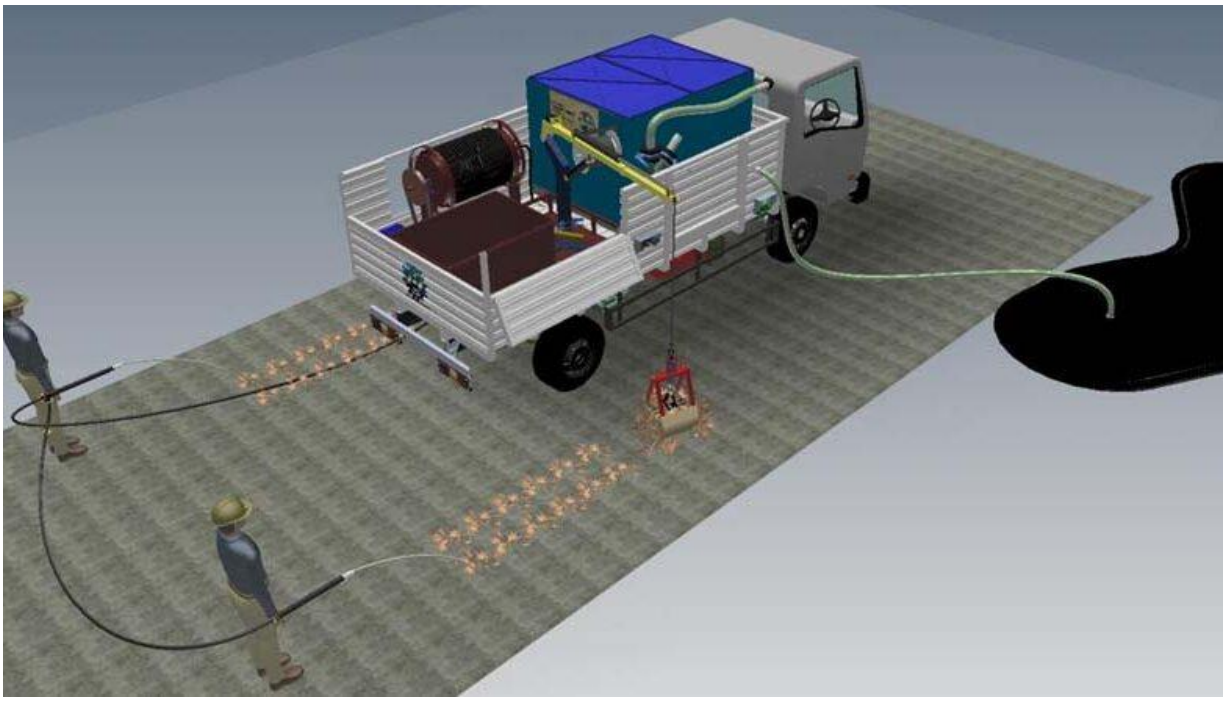

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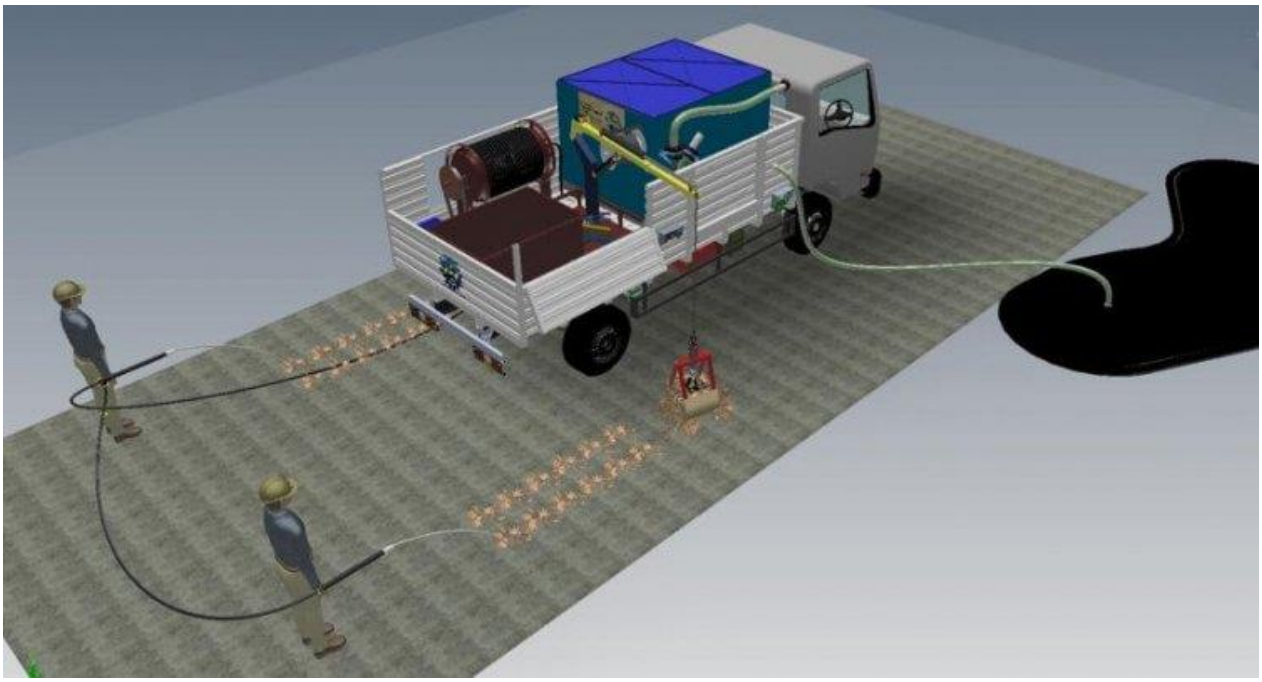
Editor Oct 23, 2021 - 14:17



Littering on India's public roadways is a big issue. Debris (from vehicles and pedestrians), biomass (leaves, twigs, and other organic matter that causes microbial action in bitumen), and stagnant water all contribute to increased road surface abrasion, which is becoming a major bottleneck in maintaining the cleanliness and hygienic standards of Indian roads and streets.

Researchers at the CSIR-Central Mechanical Engineering Research Institute (CMERI) in Durgapur have created a machine that could be effective in keeping Indian roadways and streets clean and sanitary. Using a slurry pump, this equipment suctions wastewater from a drain or manhole. The drain water is filtered through many chambers and sieves of various mesh sizes before being treated with a chemical disinfectant. The cleaned water is kept separate from the jetting operation in a separate chamber. The equipment can take more than

1000 litres of water from a single manhole. Within 50-70 metres, the machine can use the water to clean the road up to the next suitable manhole.

"Sprayed water quality was within the surface discharge limit during preliminary tests conducted by the CSIR-CMERI, and may not impact the bitumen in the road or the environment." The treated water is sprayed on the road at the optimum pressure and flow rate to drive the debris to the side of the road, where it is collected and transferred. The water that has been released returns to the drainage/manhole system. In a statement made by the institution, Prof. (Dr.) Harish Hirani, director, CSIR-CMERI, said, "The gathered debris is subsequently lifted using a grab bucket and dropped in the hopper of the truck."

Cleaning of roadsides and streets is done in a variety of ways. The most often used approach for road cleaning in India is manual sweeping with bamboo brooms, which disintegrates the waste into minute granules and may contribute to particulate matter. A worn-out broom/brush can cause tiny breaking in roads/streets over time, causing abrasion and damage, according to studies.

Vacuum sweeping is another road cleaning technique that is poor in damp or moist environments and in removing tenacious road debris. The vacuum sweeping machine's massive turbine agitates neighbouring dust, increasing the suspended particles in the air. The vacuumed air is supposed to be exhausted to the outside environment, but the residence time is usually insufficient to allow gravitational settling of PM10, and even after exhaust filters are installed, fine dust particles escape into the nearby atmosphere, potentially raising PM 2.5 and PM 10 levels. The noise levels are also increased by the huge moving parts and the turbine system for creating vacuum.

Non-exhaust sources of particulate matter, such as emissions from vehicle parts wear, road surface, resuspension of dust deposited on the road surface, and so on, have also been growing. PM10 is mostly caused by tyres and road wear particles. Bitumen wear microplastics are caused by particles from wheels and roads, as well as street sweeping. Water spraying (at 2 to 10 bar pressure to wash off the dust/debris) reduces the curbside PM10 level substantially when compared to hand sweeping and vacuum cleaning. According to reports, water jet street cleaning reduces particle matter PM10 by 90% within the first hour of washing and by roughly 18% on a daily basis. To avoid bitumen roads being damaged by prolonged contact to water, slurry must be collected after the water flushing operation and recycled to reduce water stress.

The performance of this machine is determined by water pressure, water volume, nozzle orientation, slurry water collection, and in-situ treatment. Furthermore, water evaporation contributes to evaporative cooling effects on hot days. The machine is highly suited for regular and safe maintenance of roads/streets because the drain water is recycled and reutilized responsibly for road cleaning operations.

Voice of the Nation
ORGANISER

Saving endangered animals from extinction

WEBDESK Oct 23, 2021, 11:22 AM IST

A study was conducted to examine the reproductive and genetic fitness of these captive-bred individuals and found no overall signs of genetic inbreeding between individuals across different generations.

New Delhi: Pygmy hogs are rare and endangered animals listed by the International Union for the Conservation of Nature (IUCN) and designated as a Schedule 1 species under the Indian Wildlife Protection Act, 1972. It is one of the very few mammals that build its own home, or nest, complete with a roof. Its present population, including reintroduced animals, is estimated to be less than 300 in the wild. The original population, which became restricted to a single locality, the Manas National Park in Assam, India, may number less than 50.

Efforts to save this species from extinction include the protection of its only habitat and breeding the animals in captivity. These are undertaken by the Pygmy Hog Conservation Program (PHCP), which is a collaborative project with the Ministry of Environment and Forests, Government of India, IUCN/SSC Wild Pig Specialist Group, and Forest Department, Government of Assam, as the key partners.

Since 1996, over 500 pygmy hogs have been bred successfully, and 142 captive-born have been released into the wild as part of the conservation programme. However, all these captive

individuals were offspring of just seven wild-caught individuals. One of the major challenges of a long-term captive breeding program is maintaining genetic diversity within a population over several generations. The genetic diversity can be lost from inbreeding due to mating between related individuals within a population, established with very few founders.

A study was recently conducted by the PHCP and the Laboratory for Conservation of Endangered Species at the Council of Scientific and Industrial Research's Centre for Cellular and Molecular Biology (CSIR-CCMB-LaCONES) to examine the reproductive and genetic fitness of these captive-bred individuals. The research group headed by Dr. G. Umapathy of CSIR-CCMB LaCONES studied genetic changes in 36 captive-bred pygmy hogs over time across eight consecutive generations. They also tested the association between genetic diversity and reproductive success to account for any fitness loss.

The study found no overall signs of genetic inbreeding between individuals across different generations. Dr. Umapathy said, "This was possible because of the strict scientific conservation breeding protocol followed by the programme. But, the recent generations show slightly increased relatedness. We, therefore, recommend the introduction of a few wild individuals to the breeding pool."

Dr. Goutam Narayan of PHCP and EcoSystems-India, said- "We carefully selected unrelated mates and bred them in separate family lines. We are glad that this study has provided evidence that it is possible to avoid genetic inbreeding in a small captive population even if the founder population is very small, if a strict protocol is followed year after year."

Dr. Vinay K Nandicoori, Director, CCMB, said, "This is the first such study on Indian animals to understand genetics effect of long-term captive breeding of endangered animals. The outcomes of the study will guide the management and optimization of the breeding protocol in PHCP and other similar conservation breeding programmes."

The lead author of the study was Dr. Deepanwita Purohit, and the other authors include S. Manu, M. S. Ram, S. Sharma, and H. C. Patnaik from CCMB, and Parag J. Deka from Pygmy Hog Conservation Programme.

Courtesy: India Science Wire

Saving Endangered Animals from Extinction

By **Team DP** On **Oct 23, 2021**

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Saving endangered animals from extinction

October 22, 2021

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The Indian Bulletin
www.theindianbulletin.com

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Pygmy hogs: Saving endangered animals from extinction

pygmy hog

POSTED BY: HASTAKSHEP NEWS 22ND OCTOBER 2021

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These are undertaken by the Pygmy Hog Conservation Program (PHCP), which is a collaborative project with the Ministry of Environment and Forests, Government of India, IUCN/SSC Wild Pig Specialist Group, and Forest Department, Government of Assam, as the key partners.

Since 1996, over 500 pygmy hogs have been bred successfully and 142 captive-born have been released into the wild as part of the conservation programme. However, all these captive individuals were offspring of just seven wild-caught individuals. One of the major challenges of a long-term captive breeding program is to maintain genetic diversity within a population, over several generations. The genetic diversity can be lost from inbreeding due to mating between related individuals within a population, established with very few founders.

A study was recently conducted by the PHCP and the Laboratory for Conservation of Endangered Species at the Council of Scientific and Industrial Research's Centre for Cellular and Molecular Biology (CSIR-CCMB-LaCONES) to examine the reproductive and genetic fitness of these captive-bred individuals. The research group headed by Dr G. Umapathy of CSIR-CCMB LaCONES studied genetic changes in 36 captive-bred pygmy hogs over time across eight consecutive generations. They also tested the association between genetic diversity and reproductive success to account for any fitness loss.

The study found no overall signs of genetic inbreeding between individuals across different generations. Dr Umapathy said "This was possible because of the strict scientific conservation breeding protocol followed by the programme. But, the recent generations show slightly increased relatedness. We, therefore, recommend the introduction of a few wild individuals to the breeding pool".

Dr Goutam Narayan of PHCP and EcoSystems-India, said- "We carefully selected unrelated mates and bred them in separate family lines. We are glad that this study has provided evidence that it is possible to avoid genetic inbreeding in a small captive population even if the founder population is very small if a strict protocol is followed year after year".

Dr Vinay K Nandicoori, Director, CCMB, said, "This is the first such study on Indian animals to understand genetics effect of long-term captive breeding of endangered animals. The outcomes of the study will guide the management and optimization of the breeding protocol in PHCP and other similar conservation breeding programmes".

The lead author of the study was Dr Deepanwita Purohit and the other authors include S. Manu, M. S. Ram, S. Sharma, and H. C. Patnaik from CCMB, and Parag J. Deka from Pygmy Hog Conservation Programme.

(India Science Wire)

Topics: Pygmy hog, IUCN, Wildlife Protection, Manas National Park, habitat, breeding, captivity, Pygmy Hog Conservation, Ministry of Environment and Forests, genetic diversity, Conservation, Endangered Species, CSIR, CSIR-CCMB, LaCONES

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उनकी ख़बरें जो ख़बर नहीं बनते

भारतीय वैज्ञानिकों ने विकसित की सौर ऊर्जा संचालित हाइड्रोजन जेनरेटर के लिए नई सामग्री

उपाध्याय अमलेन्दु अक्टूबर 25, 2021 Latest, तकनीक व विज्ञान, देश, समाचार

Indian scientists develop new material for solar powered hydrogen generator

नई दिल्ली, 25 अक्तूबर, 2021: भारतीय प्रौद्योगिकी संस्थान गुवाहाटी के शोधकर्ता नई सामग्री (आईआईटी) विकसित की है, जो ***सूर्य के प्रकाश का उपयोग)use of sunlight)*** करके पानी को हाइड्रोजन और ऑक्सीजन में विभाजित कर सकती है।

'उत्कृष्ट धातुओं' की तुलना में बहुत सस्ती है नई सामग्री

शोधकर्ताओं का कहना है कि ये सामग्रियां वर्तमान में उपयोग की जाने वाली 'उत्कृष्ट धातुओं' की तुलना में बहुत सस्ती हैं, जो किफायती सौरसंचालित हाइड्रोजन जेनरेटर में उपयोगी हो सकती हैं।-

'फोटो इलेक्ट्रोकेमिकल' (पीईसी) है क्या सेल्स (What is photoelectrochemical cell?)

आमतौर पर उपयोग होने वाले 'सौर सेल' प्रकाश को सीधे विद्युत ऊर्जा में परिवर्तित करने के लिए जाने जाते हैं। सूर्य के प्रकाश से संचालित ऊर्जा रूपांतरण की एक अन्य प्रणाली है, जिसे 'फोटोइलेक्ट्रोकेमिकल' (पीईसी (सेल कहा जाता है। **पीईसी** ने हाल के दिनों में विद्युत ऊर्जा में संयोजन के साथ ईंधन के प्रत्यक्ष उत्पादन के कारण ध्यान आकर्षित किया है।

पीईसी सेल सरल और सुरक्षित यौगिकों – जैसे पानी को हाइड्रोजन और ऑक्सीजन में विभाजित करने के लिए सौर ऊर्जा का उपयोग करते हैं। हाइड्रोजन एक उच्चऊर्जा ईंधन है-, जिसे आवश्यकतानुसार संग्रहीत और उपयोग किया जा सकता है। इसलिए, इन सेल्स को **कार्बन मुक्त हाइड्रोजन अर्थव्यवस्था के लिए महत्वपूर्ण (Carbon-free hydrogen critical to economy)** माना जाता है।

डॉमोहम्मद कुरैशी ., प्रोफेसर, रसायन विज्ञान विभाग, आईआईटी गुवाहाटी ने कहा, "पीईसी सेल अभी तक ऊर्जा संकट का व्यावहारिक समाधान नहीं बन सके हैं, क्योंकि इससे कुछ वैज्ञानिक बाधाएं जुड़ी हुई हैं। इनमें जलविभाजन प्रक्रिया को सक्रिय करने के लिए -ऑक्सीकरण प्रक्रिया की निष्क्रियता एक प्रमुख कारण है। जल-उत्प्रेरकों का उपयोग किया जाता है। लेकिन, ये उत्प्रेरक महंगी धातुएं हैं, जिनमें प्लैटिनम, इरिडियम और रूथेनियम शामिल हैं, जो सेल उत्पादन को महँगा और अव्यावहारिक बना देती हैं। "

आईआईटी, गुवाहाटी द्वारा जारी ताजा वक्तव्य में कहा गया है कि शोधकर्ताओं ने प्लैटिनम, इरिडियम और रूथेनियम जैसी उत्कृष्ट धातुओं के बिना उत्प्रेरक विकसित किए हैं, जो पीईसी सेल में पानी को विभाजित करने में महंगी धातुओं के समान उपयोगी हैं।

शोधकर्ताओं का कहना है कि अर्धचालकों का संयोजन-, जो वाहक परिवहन के लिए उनके ऊर्जा स्तर के गलत मिलान से बाधित होते हैं, इस दृष्टिकोण को एक मॉडल प्रणाली के रूप में उपयोग कर सकते हैं। इससे पानी के निष्क्रिय ऑक्सीकरण काइनेटिक्स वाले अर्धसंचालक तेज काइनेटिक्स के साथ सामग्री में बदल सकते हैं। उनका - कहना यह भी है कि अर्धचालकों के बीच ऊर्जा हस्तांतरण की मूल बातें समझने के लिए यह एक मॉडल प्रणाली हो सकती है।

प्रोफेसर मोहम्मद कुरैशी ने कहा, "हमने एक टर्नरी उत्प्रेरक विकसित किया है, जिसमें कोबाल्ट-टिन स्तरित- और बिस्मथ वैनाडेट शामिल हैं (एलडीएच) डबल हाइड्रोक्साइड, जो ग्रैफेन पुलों के साथ एक पीएन जंक्शन सेमीकंडक्टर बनाता है। हमने पाया कि एक फोटानोड के रूप में उत्प्रेरक जब इस्तेमाल किया जाता है, तो यह हाइड्रोजन और ऑक्सीजन का उत्पादन करने के लिए पानी को आसानी से विभाजित कर सकता है।"

जब प्रकाश पीईसी सेल के एनोड पर पड़ता है, तो ऋणात्मक रूप से आवेशित इलेक्ट्रॉन और धनात्मक आवेशित छिद्र उत्पन्न होते हैं। किसी उत्प्रेरक की अनुपस्थि (एक्सिटॉन)ति में, थर्मोडायनामिक बाधा बहुत अधिक होगी। ऐसे में, पानी को हाइड्रोजन और ऑक्सीजन में विभाजित नहीं किया जा सकता।

पानी को विभाजित करने के लिए, छिद्रों को इलेक्ट्रॉनों के साथ पुनर्संयोजन से रोका जाना चाहिए। आईआईटी गुवाहाटी द्वारा विकसित टर्नरी उत्प्रेरक प्रणाली में, बिस्मथ वैनाडेट सूर्य के प्रकाश की प्रतिक्रिया में इलेक्ट्रॉनों और छिद्रों को उत्पन्न करता है।

ग्रैफेन छिद्रों को वैनाडेट से दूर कर देता है और उन्हें कोबाल्टटिन एलडीएच में स्थानांतरित कर देता है-, इस प्रकार इलेक्ट्रॉनों के साथ उनके पुनर्संयोजन को रोकता है। इस तरह, छिद्र और इलेक्ट्रॉन अब पानी को हाइड्रोजन और ऑक्सीजन में विभाजित करने के लिए उपलब्ध होते हैं।

शोधकर्ताओं का मानना है कि यह अध्ययन हेटेरोसंरचित फोटोएनोड्स के तंत्र को समझने में मदद करेंगे और -सि बेहतर जल ऑक्सीकरण के लिए सस्ते फोटोइलेक्ट्रोडस्टम के डिजाइन का मार्ग प्रशस्त करेंगे। यह अध्ययन शोध पत्रिका फिजिकल केमिस्ट्री लेटर्स में प्रकाशित किया गया है।

(इंडिया साइंस वायर(

Topics: IIT Guwahati, cost-efficient, new materials, energy, hydrogen, water, sunlight, clean energy, fuel, carbon-free, hydrogen economy

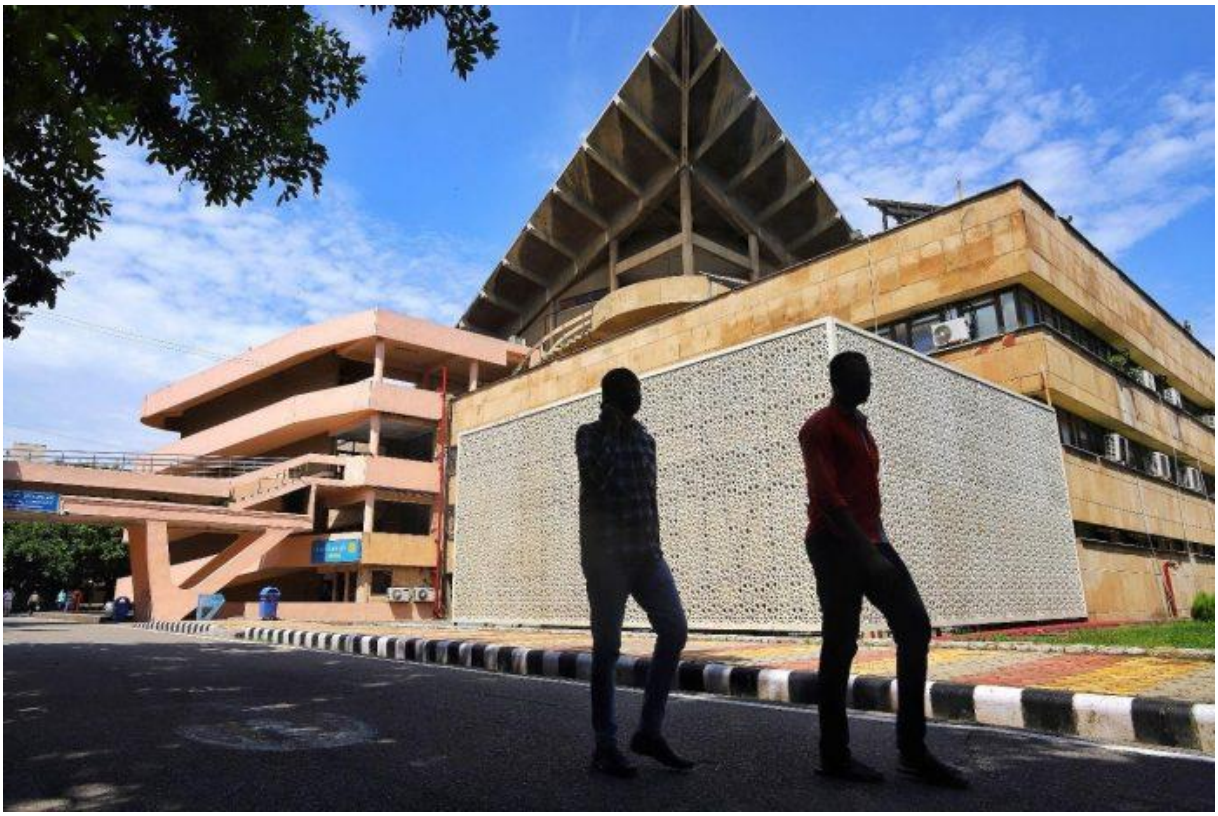
THE FEDERAL

IIT-Delhi to offer M.Tech. in AI from 2022: Details here

M.Tech in MINDS will be a flagship educational programme for the school, which is expected to commence from July 2022

India Science Wire

12:38 PM, 27 October, 2021



The ScAI was established in 2020, to strengthen education, research, and applications of AI

The School of Artificial Intelligence (ScAI) at IIT Delhi is going to start a new post-graduate programme on artificial intelligence.

IIT Delhi's Senate, the faculty body responsible for taking all major educational decisions, has approved the proposed programme titled 'M.Tech in Machine Intelligence & Data Science (MINDS)'.

M.Tech in MINDS will be a flagship educational programme for the school, which is expected to commence from July 2022. This will be the second degree offered by ScAI, after its PhD in AI.

Professor Mausam, the founding head of the school, said that the PhD programme had gathered a lot of interest in its first year, with a 90 percent success rate in PhD students joining ScAI in the last semester. He called the success rate "exceptional for a young academic unit like ours, as students generally prefer more established academic programmes." "But they chose us, suggesting that we have put together a really strong faculty team in AI," he added.

ScAI currently lists around 40 faculty members on its list, including adjunct faculty members from industry research centres like Microsoft Research, Google AI, and IBM Research.

M.Tech in MINDS is planned as an industry-sponsored programme. The students will be expected to work on industry-relevant AI problems, since they will be co-advised by an IIT Delhi professor, and a researcher from the sponsoring company. All students with an undergraduate degree in science or engineering will be eligible for the MINDS programme.

"Academic institutions today cannot remain in silos. They must work closely with all stakeholders, including industry, non-profit, and governmental organizations. M.Tech programme in MINDS will energize academia-industry collaboration in AI," said the Director of IIT Delhi, Professor V. Ramgopal Rao.

The MINDS curriculum comprises graduate-level courses in core AI technologies like deep learning and data mining, application-oriented courses like computer vision, natural language processing, and AI for healthcare, and also fundamental courses on mathematics underlying modern AI technologies.

The ScAI was established in 2020, to strengthen education, research, and applications of AI. It encourages multidisciplinary collaborations between AI and domain experts, so that fundamental research impacting real applications could be pursued. The school is making rapid strides since its inception in synergising AI activities across the Institute and new faculty recruitments.

Voice of the Nation
ORGANISER

IIT Delhi to launch M.Tech in 'MINDS'

WEBDESK Oct 27, 2021, 08:55 AM IST

IIT Delhi campus

M.Tech in MINDS is planned as an industry-sponsored programme and curriculum comprises graduate-level courses in core AI technologies.

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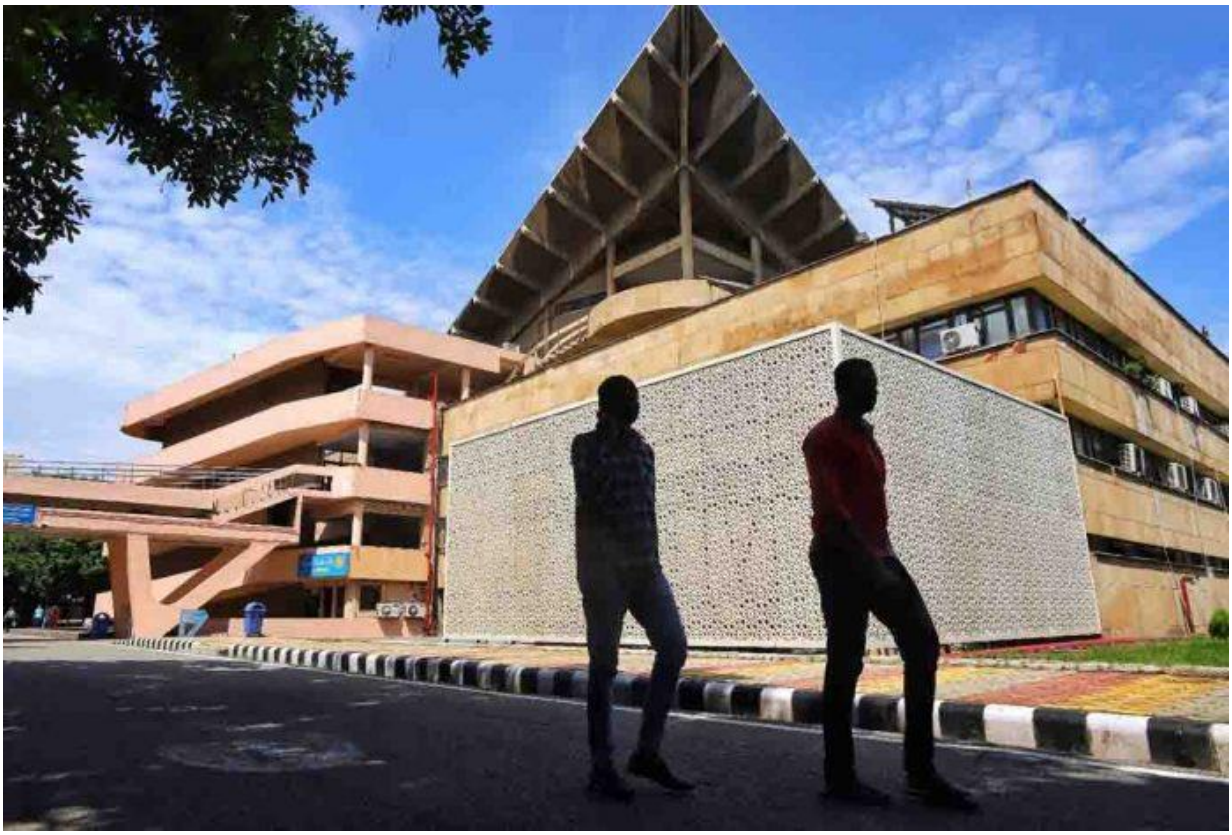
Courtesy: India Science Wire

RD TIMES.in

IIT Delhi to launch M.Tech in 'MINDS'

By **RD Times Online** - October 26, 2021



IIT Delhi Campus

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India Science Wire

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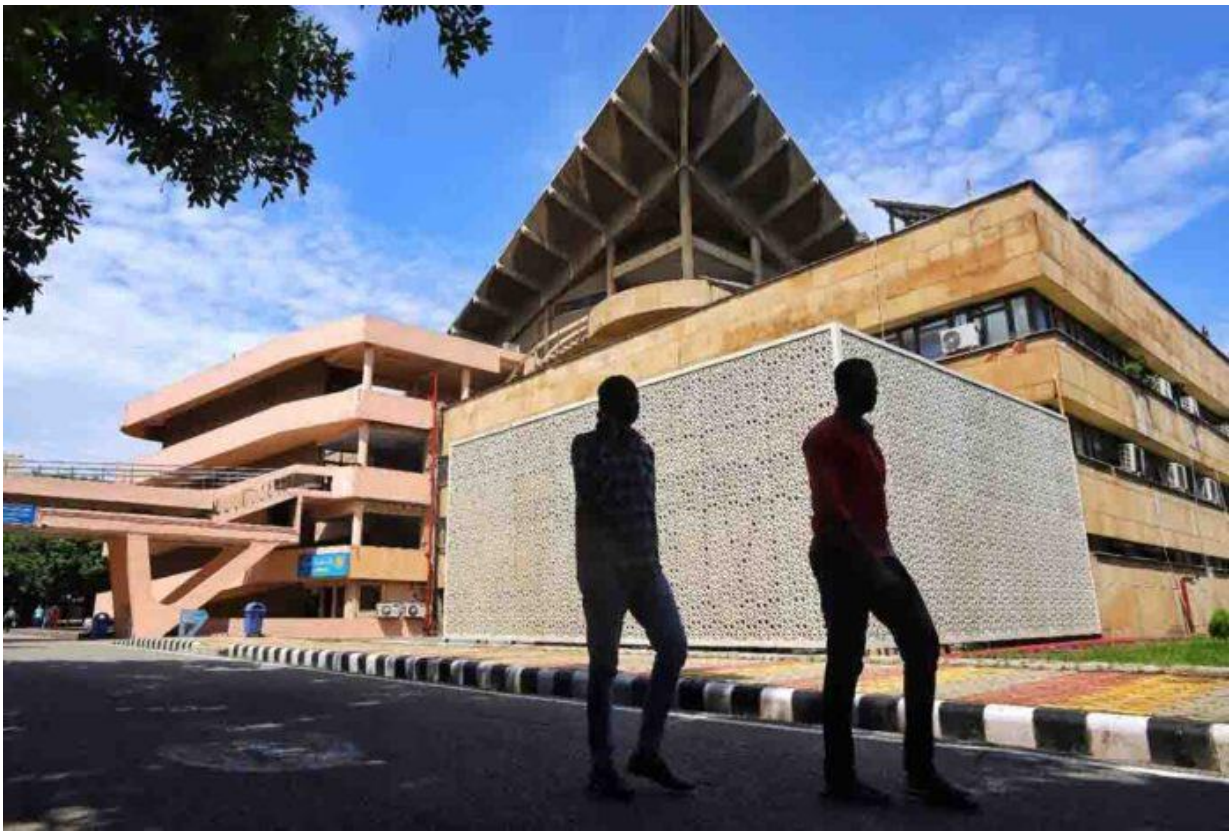
By **Rupesh Dharmik** - October 26, 2021



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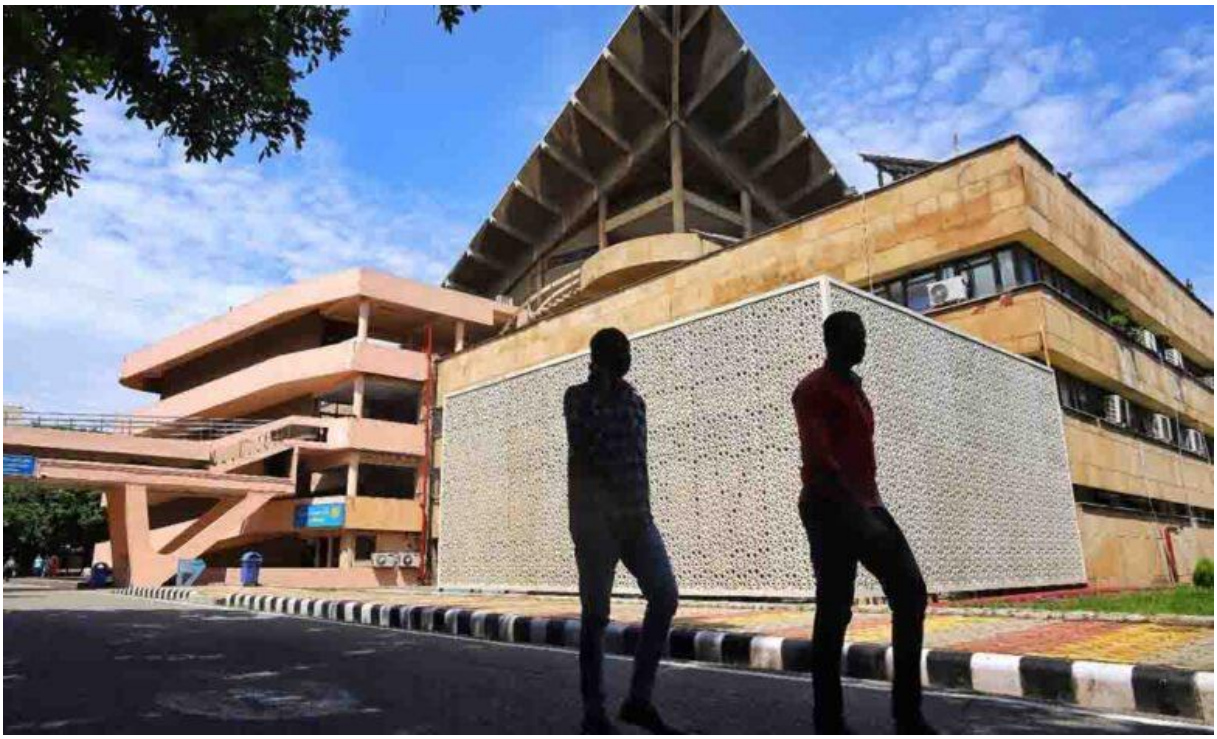

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M.Tech in MINDS is planned as an industry-sponsored programme. The students will be expected to work on industry-relevant AI problems, since they will be co-advised by an IIT Delhi professor and a researcher from the sponsoring company. All students with an undergraduate degree in science or engineering will be eligible for the MINDS programme.

Prof. V. Ramgopal Rao, Director, IIT Delhi, said, "Academic institutions today cannot remain in silos. They must work closely with all stakeholders, including industry, non-profit, and governmental organizations. M.Tech programme in MINDS will energize academia-industry collaboration in AI."

The MINDS curriculum comprises graduate-level courses in core AI technologies like deep learning and data mining, application-oriented courses like computer vision, natural language processing, and AI for healthcare, and also fundamental courses on the mathematics underlying modern AI technologies.

The School of Artificial Intelligence was established last year to strengthen education, research, and applications of AI. It encourages multidisciplinary collaborations between AI and domain experts so that fundamental research impacting real applications could be pursued. The school is making rapid strides since its inception in synergising AI activities across the Institute and new faculty recruitments. (India Science Wire)

Kashmir Convener
Voice of Courage

IIT Delhi to launch M.Tech in 'MINDS'

EDUCATION

By Online Editor On Oct 26, 2021

IIT Delhi campus

New Delhi, Oct. 26 (India Science Wire): The School of Artificial Intelligence (ScAI) at IITDelhi willstarta new post-graduate programmefocused on artificial intelligence. IIT Delhi's Senate, the faculty body responsible for taking all major educational decisions, has approved the proposed programme titled 'M.Tech in Machine Intelligence & Data Science (MINDS)'.

M. Tech in MINDS will be a flagship educational programme for the school and is expected to commence in July 2022. This will be the second degree offered by ScAI. Earlier, the school started a PhD in AI.

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Voice of the Nation
ORGANISER

New model to assess heavy rainfall-induced road damages

WEBDESK Oct 27, 2021, 09:51 AM IST

A view of the IIT Gandhinagar Campus

The researchers reconstructed the sequence of events that unfolded in the Periyar river basin in Kerala in 2018 and quantified the exact magnitude of connectivity losses as a consequence of events triggered by once in 100 years rainfall.

New Delhi: Incessant monsoon rains, floods, landslides, and associated debris flows on highways in different parts of the country cause severe infrastructural damage, casualties, and socio-economic disruptions.

Researchers at the Indian Institute of Technology (IIT) Gandhinagar have developed an integrated predictive model to accurately understand and assess the real magnitude of heavy rainfall-induced damages in road transport networks.

This hazard model can help administrators identify the 'hotspots' to be reinforced and protected to avoid highway flooding and minimise losses.

The research team used satellite imageries, ingeniously developed landslide and debris flow models, and state-of-the-art flood prediction models to predict the occurrence time and geographical locations that have a high susceptibility to the simultaneous occurrence of flooding, landslide and debris flow events after heavy rainfall episodes. It also predicts the magnitude of infrastructure disruptions that may happen due to landslides, debris flows, and floods in those regions.

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Prof Udit Bhatia, Assistant Professor of Civil Engineering at IIT Gandhinagar, said, “The first step in the direction of enhancing resilience is to understand the risk well for pre-disaster preparedness and post-disaster recovery. The results of our modelling framework show that we could underestimate the functionality losses by 70% if we do not take into account the concurrence of extreme events, which in turn, can undermine our disaster preparedness.”

Adding further, Prof Bhatia said, “When we look at the road transportation systems within the region, we end up with thousands of intersections and hundreds of thousands of road segments. Hence, no stakeholder can give the same priority to each infrastructure element in systems with such a high complexity. Our patented complex network framework in combination with our recently developed hazard model used in this study helps us identify the ‘hotspots’ which should be reinforced and protected to minimise the societal and economic disruptions.”

This study identifies the least to most weak links (hotspot pixels) within a road network and helps decide the locations of road segments that need strengthening. The landslide model also considers the existing vegetation cover, land use characteristics, water flow characteristics, and soil binding properties. All these parameters are fed into their mathematical model to calculate the slope stability at each pixel. On the other hand, this model can also estimate each stabilisation effort (e.g. changes in vegetation, reinforcements at each location) would have on the slope stability.

The proposed framework can be applied to any region globally wherever necessary observations are available for model calibration and validation, IIT Gandhinagar statement said.

Apart from Professor Udit Bhatia, the research team included Raviraj Dave and Srikrishnan Siva Subramanian. They have published their study in Environmental Research Letters, an international interdisciplinary journal published by the Institute of Physics, headquartered in the United Kingdom.

Courtesy: India Science Wire

NATIONAL AGE

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National Age October 26, 2021

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Republic NewsIndia

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By **Rupesh Dharmik** - October 26, 2021

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RKD Live 22 hours ago

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DELHI POST
Politics | Democracy | Development

New Model to Assess Heavy Rainfall-Induced Road Damages

By **ISW Desk** On **Oct 26, 2021**

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indianScoops

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The IndianBulletin
www.theindianbulletin.com

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Voice of the Nation
ORGANISER

New partnership to meet green energy goals

WEBDESK Oct 27, 2021, 09:21 AM IST

CSIR-IICT will collaborate with Clean Seas on the cost-effective fuel cell technology to enable the project to complete the value chain from converting waste to generation and using the hydrogen output.

New Delhi: Council of Scientific and Industrial Research (CSIR) 's Hyderabad-based constituent laboratory Indian Institute of Chemical Technology (IICT) has taken a new initiative to help strengthen efforts related to the conversion of waste to wealth.

CSIR-IICT signed a Memorandum of Understanding (MoU) with Clean-Seas, Inc., a wholly-owned subsidiary of Clean-Seas India Pvt. Ltd of the Clean Vision Corporation, to collaborate on waste conversion system technology. Clean Vision Corporation is a global holding company that acquires and operates sustainable cleantech and green energy businesses.

CSIR-IICT will be the knowledge partner for customizing Clean-Seas' waste plastic conversion technology to suit Indian conditions, which will aid in mitigating the country's growing waste streams that will be converted into valuable, environmentally friendly commodities. The project is currently in the planning stage, and the collaboration partners seek to have it operational in the first quarter of 2022.

In addition, CSIR-IICT will collaborate with Clean Seas on the cost-effective fuel cell technology to enable the project to complete the value chain from converting waste to generation and using the hydrogen output. The plastic waste streams will be converted into low sulfur fuels, which will produce electricity that can be used for generating clean hydrogen, thereby contributing to making India a global leader in hydrogen production called the "hydrogen moonshot."

"The partnership with Clean-Seas shall bring out a promising solution that will have an edge over current technologies and will go a long way towards addressing this global crisis," said Dr Chandrasekhar, Director CSIR-IICT.

"Clean energy is essential for improving the health of our planet, and collaboration such as this will lead the way to a cleaner and more energy secure environment," said Mr. Venkat Kumar Tangirala, Managing Director of Clean-Seas India.

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Courtesy: India Science Wire

indianScoops

New partnership to meet green energy goals

October 26, 2021

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BharatHerald

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IT INDIATHRIVE

New partnership to meet green energy goals

BY **INDIA THRIVE** OCTOBER 26, 2021

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Republic NewsIndia

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By **Rupesh Dharmik** - October 26, 2021

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New Partnership to Meet Green Energy Goals

By **Team DP** On **Oct 27, 2021**

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The IndianBulletin
www.theindianbulletin.com

New partnership to meet green energy goals

By **The Indian Bulletin Online** - October 26, 2021

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बरसात से सड़कक्षति का आकलन करने के लिए नया - मॉडल

By RD Times Hindi October 26, 2021

आईआईटी, गाँधीनगर

नई दिल्ली, 26 अक्तूबर :(इंडिया साइंस वायर) देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायःबाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जानआर्थिक व्यवधान एक बड़ी चुनौती है।-माल की व्यापक हानि और सामाजिक-

भारतीय प्रौद्योगिकी संस्थान (आईआईटी),गाँधीनगर के शोधकर्ताओं ने सड़कनेटवर्क में भारी वर्षा के कारण - होने वाली क्षति के सटीक और वास्तविक आकलन के लिएएक एकीकृत मॉडल विकसित किया है। यह मॉडल प्रशासकों को सड़कों पर उन संवेदनशील स्थानों की पहचान करने में मदद कर सकता है, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है। शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गाँधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) रिज़ॉल्यूशन डिजिटल एलिवेशन मॉडल-उथले भूस्खलनएवंमलबे के प्रवाह का विश्लेषण करता है, और भारी मात्रा में जलप्रवाह के लिए जिम्मेदा-र जलाशयों के बहाव संबंधी डेटा का आकलन करता है।

प्रोफेसर उदित भाटिया, श्रीकृष्णन शिव सुब्रमण्यम और रविराज दवे (बाएं से दाएं)

आईआईटी, गाँधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, “आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदापूर्व तैयारियों और आपदा के दुष्प्रभावों से उबरने - के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।”

प्रोफेसर भाटिया ने कहा, “किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है। इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे ‘हॉटस्पॉट’ की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।”

इस संबंध में, आईआईटी, गाँधीनगर केवक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहाँ मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।

प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। (इंडिया साइंस वायर)

बरसात से बदनुमा हुई सड़क की क्षति नापने के लिए बनाया नया मॉडल

Last Updated: मंगलवार, 26 अक्टूबर 2021 (18:19 IST)

नई दिल्ली, देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायः बाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जानमाल की व्यापक हानि और -आर्थिक व्यवधान एक बड़ी चुनौती है।-सामाजिक

भारतीय प्रौद्योगिकी संस्थान (आईआईटी), गांधीनगर के शोधकर्ताओं ने सड़कनेटवर्क में भारी वर्षा के कारण -होने वाली क्षति के सटीक और वास्तविक आकलन के लिए एक एकीकृत मॉडल विकसित किया है।

यह मॉडल प्रशासकों को सड़कों पर उन संवेदनशील स्थानों की पहचान करने में मदद कर सकता है, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की

भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है।

शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गांधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) रिज़ॉल्यूशन डिजिटल एलिवेशन मॉडल- उथले भूस्खलन एवं मलबे के प्रवाह का विश्लेषण करता है, और भारी मात्रा में जलप्रवाह के लिए जिम्मेदार - जलाशयों के बहाव संबंधी डेटा का आकलन करता है।

आईआईटी, गांधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, “आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदापूर्व तैयारियों और आपदा के दुष्प्रभावों से उबरने - के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।"

प्रोफेसर भाटिया ने कहा, “किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है।

इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गांधीनगर के वक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहां मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।
प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। ***(इंडिया साइंस वायर(***

बरसात से सड़कक्षति का आकलन करने के लिए नया - मॉडल

26/10/2021 V3news India

नई दिल्ली, 26 अक्तूबर देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायः बाढ़ :(इंडिया साइंस वायर), भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जानमाल की - (आईआईटी) आर्थिक व्यवधान एक बड़ी चुनौती है। भारतीय प्रौद्योगिकी संस्थान-व्यापक हानि और सामाजिक, गाँधीनगर के शोधकर्ताओं ने सड़कनेटवर्क में भारी वर्षा के कारण होने वाली क्षति के सटीक और वास्तविक आकलन के - लिए एक एकीकृत मॉडल विकसितकिया है।

यह मॉडल प्रशासकों को सड़कों पर उन संवेदनशील स्थानों की पहचान करने में मदद कर सकता है, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है। शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का

उपयोग किया है। शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है। आईआईटी, गाँधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार

नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च उथले (डीईएम) रिज़ॉल्यूशन डिजिटल एलिवेशन मॉडल-भूस्खलन एवं मलबे के प्रवाह का विश्लेषण करता है, और भारी मात्रा में जलप्रवाह के लिए जिम्मेदार जलाशयों के बहाव - संबंधी डेटा का आकलन करता है। आईआईटी, गाँधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, "आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदापूर्व तैयारियों और आपदा के - दुष्प्रभावों से उबरने के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।"

प्रोफेसर भाटिया ने कहा, "किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है। इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गाँधीनगर के वक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहाँ मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं। प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है।

भारत हेराल्ड

बरसात से सड़कक्षति का आकलन करने के - लिए नया मॉडल

1 day ago

आईआईटी, गाँधीनगर

नई दिल्ली, 26 अक्तूबर: देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायःबाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जान व्यापक की माल- है। चुनौती बड़ी एक व्यवधान आर्थिक-सामाजिक और हानि

भारतीय प्रौद्योगिकी संस्थान आई)आईटी(,गाँधीनगर के शोधकर्ताओं ने सड़क कारण के वर्षा भारी में नेटवर्क- मॉडल यह है। किया विकसित मॉडल एकीकृत लिएएक के आकलन वास्तविक और सटीक के क्षति वाली होने है सकता कर मदद में करने पहचान की स्थानों संवेदनशील उन पर सड़कों को प्रशासकों, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है। शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गाँधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) मॉडल एलिवेशन डिजिटल रिज़ॉल्यूशन- है करता विश्लेषण का प्रवाह के भूस्खलनएवंमलबे उथले, और भारी मात्रा में जल जिम्मेदार लिए के प्रवाह- सं बहाव के जलाशयोंबंधी डेटा का आकलन करता है।

प्रोफेसर उदित भाटिया, श्रीकृष्णन शिव सुब्रमण्यम और रविराज दवे (बाएं से दाएं)

आईआईटी, गाँधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, "आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदातै पूर्व-यारियों और आपदा के दुष्प्रभावों से उबरने के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।"

प्रोफेसर भाटिया ने कहा, "किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है। इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गाँधीनगर केवक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहाँ मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।

प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। (वायर साइंस इंडिया)

बरसात से सड़कक्षति का आकलन करने के - लिए नया म ॉडल

By **Rupesh Dharmik** - October 26, 2021

आईआईटी, गाँधीनगर

नई दिल्ली, 26 अक्तूबर :(इंडिया साइंस वायर) देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायःबाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जानआर्थिक व्यवधान एक बड़ी चुनौती है।-माल की व्यापक हानि और सामाजिक-

भारतीय प्रौद्योगिकी संस्थान (आईआईटी),गाँधीनगर के शोधकर्ताओं ने सड़कनेटवर्क में भारी वर्षा के कारण - होने वाली क्षति के सटीक और वास्तविक आकलन के लिएएक एकीकृत मॉडल विकसित किया है। यह मॉडल प्रशासकों को सड़कों पर उन संवेदनशील स्थानों की पहचान करने में मदद कर सकता है, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है। शोधकर्ताओं का कहना है कि यह

मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गाँधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) रिज़ॉल्यूशन डिजिटल एलिवेशन मॉडल-उथले भूस्खलनएवंमलबे के प्रवाह का विश्लेषण करता है, और भारी मात्रा में जलप्रवाह के लिए जिम्मेदार - जलाशयों के बहाव संबंधी डेटा का आकलन करता है।

प्रोफेसर उदित भाटिया, श्रीकृष्णन शिव सुब्रमण्यम और रविराज दवे (दाएं बाएं से)

आईआईटी, गाँधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, "आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदापूर्व तैयारियों और आपदा के दुष्प्रभावों से उबरने - के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।"

प्रोफेसर भाटिया ने कहा, "किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है। इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गाँधीनगर केवक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहाँ मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।

प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। (इंडिया साइंस वायर)

दी इंडियन बुलेटिन

बरसात से सड़कक्षति का आकलन करने के - लिए नया मॉडल

1 day ago

आईआईटी, गाँधीनगर

नई दिल्ली, 26 अक्तूबर: देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायःबाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जान व्यापक की माल- है। चुनौती बड़ी एक व्यवधान आर्थिक-सामाजिक और हानि

भारतीय प्रौद्योगिकी संस्थान (आईआईटी),गाँधीनगर के शोधकर्ताओं ने सड़क कारण के वर्षा भारी में नेटवर्क- मॉडल यह है। किया विकसित मॉडल एकीकृत लिएएक के आकलन वास्तविक और सटीक के क्षति वाली होने है सकता कर मदद में करने पहचान की स्थानों संवेदनशील उन पर सड़कों को प्रशासकों, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है। शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गाँधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) मॉडल एलिवेशन डिजिटल रिज़ॉल्यूशन- है करता विश्लेषण का प्रवाह के भूस्खलनएवंमलबे उथले, और भारी मात्रा में जल जिम्मेदार लिए के प्रवाह- है। करता आकलन का डेटा संबंधी बहाव के जलाशयों

प्रोफेसर उदित भाटिया, श्रीकृष्णन शिव सुब्रमण्यम और रविराज दवे (बाएं से दाएं)

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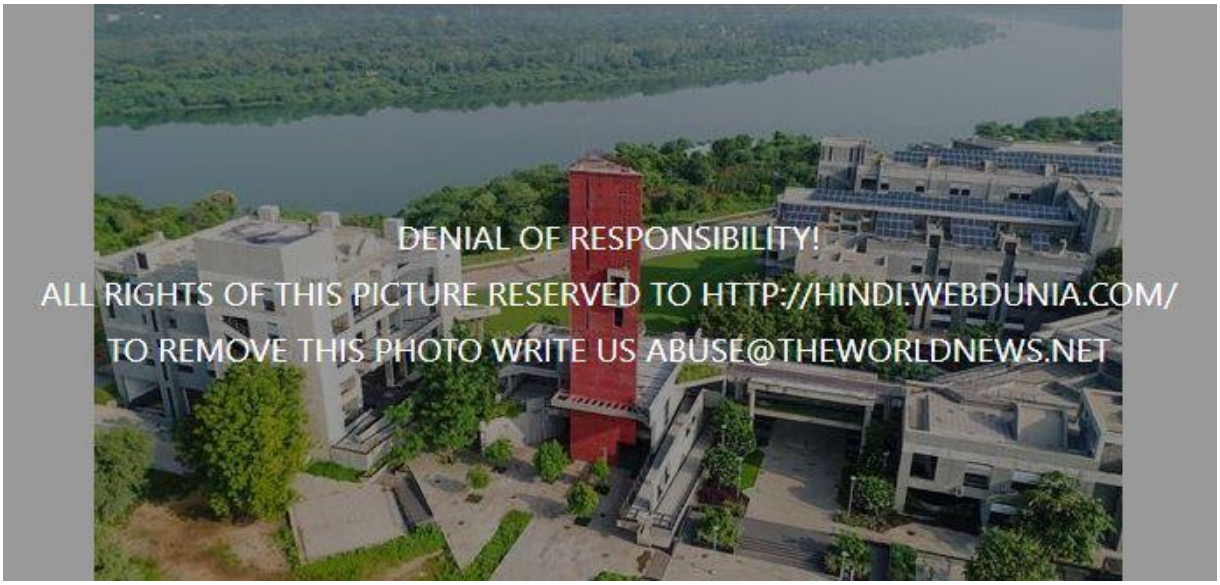
प्रोफेसर भाटिया ने कहा, "किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है। इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गाँधीनगर केवक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहाँ मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।

प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। (वायर साइंस इंडिया)

TRUSTED 10/26/2021, 6:15:00 PM

बरसात से बदनुमा हुई सड़क की क्षति नापने के लिए बनाया नया मॉडल



नई दिल्ली, देश के विभिन्न हिस्सों में मानसून की भारी बारिश प्रायः बाढ़, भूस्खलन और राजमार्गों पर मलबे के प्रवाह का कारण बनती है। इससे होने वाला आधारभूत ढांचे का नुकसान, जान माल की व्यापक हानि-और सामाजिकआर्थिक व्यवधान एक बड़ी चुनौती है।-

भारतीय प्रौद्योगिकी संस्थान (आईआईटी), गांधीनगर के शोधकर्ताओं ने सड़कनेटवर्क में भारी वर्षा के कारण होने - वाली क्षति के सटीक और वास्तविक आकलन के लिए एक एकीकृत मॉडल विकसित किया है।

यह मॉडल प्रशासकों को सड़कों पर उन संवेदनशील स्थानों की पहचान करने में मदद कर सकता है, जिन्हें राजमार्गों पर भारी वर्षा के कारण होने वाले व्यवधानों को रोकने के लिए संरक्षित करने की आवश्यकता होती है।

शोधकर्ताओं ने बाढ़, भूस्खलन या फिर मलबे के प्रवाह से जुड़ी घटनाओं के समय तथा भौगोलिक स्थान की भविष्यवाणी करने के लिए उपग्रह चित्रों, भूस्खलन एवं मलबे के प्रवाह का आकलन करने में सक्षम मॉडल और बाढ़ की भविष्यवाणी करने वाले अत्याधुनिक मॉडल्स का उपयोग किया है।

शोधकर्ताओं का कहना है कि यह मॉडल भूस्खलन, मलबे के प्रवाह और बाढ़ के कारण होने वाले बुनियादी ढांचे के व्यवधान की भयावहता की भी भविष्यवाणी कर सकता है।

आईआईटी, गांधीनगर द्वारा इस संबंध में जारी एक ताजा वक्तव्य में बताया गया है कि अपने अध्ययन के अंतर्गत शोधकर्ताओं ने वर्ष 2018 में केरल में पेरियार नदी बेसिन में सामने आई घटनाओं के अनुक्रम के पुनर्संरचना द्वारा 100 वर्षों में होने वाली ऐसी एक बारिश से होने वाले नुकसान के सटीक परिमाण को निर्धारित किया है।

किसी क्षेत्र के सड़क नेटवर्क और दैनिक वर्षा डेटा से लैस उच्च (डीईएम) रिज़ॉल्यूशन डिजिटल एलिवेशन मॉडल-ह का विश्लेषण करताउथले भूस्खलन एवं मलबे के प्रवा है, और भारी मात्रा में जलप्रवाह के लिए जिम्मेदार - जलाशयों के बहाव संबंधी डेटा का आकलन करता है।

आईआईटी, गांधीनगर में सिविल इंजीनियरिंग के सहायक प्रोफेसर प्रोफेसर उदित भाटिया ने कहा, "आपदाओं को लेकर लचीलापन बढ़ाने की दिशा में पहला कदम आपदापूर्व तैयारियों औ-र आपदा के दुष्प्रभावों से उबरने के लिए जोखिम को अच्छी तरह से समझना है। हमारे मॉडलिंग ढांचे के नतीजे बताते हैं कि अगर हम चरम घटनाओं की प्रवृत्ति को ध्यान में नहीं रखते हैं, तो आपदा तैयारी कमजोर हो सकती है।"

प्रोफेसर भाटिया ने कहा, "किसी क्षेत्र की सड़क परिवहन प्रणाली में हजारों चौराहे और सैकड़ों से लेकर हजारों सड़क खंड होते हैं। इसलिए, इतनी अधिक जटिलता वाले सिस्टम में प्रत्येक आधारभूत संरचना से जुड़े तत्व को समान प्राथमिकता देना लगभग असंभव है।

इस अध्ययन में उपयोग किए गए हमारे हाल ही में विकसित मॉडल के संयोजन में हमारा पेटेंट जटिल नेटवर्क ढांचे में भी ऐसे 'हॉटस्पॉट' की पहचान करने में मदद करता है, जिसे सामाजिक और आर्थिक व्यवधानों को कम करने के लिए सशक्त और संरक्षित किया जाना चाहिए।"

इस संबंध में, आईआईटी, गांधीनगर के वक्तव्य में कहा गया है कि इस प्रस्तावित ढांचे को दुनिया भर में किसी भी क्षेत्र में लागू किया जा सकता है, जहां मॉडल मापांकन और सत्यापन के लिए आवश्यक अवलोकन उपलब्ध हैं।

प्रोफेसर उदित भाटिया के अलावा; इस अध्ययन में रविराज दवे और श्रीकृष्णन शिव सुब्रमण्यम शामिल हैं। यह अध्ययन युनाइटेड किंगडम स्थित इंस्टीट्यूट ऑफ फिजिक्स द्वारा प्रकाशित शोध पत्रिका एन्वायरमेंट रिसर्च लेटर्स में प्रकाशित किया गया है। ***(इंडिया साइंस वायर(***

Wednesday, 27 Oct, 6.27 pm
Republic News India

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Hindustan Saga 3 seconds ago

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IndianSentinel
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21 seconds ago

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AbhyudayTimes

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The IndianBulletin
www.theindianbulletin.com

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Telangana Today
FOR LOCAL TO GLOBAL NEWS

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BY INDIA SCIENCE WIRE PUBLISHED: 27TH OCT 2021 10:28 PM

Representational Image

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The study was led by Dr. Alavalapati Goutham Reddy, Assistant Professor, Department of Computer Science and Engineering, NIT Andhra Pradesh. The Research Paper was co-authored by Mr. Raveendra Babu, Research Scholar, NIT Andhra Pradesh along with Prof. Ashok Kumar Das of IIIT Hyderabad, Dr. Ruhul Amin of IIIT Naya Raipur, Prof. Young-Ho Park of Kyungpook National University South Korea, and Prof. Willy Susilo of the University of Wollongong. They have published a report of their work in the journal IEEE Transaction on Vehicular Technology.

The protocol was tested out and messages exchanged between electric vehicles and dynamic charging infrastructure were found to be secure, preventing attackers from tracking the vehicle and gaining any benefits.

The scientists noted that the protocol was immune to man-in-the-middle attacks, impersonation attacks, replay attacks, and insider assaults while maintaining user anonymity and untraced ability. It was also more efficient than its counterparts in terms of computing and communication costs, they said.

DELHI POST
Politics | Democracy | Development

A New Protocol to Address Security and Privacy Issues in Electric Vehicles

By **ISW Desk** On **Oct 27, 2021**

Electric vehicles are expected to be the future of transportation due to their low carbon footprint and low energy use. They provide clean mobility and reduce the environmental impact of conventional transportation. The International Energy Agency (IEA) predicts that by 2030, the worldwide fleet of electric vehicles will reach 145 million. As more people choose electric vehicles, the demand for charging infrastructure would also grow.

However, several challenges remain to be addressed. Different types of messaging and charging infrastructure will be established in public places and they could be prone to security and privacy concerns. Researchers at the National Institute of Technology Andhra Pradesh, working with an international team, have developed a protocol to deal

with them. They worked with colleagues from IIIT Hyderabad, IIIT Naya Raipur, Kyungpook National University, South Korea, and the University of Wollongong.

The researchers studied static, quasi-static, and dynamic charging systems. Static charging, which allows consumers to park at their homes or offices, needs the car to be immobile. It requires a connecting wire and a plug-in charger. They are unsafe in wet conditions. Quasi charging is used to charge vehicles that stop briefly, including at traffic lights or bus stops.

Dynamic charging, on the other hand, would allow for on-the-go charging. It can be done by burying Charging Pads (CPs) beneath the road. Electric Vehicles can get charged by driving over them. It will eliminate the need for large-capacity batteries and lower battery costs. It would also save time for drivers who no longer will need to stop at charging facilities. Dynamic charging would be a boon to the transportation sector.

It is, however, still a work in progress since it requires precise coordination between electric vehicles, highway infrastructure, and charging stations. As a result of the wide range of novel technologies that would be employed, for communication, the messages that will be sent among communicating principals, and charging infrastructure implemented in places like homes, offices, and public stations could face several security issues.

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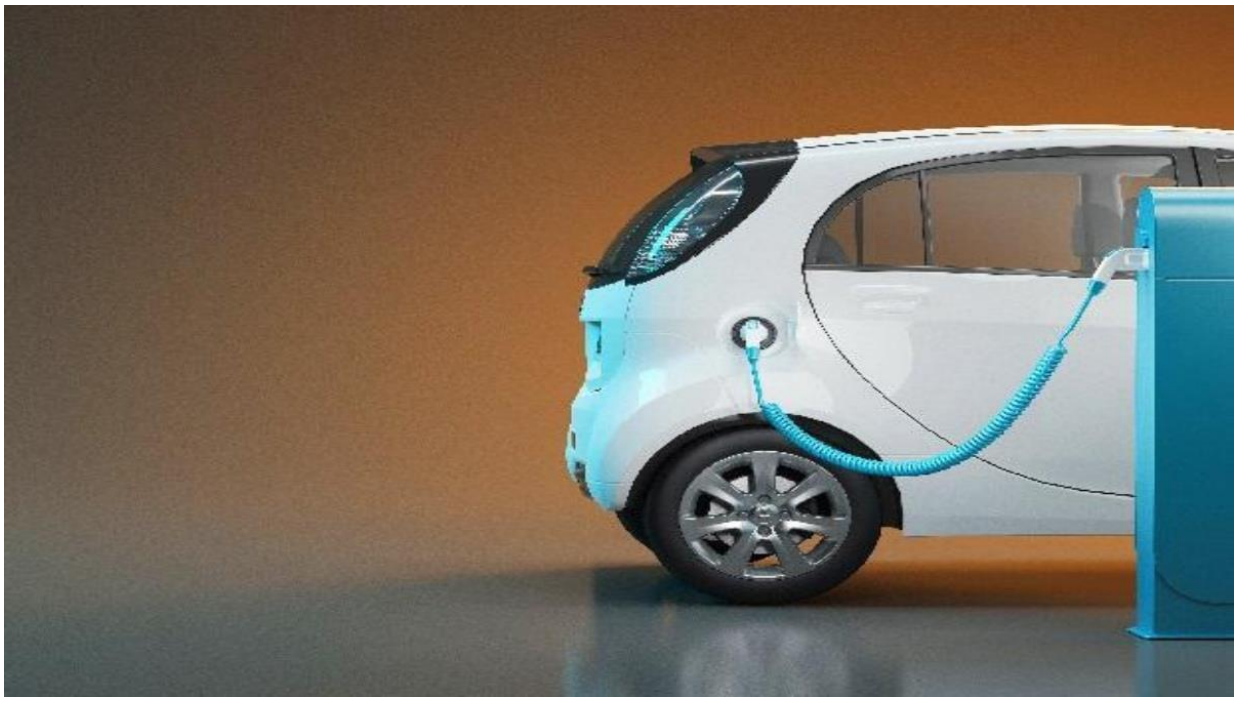
The Daily Guardian

NEWS

RESEARCHERS IN CHANDIGARH DEVELOP PROTOCOL TO ADDRESS SECURITY, PRIVACY IN ELECTRIC VEHICLES

Published 3:57 am IST on October 28, 2021
By **Taruni Gandhi**



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Voice of the Nation
ORGANISER

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WEBDESK Oct 28, 2021, 10:19 AM IST

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Courtesy: India Science Wire

Wednesday, 27 Oct, 6.31 pm
Republic News India

Dr. Rajesh S. Gokhale appointed as Secretary DBT

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RKD Live 3 seconds ago

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NATIONAL AGE

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Republic NewsIndia

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By **Rupesh Dharmik** - October 27, 2021

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Rajesh Gokhale Succeeds Renu Swarup as Department of Biotechnology Secretary

27/10/2021

INDIA SCIENCE WIRE

Rajesh S. Gokhale. Photo: Infosys Science Foundation

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Gokhale joined the NII in 1999 and spent a decade implementing a cutting-edge biotechnology research programme. He subsequently served as the director of the CSIR Institute of Genomics and Integrative Biology from 2009 to 2016, before returning to the NII in 2017. He also briefly served as the director-in-charge of the NII in 2021, and in September moved on deputation to the Indian Institute of Science Education and Research (IISER) Pune, as a professor.

Gokhale is a leading scientist on the study of tuberculosis. His work has yielded novel insights into metabolic pathways that operate in *Mycobacterium tuberculosis*, the pathogen, that are responsible for causing the infection. He has also made important contributions towards understanding the interplay between metabolic reprogramming and immunity vis-à-vis the autoimmune skin disorder known as vitiligo.

He has received several awards, including the Wellcome Trust senior research fellowship (2001-2006), the Howard Hughes Medical Institute international research scholarship (2005-2010), the Swarnajayanti fellowship (2006-2011), the Bhatnagar Prize (2006), the National Bioscience Award for Career Development (2009), the Infosys Prize (2013) and the J.C. Bose National Fellowship (2018-present).

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India Science Wire

Kashmir Convener
Voice of Courage

Dr. Rajesh S. Gokhale appointed as Secretary DBT

NEWS

By Online Editor On Oct 27, 2021

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Dr Rajesh Gokhale to join as new Secretary of Department of Biotechnology

The note from Appointments Committee of the Cabinet mentioned that Dr. Gokhale will take over from Renu Swarup, who is set to retire on 31st October, 2021

By **Rahul Koul** - October 27, 2021

New Delhi: Union government has appointed Dr Rajesh Gokhale as the new Secretary of Department of Biotechnology (DBT), Ministry of Science and Technology. The note from Appointments Committee of the Cabinet stated that Dr. Gokhale will take over from Renu Swarup, who is set to retire on 31st October, 2021.

Dr. Gokhale is the former Director of CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB). He has led interdisciplinary initiatives that have spawned new avenues in the area of functional genomics research and healthcare. He is also Co-founder of Vyome Biosciences (VYOME), a biopharmaceutical company developing best in class drugs for dermatology care utilizing genomics knowledge. He has previously worked as Staff Scientist at National Institute of Immunology as well.

Dr Gokhale's scientific contributions have earned him international recognition in understanding tuberculosis pathogenesis, with a focus to understand complex cell envelope coat of mycobacterium – a unique feature of this pathogen. His research has provided new insights into the chemico-cellular trestle of mycobacteria, providing new opportunity to delineate remarkable dormancy dynamics of this infectious agent. He has now set up a major programme in the area of understanding skin pigmentation homeostasis, with particular interest in delineating chronic unpredictable disfiguring disorder vitiligo.

After completing his M.Sc in Biotechnology from IIT Bombay, Dr Gokhale did his Ph.D. from Indian Institute of Science (IISc), Bangalore, in the area of Protein Folding and Stability and then carried out postdoctoral work at Stanford University in Polyketide Synthases and secondary Metabolite Biosynthesis. Earlier, he did his graduation in B.Sc. Chemistry from Delhi University. "Since Biotechnology was a new group then, there was a tremendous emotional connect between faculty members and students of IIT Bombay and it turned out to be a truly inspiring and determining phase of my career. Other activities on-campus and the H8 folks, C1Rites specially, all are very special to me," he remarked.

Dr Gokhale is recipient of several honours and awards including, the Infosys Prize 2013 in Life Sciences, India; Howard Hughes Medical Institute International Research Scholar, USA; Swarnajayanti Fellowships, India; Shanti Swaroop Bhatanagar Prize in Biological Science, India; and National Bioscience Award for Career Development, India, and Wellcome Trust Senior Research Fellow, UK, to mention prominent ones.

He is a member of several Scientific Advisory Committees and is also a section editor of Tuberculosis journal and on the advisory board of Natural Product Reports. He is a Fellow of Indian National Science Academy (F.N.A.), New Delhi, Fellow of the National Academy of Sciences (F.N.A.Sc.), Allahabad, and a Fellow of Indian Academy of Sciences (F.A.Sc.), Bangalore. Dr. Gokhale is furthermore, a Honorary Faculty member with Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore.

Dr. Gokhale is a sports enthusiast and strongly believes that sports is a great leveler and thus crucial to maintain balance in life. His other passion is reading.

DELHI POST
Politics | Democracy | Development

Dr. Rajesh S. Gokhale Appointed as Secretary DBT

By **ISW Desk** On **Oct 28, 2021**

Dr. Rajesh S. Gokhale, an esteemed scientist of the National Institute of Immunology (NII) New Delhi, has been appointed as the Secretary of the Department of Biotechnology (DBT), Government of India. Dr Gokhale takes over from Dr Renu Swarup who is set to retire on the 31st of this month.

Dr. Rajesh S. Gokhale

Dr. Gokhale joined NII in 1999 and spent a decade implementing a cutting-edge biotechnology research program. Subsequently, he served as the Director of CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB) from 2009-2016, spearheading the prolific growth of the institute. He returned to his parent institute, NII, in 2017. He also briefly acted as the Director-in-charge of NII in 2021 before

moving on deputation to the Indian Institute of Science Education and Research, Pune (IISER Pune) as a Professor on 16th September 2021.

Dr. Gokhale is one of the world leaders in Tuberculosis research. His research has provided novel insights into metabolic pathways that operate in Mycobacterium Tuberculosis and are critical for disease pathogenesis. He has also made critical contributions towards the understanding of the interplay between metabolic reprogramming and immunity autoimmune skin disorder Vitiligo. The research in his laboratory aims to understand disease pathogenesis and develop novel therapeutic strategies that will tackle the underlying causes rather than just the symptoms, NII statement said.

Dr. Gokhale has received several prestigious awards, including the Wellcome Trust (UK) Senior research fellowship (2001-2006), Howard Hughes Medical Institute (HHMI) International Research Scholarship, USA (2005 – 2010), Swarnajayanti Fellowship, Department of Science and Technology, India (2006- 2011), Shanti Swaroop Bhatnagar Prize in Biological Sciences, India (2006), National Bioscience Award for Career Development, India (2009), Infosys Prize in Life Sciences (2013), IIT Bombay Distinguished Alumnus Award (2014), Sun Pharma Research Award (2014) – Medical Sciences, Basic Research Award, JC Bose National Fellowship (2018-Present).

Dr. Gokhale has been a member of many professional and academic bodies and societies. He is a Fellow of the Indian National Science Academy, New Delhi (2014), the National Academy of Sciences India, Allahabad (2012) as well the India Academy of Sciences (2007). He was elected as a member of the prestigious Guha Research Conference (2005). He also served as a member of the editorial board, The Journal of Biological Chemistry (2014 to 2017), section editor of Journal “Tuberculosis”, Elsevier (2007 to 2017), the Indian Journal of Biochemistry & Biophysics (2013 onwards). (India Science Wire)

dailyhunt

Wednesday, 27 Oct, 6.36 p
Republic News India

Study decodes mystery around 'black tigers'

New Delhi, Oct 27: Similipal tiger reserve in Odisha has a unique feature. It is the only tiger reserve in the world where a subspecies of tigers called Pseudomelanistic tigers have been photographed. Pseudomelanistic tigers stand out from the rest of the tigers as the black stripes on their back are so wide that they almost overlap each other and seen from a distance the animals seem to be jet black.

The black tigers have been a matter of mystery. A number of questions remain unanswered about the animal such as what makes them the way they are? Is their presence unique to Similipal? Or are they present anywhere other than Similipal also but it is just that they haven't been photographed outside of Similipal? A new study by a team of scientists drawn from several institutions both within and outside the country has now found some answers.

Such questions can be answered by studying the genetics of animals. But, conducting such studies is easier said than done particularly in the case of animals as elusive as tigers. One needs samples from well-identified individuals and obtaining samples from tigers in the wild with the confirmed identity of individuals is next to impossible.

A breakthrough came in 2014 when two pseudomelanistic tiger cubs were born in captivity at Nandankanan Biological Park in Bhubaneswar. The stroke of luck got strengthened when one year later one more pseudomelanistic cub was born to the same parents. A team of scientists from the National Centre for Biological Sciences (NCBS), Bengaluru, obtained samples from these captive tigers and analysed their DNA sequence.

They found that mutations in a gene called Taqpep were responsible for the different patterns of stripes in pseudomelanistic tigers. All pseudomelanistic tigers had a mutation in both copies of their Taqpep gene that they received from their mother and their father. Normal-looking tigers either did not have that mutation at all, or they had it on only one copy of the gene.

The researchers then collected non-invasive samples of wild tigers in the form of faecal urine, matter and saliva from animals hunted and partially eaten by tigers from Similipal and several other forest areas across India and found that the mutation was present only in Similipal tigers, nowhere else. Clearly, there was something going on in Similipal.

They then compared the genetic data of tigers collected from Central India, South India, and North-West India with that of tigers from Similipal. They observed that Similipal tigers were more related to each other than tigers from Central India or South India. This indicated that Similipal tigers were more inbred. Also, Similipal tigers were genetically different from other central Indian tigers. Both these aspects pointed towards the genetic isolation of Similipal.

The scientists have concluded that the high frequency of the pseudomelanistic variant within Similipal could be because of a process called genetic drift. Genetic drift is an evolutionary force that can bring changes in the frequency of genetic variants within a population just by chance. Like tossing a coin once might result in a head or a tail just by chance, genetic drift can change the frequency of one genetic variant over another just by chance. Genetic drift works in all the natural populations but has stronger effects in small and isolated populations. As evidence suggested Similipal to be a small and isolated population, genetic drift seemed to explain the observations.

The study team has published a report on their work in Proceedings of the National Academy of Sciences (PNAS). (India Science Wire)

The NATIONAL READER

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The National Reader October 27, 2021

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BY **INDIA THRIVE** OCTOBER 27, 2021

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Times-Bulletin

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By **Times Bulletin Team** - October 27, 2021

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NEWS Outlook

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Republic NewsIndia

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By **Rupesh Dharmik** - October 27, 2021

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Telangana Today
FOR LOCAL TO GLOBAL NEWS

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BY INDIA SCIENCE WIRE PUBLISHED: 27TH OCT 2021 10:52 PM

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Deccan News

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The black tigers were a mystery. A number of questions remain unanswered about the animal, as they do as they are? Is their presence unique to Similipal? Or are they also present anywhere other than Similipal, but it’s just that they were not photographed outside Similipal? A new study by a team of scientists from various institutions inside and outside the country has now found some answers.

Such questions can be answered by studying the genetics of animals. But doing such studies is easier said than done, especially in the case of animals that are as elusive as tigers. One needs samples from well-identified individuals and obtaining samples from tigers in the wild with the confirmed identity of individuals is almost impossible.

A breakthrough came in 2014 when two pseudomelanistic tiger cubs were born in captivity at Nandankanan Biological Park in Bhubaneswar. The stroke of luck intensified when one year later another pseudomelanistic puppy was born to the same parents. A team of scientists from the National Center for Biological Sciences (NCBS), Bengaluru, obtained samples of these captured tigers and analyzed their DNA sequence.

They found that mutations in a gene called Taqpep were responsible for the different patterns of streaks in pseudomelanistic tigers. All pseudomelanistic tigers had a mutation in both copies of their Taqpep gene that they received from their mother and father. Tigers that looked normal either did not have that mutation at all, or they had it on only one copy of the gene.

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The scientists concluded that the high frequency of the pseudomelanistic variant may be within Similipal as a result of a process called genetic drift. Genetic drift is an evolutionary force that can only accidentally bring about changes in the frequency of genetic variants within a population. Like tossing a coin once just by chance can lead to a head or a tail, genetic drift can change the frequency of one genetic variant over another just by chance. Genetic power works in all natural populations but has stronger effects in small and isolated populations. As evidence suggests that Similipal is a small and isolated population, genetic drift apparently explained the observations.

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October 27, 2021

India Science Wire

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The researchers then collected non-invasive samples of wild tigers in the form of faecal urine, matter and saliva from animals hunted and partially eaten by tigers from Similipal and several other forest areas across India and found that the mutation was present only in Similipal tigers, nowhere else. Clearly, there was something going on in Similipal.

They then compared the genetic data of tigers collected from Central India, South India, and North-West India with that of tigers from Similipal. They observed that Similipal tigers were more related to each other than tigers from Central India or South India. This indicated that Similipal tigers were more inbred. Also, Similipal tigers were genetically different from other central Indian tigers. Both these aspects pointed towards the genetic isolation of Similipal.

The scientists have concluded that the high frequency of the pseudomelanistic variant within Similipal could be because of a process called genetic drift. Genetic drift is an evolutionary force that can bring changes in the frequency of genetic variants within a population just by chance. Like tossing a coin once might result in a head or a tail just by chance, genetic drift can change the frequency of one genetic variant over another just by chance. Genetic drift works in all the natural populations but has stronger effects in small and isolated populations. As evidence suggested Similipal to be a small and isolated population, genetic drift seemed to explain the observations.

The study team has published a report on their work in Proceedings of the National Academy of Sciences (PNAS).

Keywords: Similipal, Odisha, genetics, animal, cub, captivity, Nandankanan Biological Park, Bhubaneswar, National Centre for Biological Sciences, NCBS, DNA sequence, mutation, Central India, South India, North-West India, inbred, genetic drift, evolutionary, genetic variant.

Wednesday, 27 Oct, 6.42 pm
Republic News India

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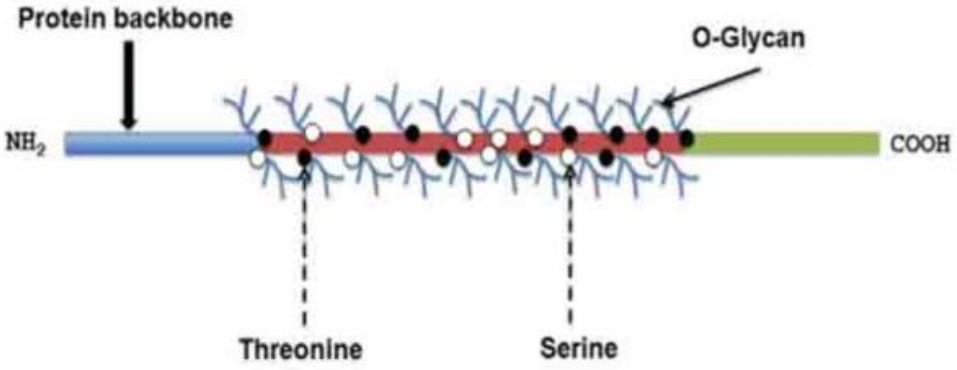

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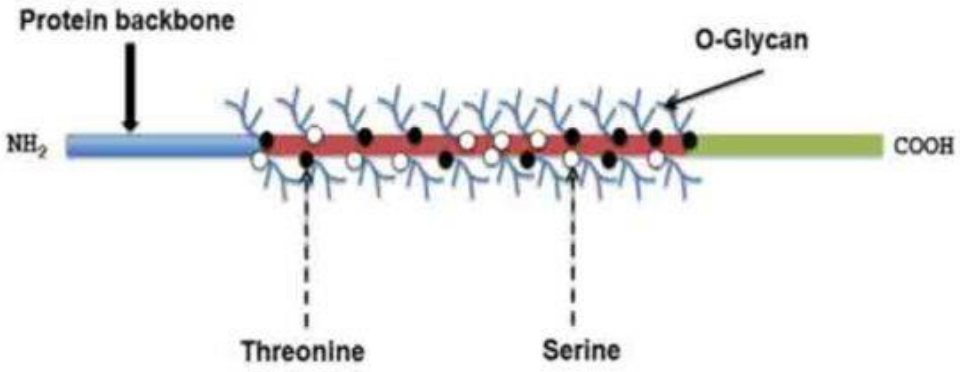
By **Rupesh Dharmik** - October 27, 2021



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BharatHerald

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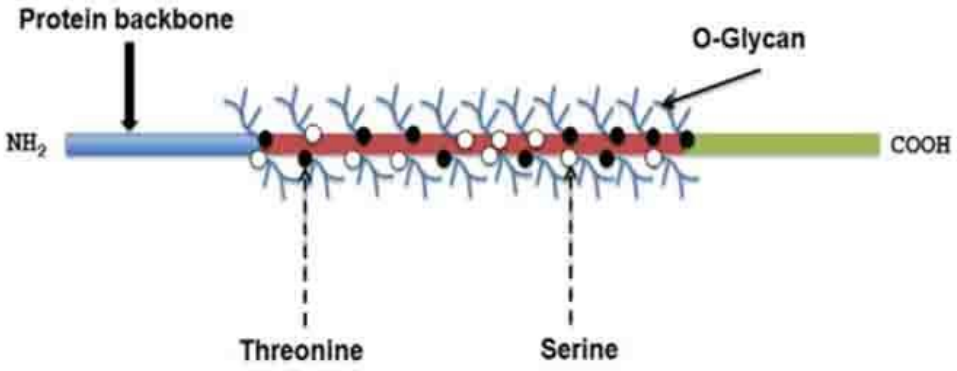

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PRESS-JOURNAL

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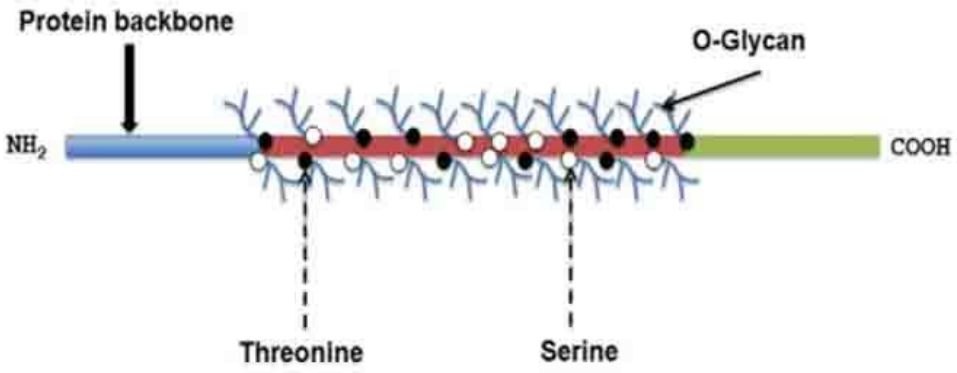
4 seconds ago Press Journal Team



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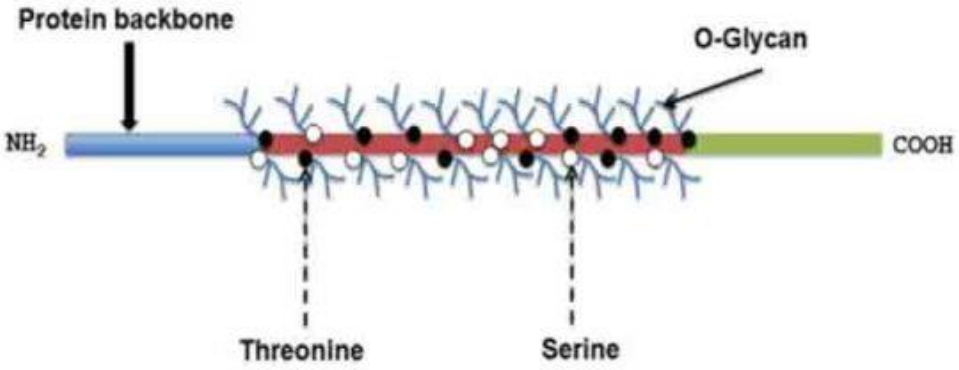
*By **News Mint24 Team** - October 27, 2021*



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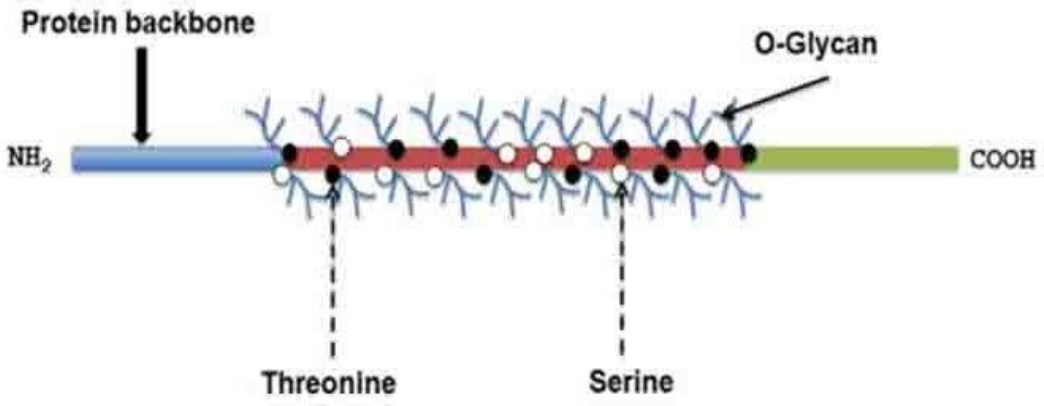
Pioneer News 4 seconds ago



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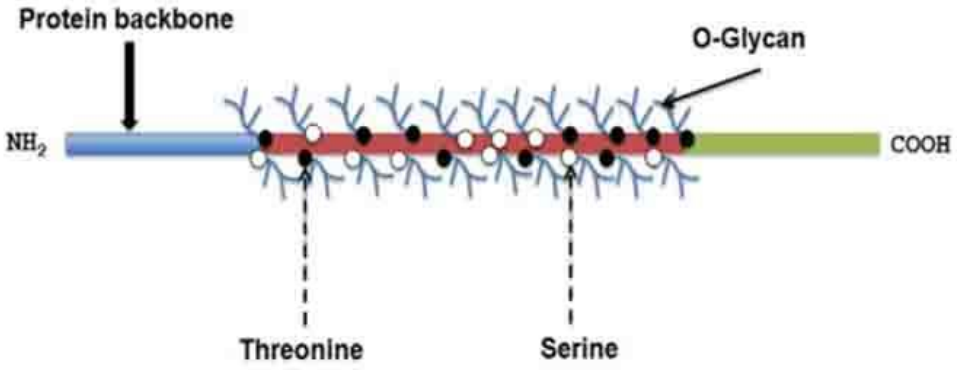
THE FORTUNE INDIA



Science

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October 27, 2021 | The Fortune India

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Telangana Today
FOR LOCAL TO GLOBAL NEWS

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BY INDIA SCIENCE WIRE PUBLISHED: 27TH OCT 2021 10:44 PM

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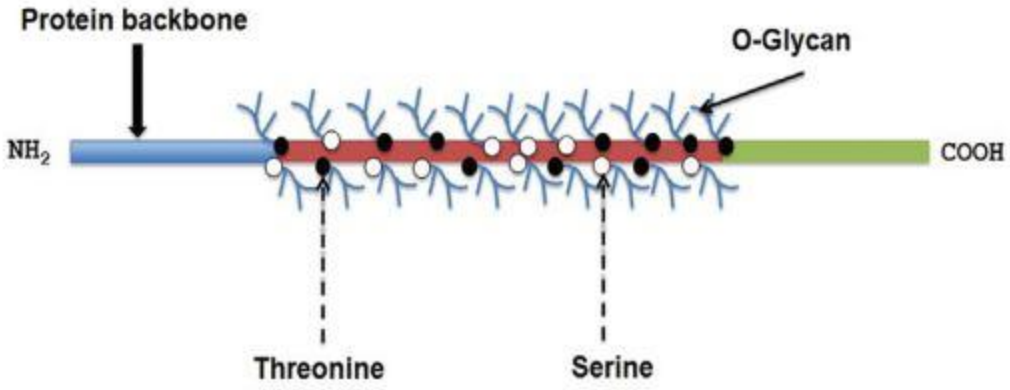

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Voice of the Nation
ORGANISER

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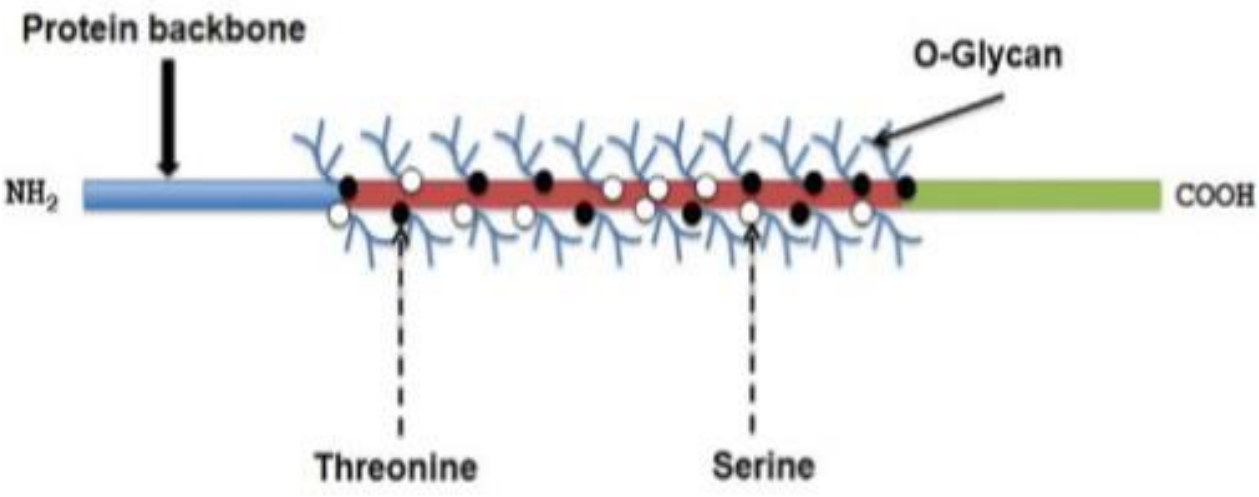
WEBDESK Oct 28, 2021, 10:55 AM IST



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Courtesy: India Science Wire

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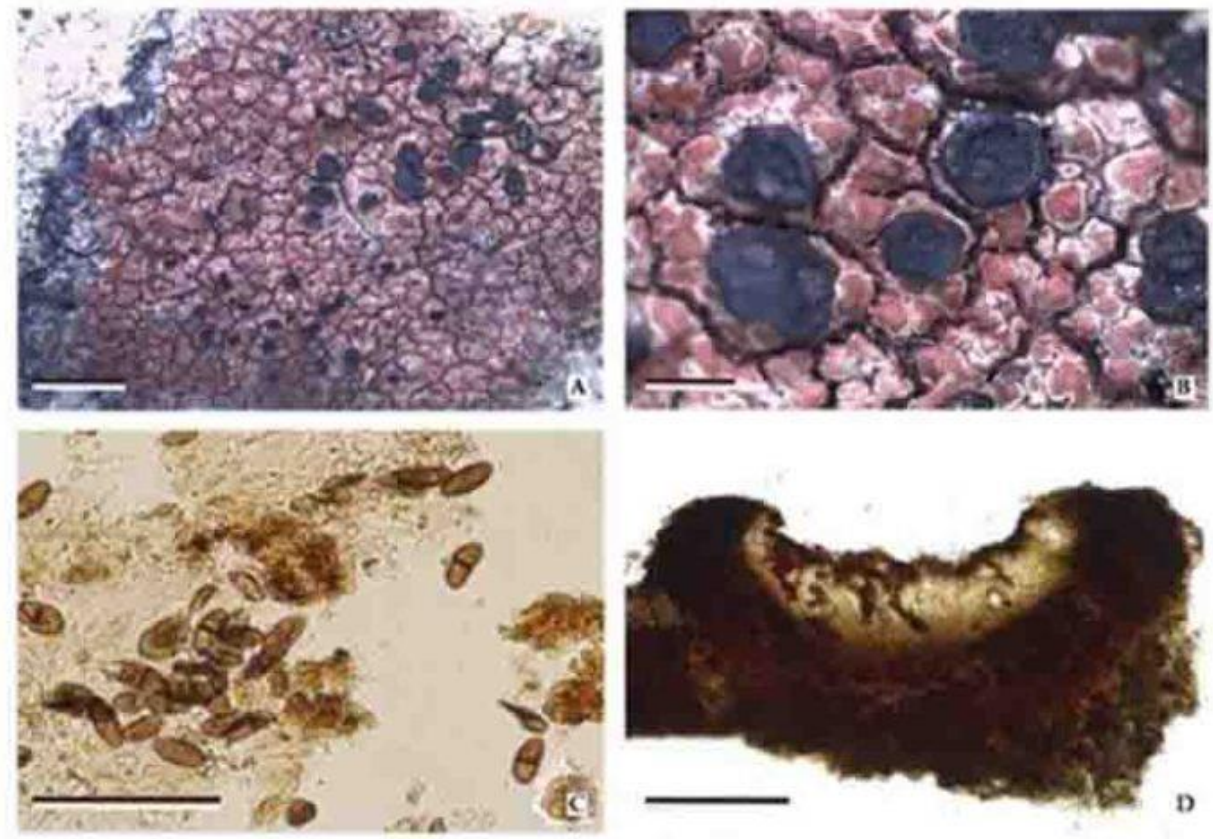
रिपब्लिक न्यूज़इंडिया

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नईवनस्पति प्रजातियां

By **Rupesh Dharmik** - October 27, 2021

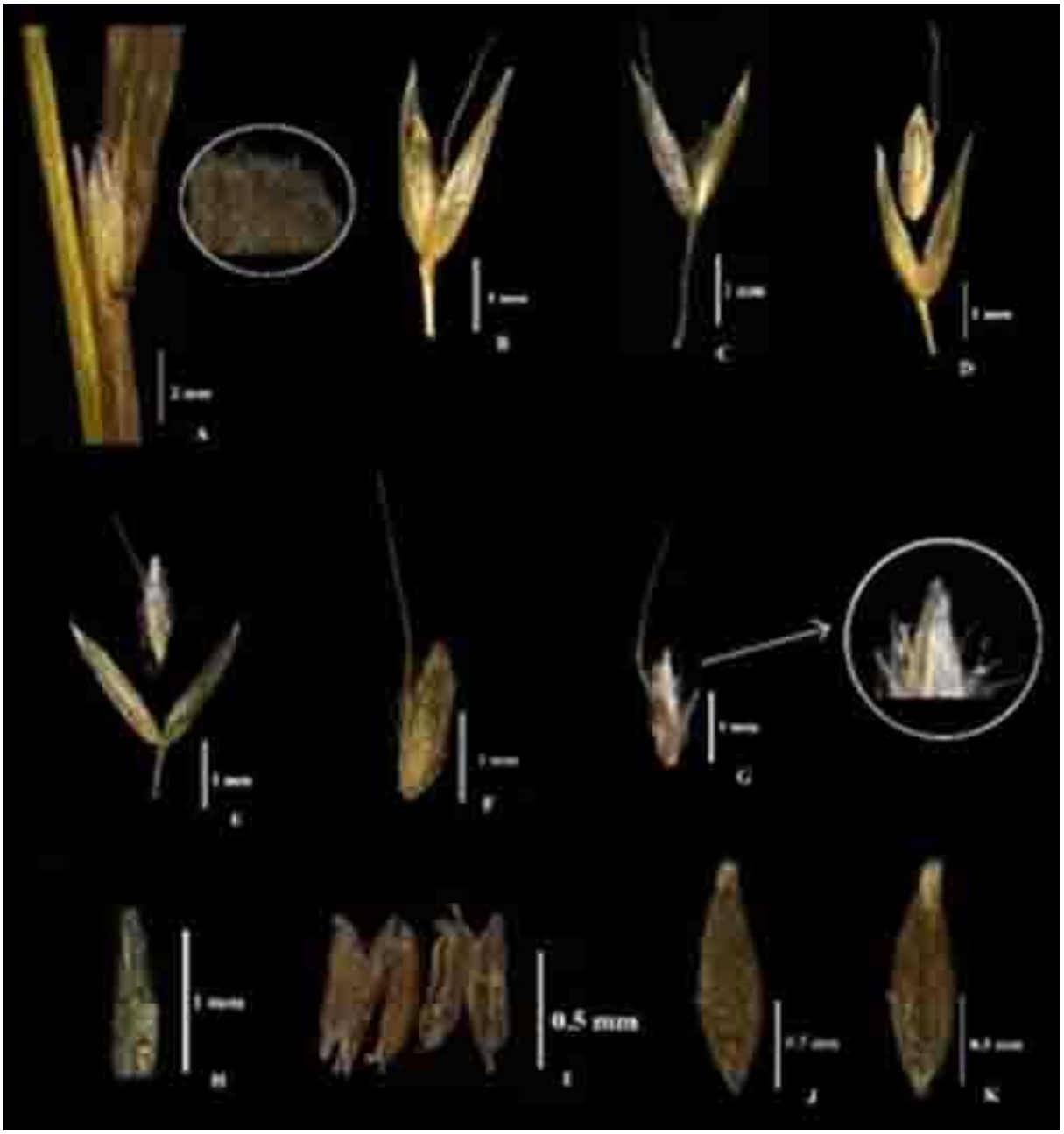


लाइकेन की प्रजाति क्रेटिरिया रुब्रम

नई दिल्ली, 27 अक्तूबर :(इंडिया साइंस वायर) वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर) की लखनऊ स्थित प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थान को वनस्पति विज्ञान के (एनबीआरआई) क्षेत्र में उत्कृष्ट शोध के लिए जाना जाता है। एनबीआरआई ने वैज्ञानिकों ने हिमालय क्षेत्र, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है। यह जानकारी

हाल में सीएसआईआरएनबीआरआईके स्थापना दिवस के मौ-के पर संस्थान के निदेशक प्रोफेसर एसबारिक .के. द्वारा प्रदान की गई है।

सीएसआईआर वैज्ञानिक डॉ शरद श्रीवास्तव ने बताया कि वैज्ञानिकों द्वारा खोजी गई एनबीआरआई के वरिष्ठ- इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।



अग्रोस्टिस जीनस की नई प्रजाति अग्रोस्टिस बारीकी

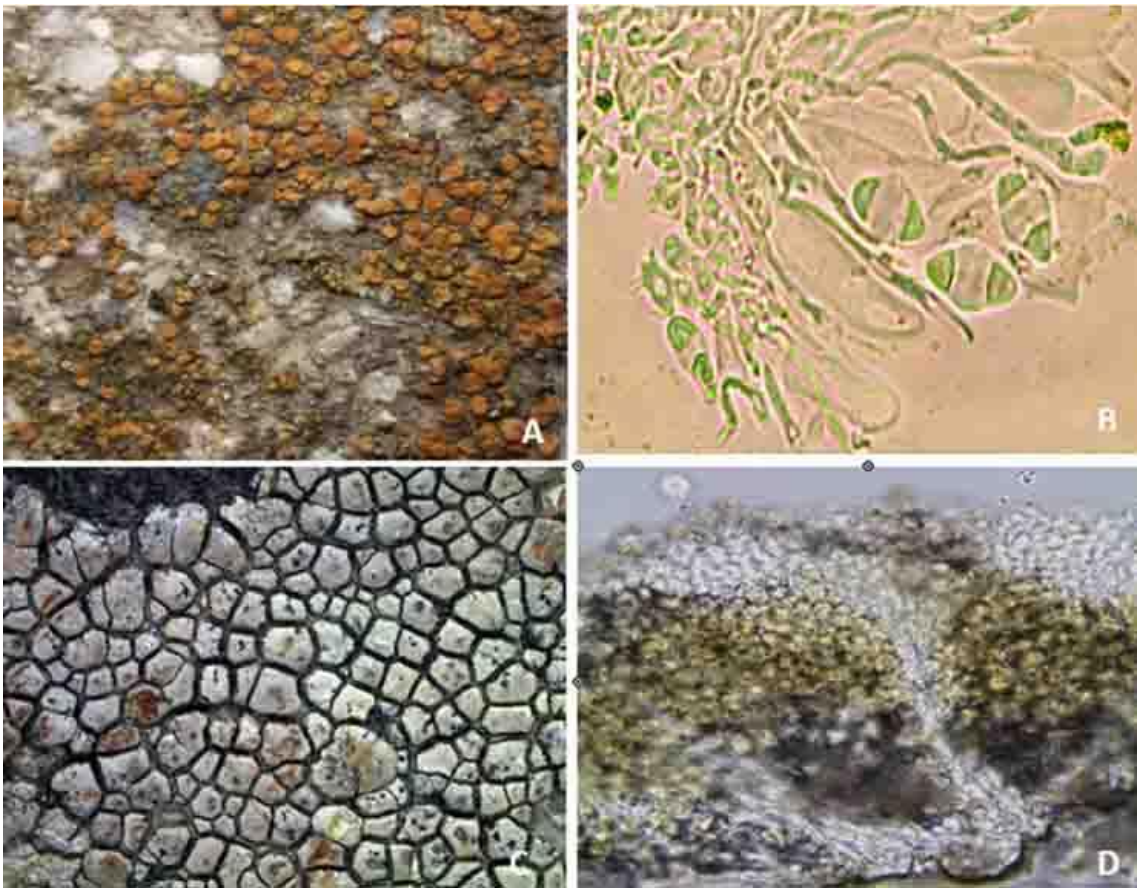
लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिणपूर्व - एशिया क्षेत्र में भारत में हिमालय क्षेत्र में इस जीनस की कुल16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथसाथ जिरेनियम का सजावटी पौधे के रूप म-ेां भी बहुतायत में उपयोग किया जाता है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरएनबीआ-रआई में एरिया कॉर्डिनेटर, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टी राणा ने बताया कि .एस."नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उपजातियाँ - देखने में एक जैसी हो सकती हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।" उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।



नई खोजी गई लाइकेन प्रजातियां

सीएसआईआरएनबीआरआई द्वारा जारी एक ताजा वक्तव्य में बताया गया है कि संस्थान ने गत वर्ष पादप - विज्ञान से संबंधित कुल132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं। कॉटन मिशन का उद्देश्य कपास की खेती को प्रोत्साहित करना और फ्लोरीकल्चर मिशन का उद्देश्य देश के 21 प्रदेशो में पुष्प कृषि को बढ़ावा देना है।

इस संस्थान द्वारा संचालित अन्य परियोजनाओं में भारत के विलुप्त होने वाले पौधों के संरक्षण, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहु- (इंडिया साइंस वायर) शामिल हैं। (एमएलपी) प्रयोगशाला परियोजनाएं

भारत हेराल्ड

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नईवनस्पति प्रजातियां

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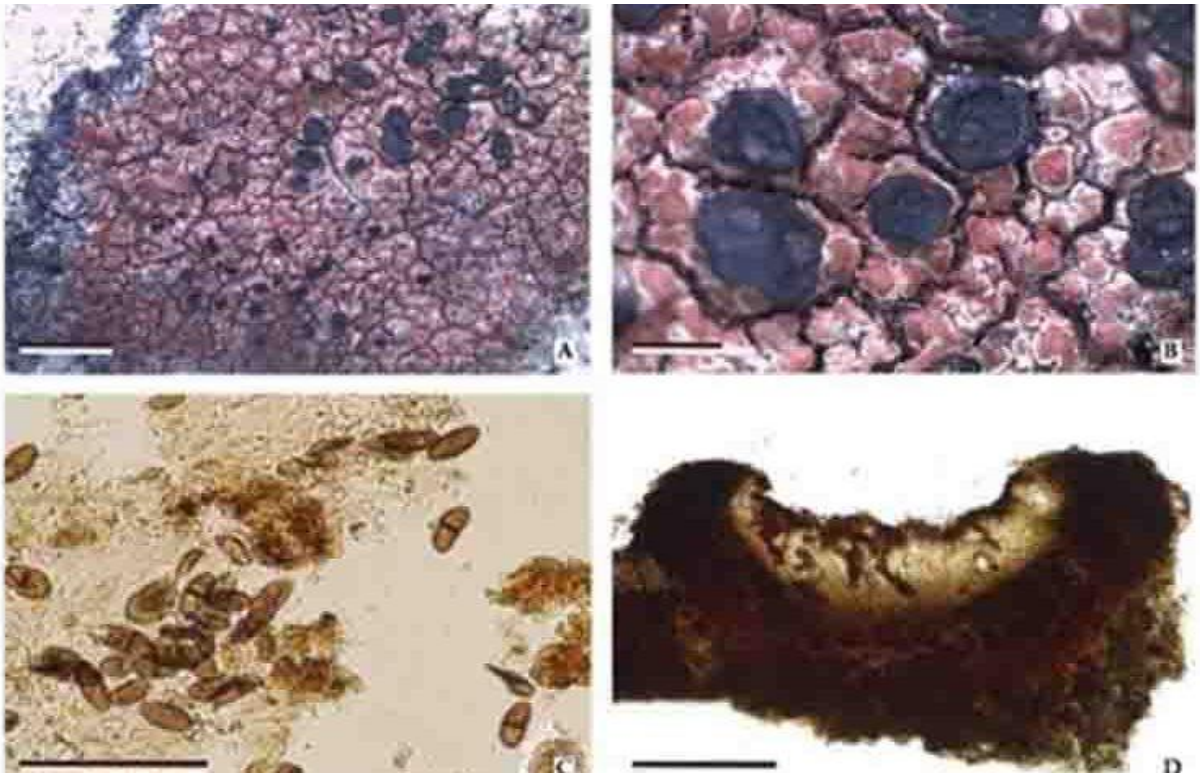
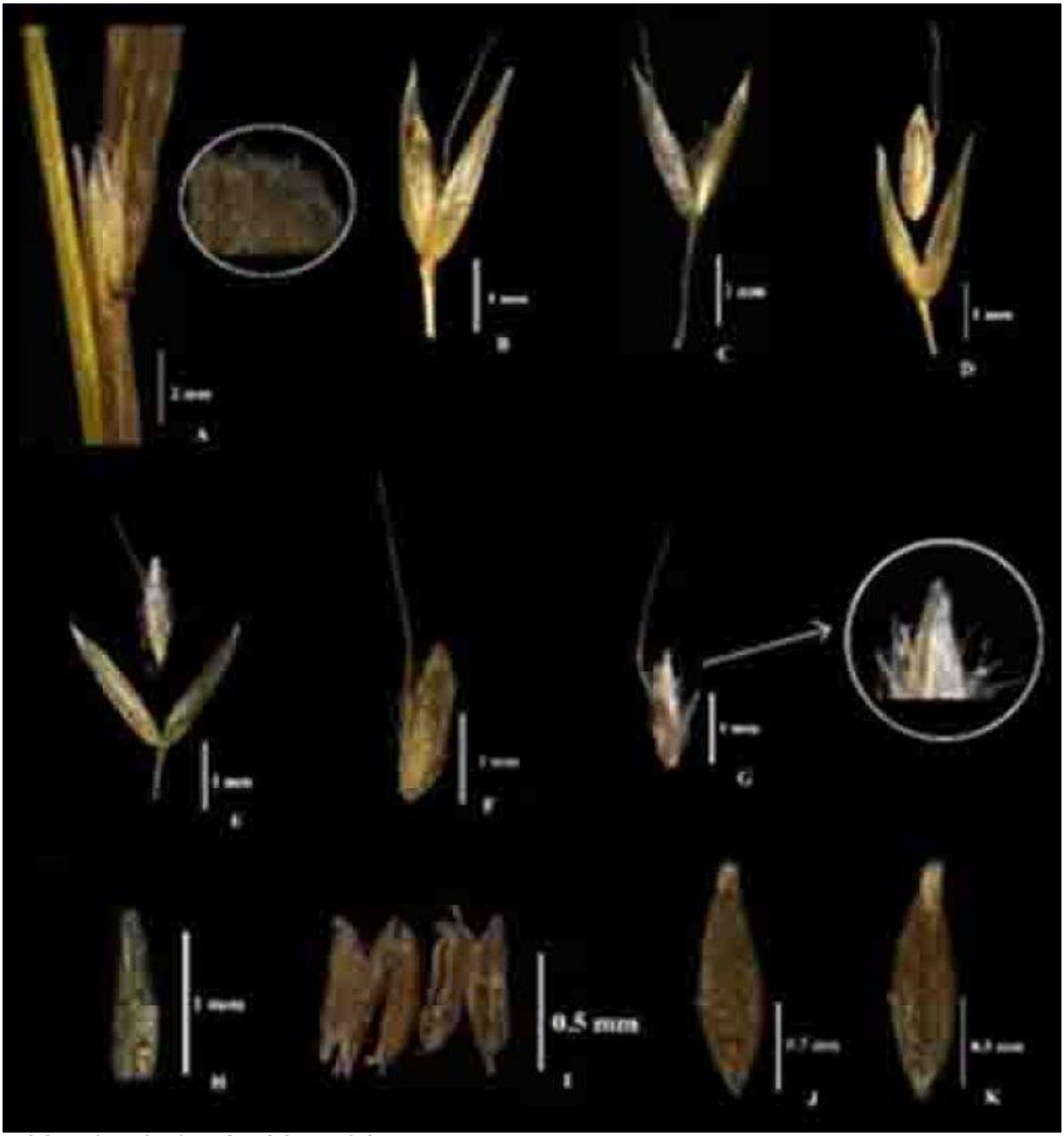


लाइकेन की प्रजाति क्रेटिरिया रुब्रम

नई दिल्ली, 27 अक्तूबर :(वायर साइंस इंडिया) वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर) लखनऊ कीस्थित प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थान क्षेत्र के विज्ञान वनस्पति को (एनबीआरआई) क्षेत्र हिमालय ने वैज्ञानिकों ने एनबीआरआई है। जाता जाना लिए के शोध उत्कृष्ट में, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है। यह जानकारी हाल में सीएसआईआर बारिक .के.एस प्रोफेसर निदेशक के संस्थान पर मौके के दिवस स्थापना एनबीआरआईके- है। गई की प्रदान द्वारा

सीएसआईआरएनब-ीआरआई के वरिष्ठ वैज्ञानिक डॉ शरद श्रीवास्तव ने बताया कि वैज्ञानिकों द्वारा खोजी गई इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।



अग्रोस्टिस जीनस की नई प्रजाति अग्रोस्टिस बारीकी

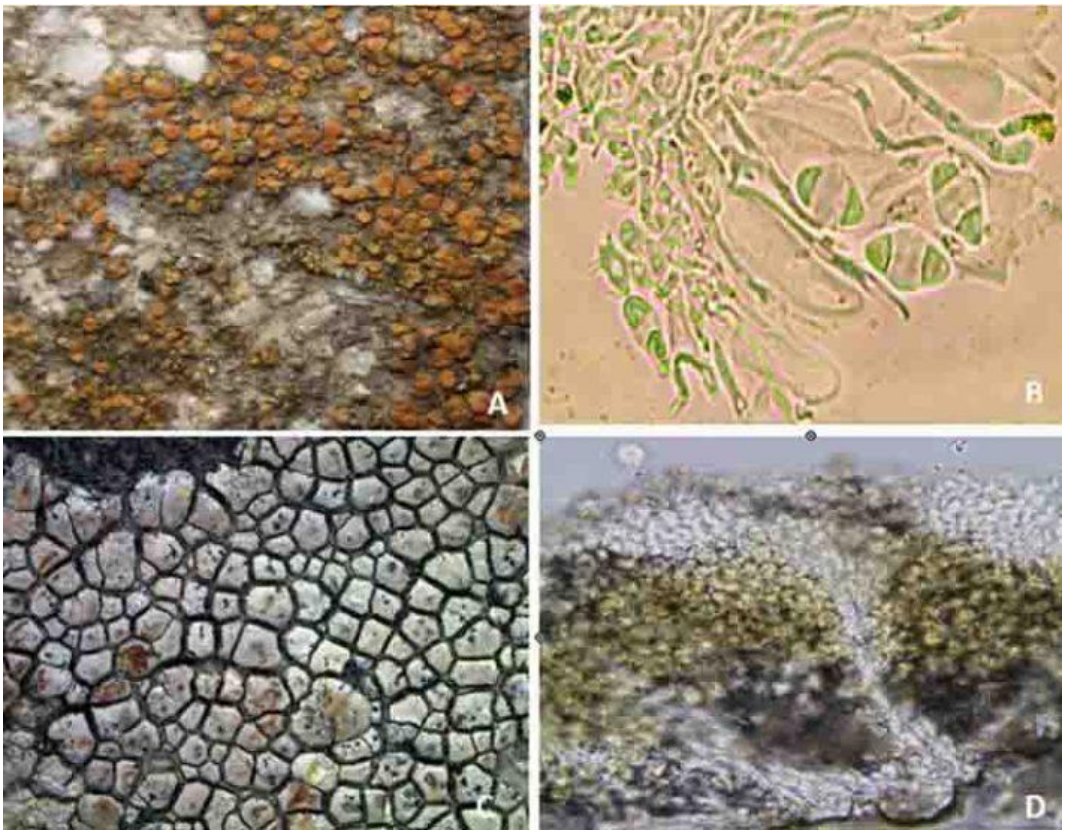
लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिण पूर्व- कुल की नसजी इस में क्षेत्र हिमालय में भारत में क्षेत्र एशिया16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथकिय उपयोग में बहुतायत भी में रूप के पौधे सजावटी का जिरेनियम साथ-ा जाता है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरकॉर्डिनेटर एरिया में एनबीआरआई-, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टी कि बताया ने राणा .एस."नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उप जातियाँ-दखने में एक जैसी हो सकती हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।" उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।



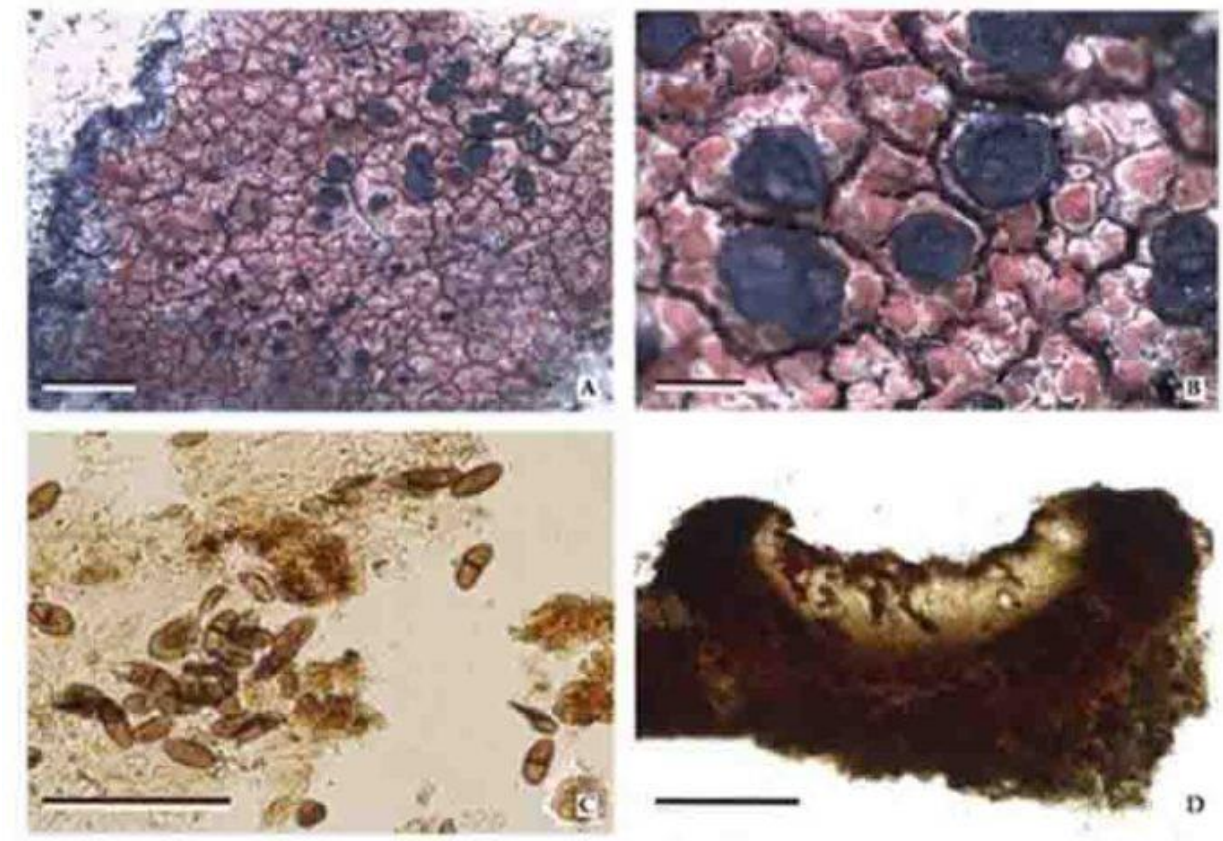
नई खोजी गई लाइकेन प्रजातियां

सीएसआईआर पादप वर्ष गत ने संस्थान कि है गया बताया में वक्तव्य ताजा एक जारी द्वारा एनबीआरआई- कुल संबंधित से विज्ञान132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं। कॉटन मिशन का उद्देश्य कपास की खेती को प्रोत्साहित करना और फ्लोरीकल्चर मिशन का उद्देश्य देश के 21 प्रदेशो में पुष्प कृषि को बढ़ावा देना है।

इस संस्थान द्वारा संचालित अन्य परियोजनाओं में भारत के विलुप्त होने वाले पौधों के संरक्षण, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहु- पर प्रयोगशालाियोजनाएं (वायर साइंस इंडिया) हैं। शामिल (एमएलपी)

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नईवनस्पति प्रजातियां

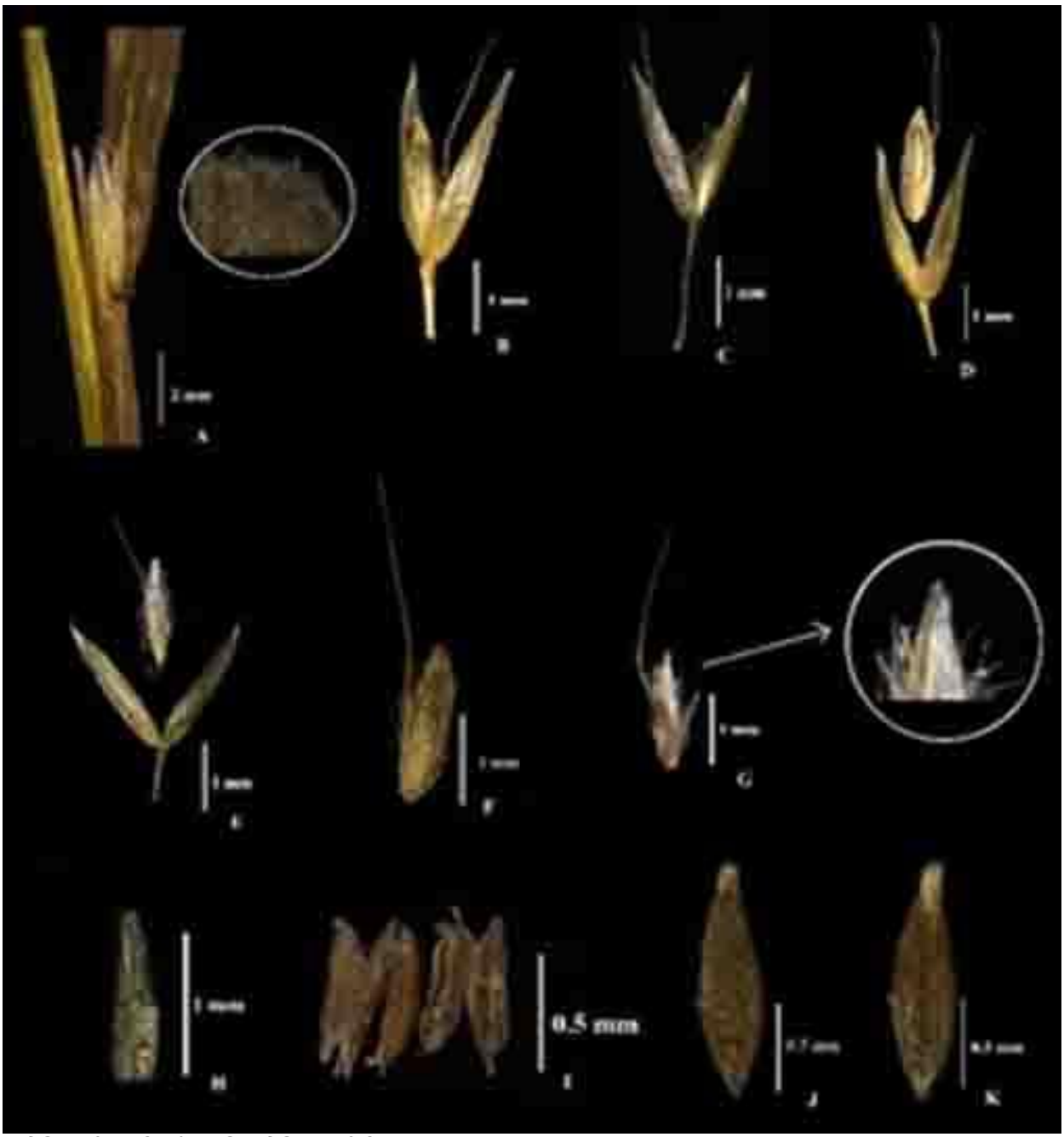
By RD Times Hindi | October 27, 2021



लाइकेन की प्रजाति क्रेटिरिया रुब्रम

नई दिल्ली, 27 अक्तूबर :(इंडिया साइंस वायर) वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर) को वनस्पति विज्ञान के क्षेत्र (एनबीआरआई) की लखनऊ स्थित प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थान में उत्कृष्ट शोध के लिए जाना जाता है। एनबीआरआई ने वैज्ञानिकों ने हिमालयक्षेत्र, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है। यह जानकारी हाल में सीएसआईआरएनबीआरआईके स्थापना द-िवस के मौके पर संस्थान के निदेशक प्रोफेसर एस .के. बारिक द्वारा प्रदान की गई है।

सीएसआईआरएनबीआरआई के वरिष्ठ वैज्ञानिक डॉ शरद श्रीवास्तव ने बताया कि वैज्ञानिकों द्वारा खोजी गई - इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।



अग्रोस्टिस जीनस की नई प्रजाति अग्रोस्टिस बारीकी

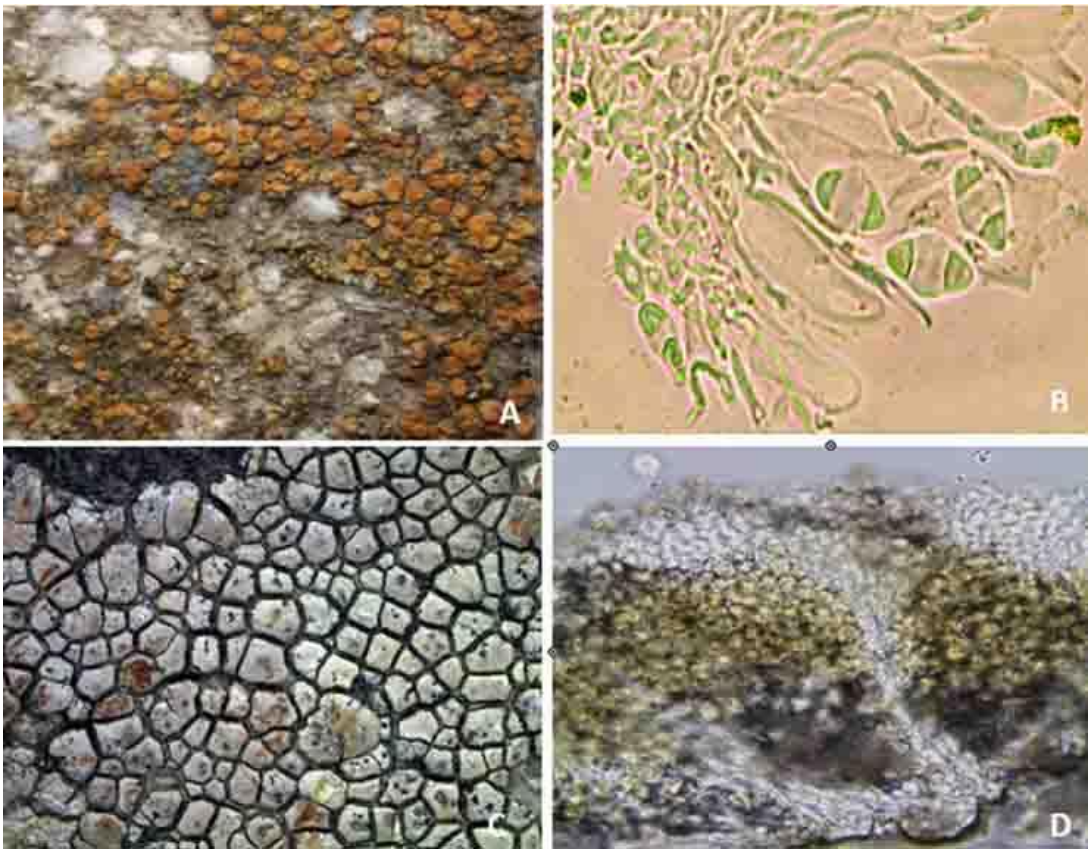
लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिणपूर्व - एशिया क्षेत्र में भारत में हिमालय क्षेत्र में इस जीनस की कुल16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथसाथ जिरेनियम का सजावटी पौधे के रूप में भी बहुतायत में उपयोग किया जाता - है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरएनबीआरआई में एरिया कॉर्डिनेटर-, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टी राणा ने बताया कि .एस.“नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उपजातियाँ - देखने में एक जैसी हो सकती हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।” उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।



नई खोजी गई लाइकेन प्रजातियां

सीएसआईआरएनबीआरआई द्वारा जारी एक ताजा वक्तव्य में बताया गया है कि संस्-थान ने गत वर्ष पादप विज्ञान से संबंधित कुल 132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं। कॉटन मिशन का उद्देश्य कपास की खेती को प्रोत्साहित करना और फ्लोरीकल्चर मिशन का उद्देश्य देश के 21 प्रदेशो में पुष्प कृषि को बढ़ावा देना है।

इस संस्थान द्वारा संचालित अन्य परियोजनाओं में भारत के विलुप्त होने वाले पौधों के संरक्षण, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहु-(इंडिया साइंस वायर) शामिल हैं। (एमएलपी) प्रयोगशाला परियोजनाएं

दी इंडियन बुलेटिन

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नईवनस्पति प्रजातियां

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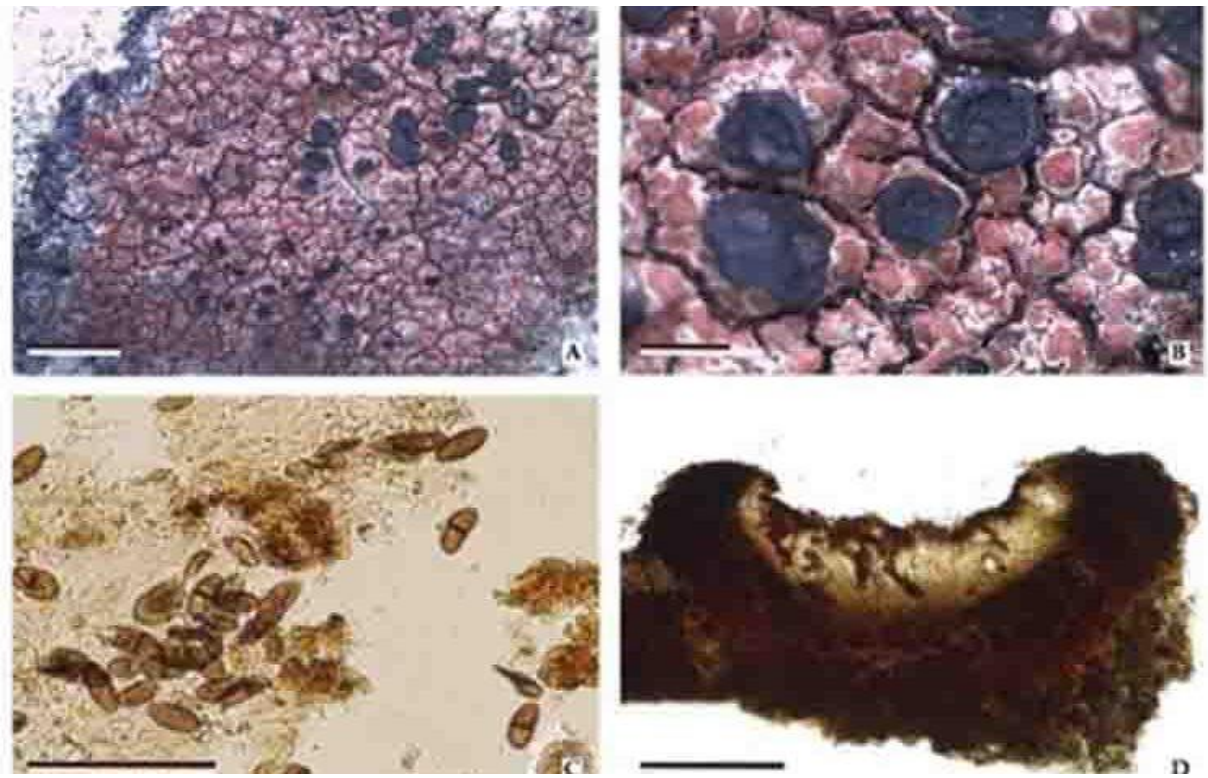
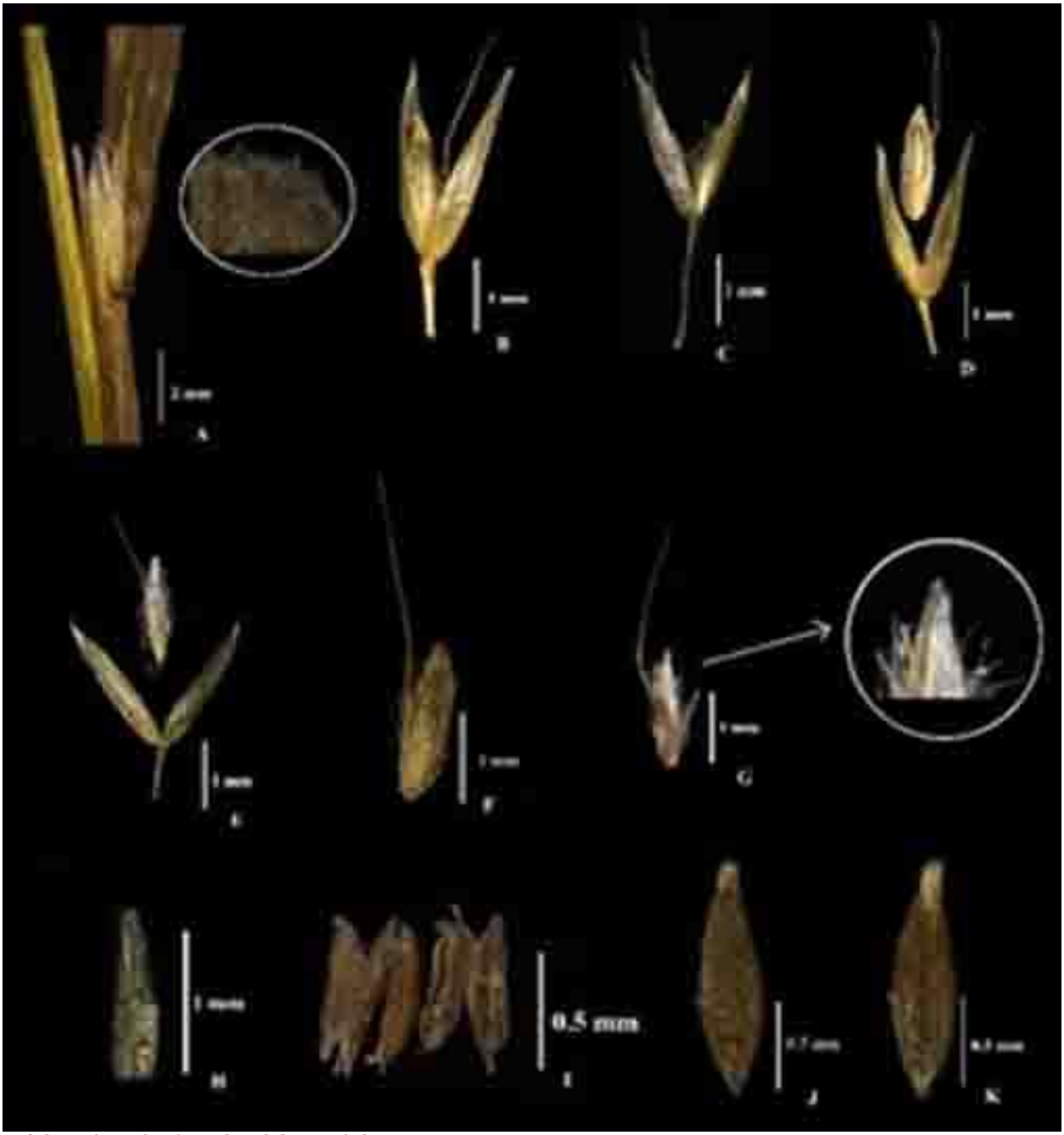


लाइकेन की प्रजाति क्रेटिरिया रुब्रम

नई दिल्ली, 27 अक्तूबर :(वायर साइंस इंडिया) वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर) क्षेत्र के विज्ञान वनस्पति को (एनबीआरआई) संस्थान अनुसंधान वनस्पति राष्ट्रीय प्रयोगशाला स्थित लखनऊ की क्षेत्र हिमालय ने वैज्ञानिकों ने एनबीआरआई है। जाता जाना लिए के शोध उत्कृष्ट में, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है। यह जानकारी हाल में सीएसआईआरमौ के दिवस स्थापना एनबीआरआईके-के पर संस्थान के निदेशक प्रोफेसर एस बारिक .के. है। गई की प्रदान द्वारा

सीएसआईआर गई खोजी द्वारा वैज्ञानिकों कि बताया ने श्रीवास्तव शरद डॉ वैज्ञानिक वरिष्ठ के एनबीआरआई- रुब्रम क्रेटिरिया प्रजाति की लाइकेन में प्रजातियों नई इन, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।



अग्रोस्टिस जीनस की नई प्रजाति अग्रोस्टिस बारीकी

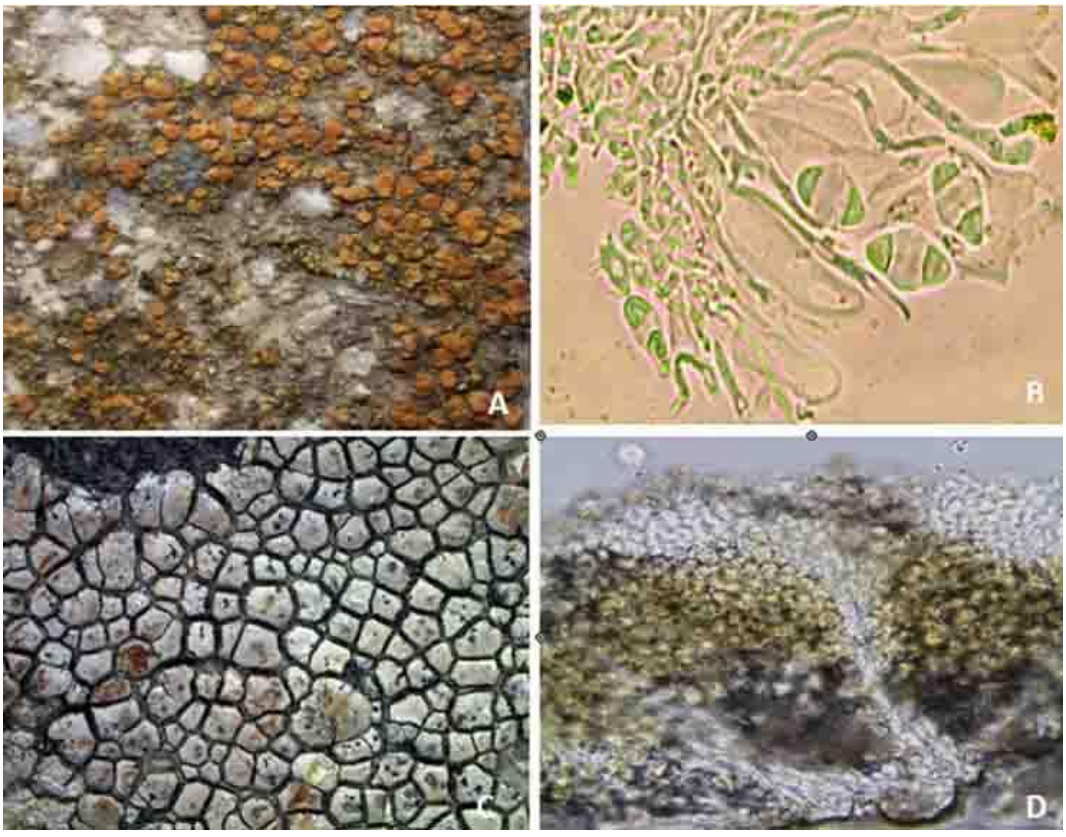
लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिण पूर्व- कुल की जीनस इस में क्षेत्र हिमालय में भारत में क्षेत्र एशिया16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथरूप के पौधे सजावटी का जिरेनियम साथ- में भी बहुतायत में उपयोग किया जाता है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरकॉर्डिनेटर एरिया में एनबीआरआई-, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टी कि बताया ने राणा .एस."नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उप जातियाँ- लेकिन हैं। सकती हो जैसी एक में देखने, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।" उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।



नई खोजी गई लाइकेन प्रजातियां

सीएसआईआर पादप वर्ष गत ने संस्थान कि है गया बताया में वक्तव्य ताजा एक जारी द्वारा एनबीआरआई- कुल संबंधित से विज्ञान132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं। कॉटन मिशन का उद्देश्य कपास की खेती को प्रोत्साहित करना और फ्लोरीकल्चर मिशन का उद्देश्य देश के 21 प्रदेशो में पुष्प कृषि को बढ़ावा देना है।

इस संस्थान द्वारा संचालित अन्य परियोजनाओं में भारत के विलुप्त होने वाले पौधों के संरक्षण, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहु-प्रयोगशाला परियोजनाएं (वायर साइंस इंडिया) हैं। शामिल (एमएलपी)

गाँव कनेक्शन

एनबीआरआई के वैज्ञानिकों ने खोजी वनस्पतियों की आठ नई प्रजातियां

भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है।

India Science Wire 27 Oct 2021

राष्ट्रीय वनस्पति अनुसंधान संस्थान के लिए जाना को वनस्पति विज्ञान के क्षेत्र में उत्कृष्ट शोध (एनबीआरआई) एनबीआरआई के वैज्ञानिकों ने हिमालय क्षेत्र-जाता है। सीएसआईआर, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है।

इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है। यह जानकारी हाल में सीएसआईआरएनबीआरआई के स्थापना दिवस के मौके पर संस्थान के निदेशक प्रोफेसर - बारिक द्वारा प्रदान की गई है। .के.एस

सीएसआईआरएनबीआरआई के वरिष्ठ वैज्ञानिक- डॉ शरद श्रीवास्तव ने बताया कि वैज्ञानिकों द्वारा खोजी गई इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई

प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।

लाइकेन की प्रजाति क्रेटिरिया रुब्रम और अग्रोस्टिस जीनस की नई प्रजाति अग्रोस्टिस बारीकी

लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिणपूर्व - एशिया क्षेत्र में भारत में हिमालय क्षेत्र में इस जीनस की कुल16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथ साथ जिरेनियम का सजावटी पौधे के रूप में भी-बहुतायत में उपयोग किया जाता है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरएनबीआरआई म-ेा एरिया कॉर्डिनेटर, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टीनई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि " कि राणा ने बताया .एस. इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उपजातियाँ - देखने में एक जैसी हो सकती हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।उन्होंने यह " भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नई वनस्पति प्रजातियां

By Ram Bharose

अक्टूबर 27, 2021 असम, कपास

NBRI scientists discovered eight new plant species

नई दिल्ली, 27 अक्तूबर : **वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद** (सीएसआईआर) की लखनऊ स्थित प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थान को (एनबीआरआई) वनस्पति विज्ञान के क्षेत्र में उत्कृष्ट शोध के लिए जाना जाता है। एनबीआरआई ने वैज्ञानिकों ने हिमालय क्षेत्र, पूर्वोत्तर भारत और पश्चिमी घाट में अपने

अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है।

यह जानकारी हाल में सीएसआईआरएनबीआरआई के स्थापना दिवस के मौके पर संस्थान के निदेशक प्रोफेसर - बारिक द्वारा प्रदान की गई है। .के.एस

सीएसआईआरएनबीआरआई के वरिष्ठ व-ैज्ञानिक डॉ शरद श्रीवास्तव ने बताया कि वैज्ञानिकों द्वारा खोजी गई इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।

लाइकेन की प्रजाति क्रेटिरिया रुब्रम (The species of lichen Criteria rubrum) असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है।

शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है।

क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिणपूर्व - एशिया क्षेत्र में भारत में हिमालय क्षेत्र में इस जीनस की कुल16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है।

ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है। जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथसाथ जिरेनियम का सजावटी पौधे के रूप में भी बहुतायत में उपयोग किया जाता - है।

एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग 600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरएनबीआरआई में एरिया कॉर्डिनेटर-, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टीए.स राणा ने बताया कि .“नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उपजातियाँ - देखने में एक जैसी हो सकती हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।” उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं।

कॉटन मिशन का उद्देश्य क्या है? (What is the objective of Cotton Mission?)

सीएसआईआरआरआई द्वारा जारी एक ताजा वक्तव्य में बताया गया है कि संस्थान ने गत वर्ष पादप एनबी- विज्ञान से संबंधित कुल132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं। कॉटन मिशन **का उद्देश्य** कपास की खेती **को प्रोत्साहित करना)encourage cotton cultivation)** और **फ्लोरीकल्चर मिशन का उद्देश्य (Objective of Floriculture Mission)** देश के 21 प्रदेशों में पुष्प कृषि को बढ़ावा देना है।

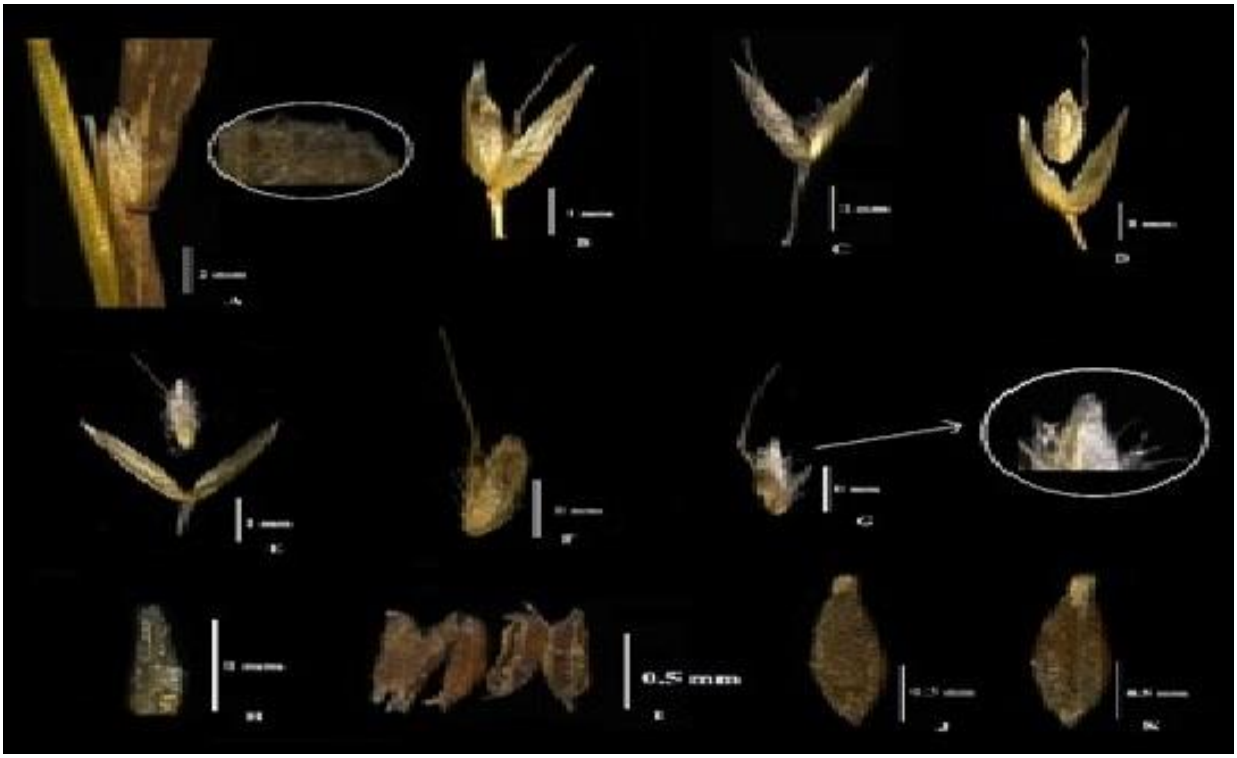
इस संस्थान द्वारा संचालित अन्य परियोजनाओं में **भारत के विलुप्त होने वाले पौधों के संरक्षण**, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहु-शामि (एमएलपी) प्रयोगशाला परियोजनाएंल हैं।

(इंडिया साइंस वायर(

Topics: CSIR, NBRI, New Species, Plant Species, Biodiversity, Himalayan region, Northeast, Western Ghats

एनबीआरआई के वैज्ञानिकों ने खोजी आठ नई वनस्पति प्रजातियां

27/10/2021 V3news India



नई दिल्ली, 27 अक्तूबर की (सीएसआईआर) वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद :(इंडिया साइंस वायर) को वनस्पति विज्ञान (एनबीआरआई) लखनऊ स्थित प्रयोगशाला राष्ट्रीय वनस्पति अनुसंधान संस्थानके क्षेत्र में उत्कृष्ट शोध के लिए जाना जाता है। एनबीआरआई ने वैज्ञानिकों ने हिमालय क्षेत्र, पूर्वोत्तर भारत और पश्चिमी घाट में अपने अध्ययन के दौरान पिछले वर्ष आठ नई वनस्पति प्रजातियों का पता लगाया है। इसके साथ ही भारत से पहली बार नये भौगोलिक रिकॉर्ड के रूप में 26 प्रजातियों को खोजा गया है।

यह जानकारी हाल में सीएसआईआर .के.एनबीआरआई के स्थापना दिवस के मौके पर संस्थान के निदेशक प्रोफेसर एस-एनबीआरआई के वरिष्ठ वैज्ञानिक डॉ शरद श्रीवास्तव ने बताया कि -बारिक द्वारा प्रदान की गई है। सीएसआईआर वैज्ञानिकों द्वारा खोजीगई इन नई प्रजातियों में लाइकेन की प्रजाति क्रेटिरिया रुब्रम, हराईला उप्रेतियाना एवं मारिओस्पोरा हिमालएंसिस, अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी, जिरेनियम जीनस की एक तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस और एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई शामिल हैं।

लाइकेन की प्रजाति क्रेटिरिया रुब्रम असम के नगोन जिले के कोमोरकता रिज़र्व फारेस्ट से खोजी गई है। शोधकर्ताओं का कहना है कि इस प्रजाति में पहली बार ईंट जैसे लाल रंग का थैलस देखा गया, जिसकी रासायनिक पहचान होना बाकी है। क्रेटिरिया जाति की कुल 20 प्रजातियाँ अभी तक ज्ञात हो चुकी है। हराईला उप्रेतियाना को जम्मू के नट्टा टॉप में समुद्र तल से 2440 मीटर की ऊँचाई से खोजा गया है। वहीं, मारिओस्पोरा हिमालएंसिस की पहचान अनंतनाग एवं पहलगाम के पर्वतीय क्षेत्रों में समुद्र तल से 2240 मीटर की ऊँचाई से प्राप्त वनस्पति संग्रह से की गई है।

अग्रोस्टिस जीनस की एक नई प्रजाति अग्रोस्टिस बारीकी को पश्चमी हिमालय से खोजा गया है। दक्षिणपूर्व एशिया क्षेत्र में-भारत में हिमालय क्षेत्र में इस जीनस की कुल 16 प्रजातियों के साथ सबसे ज्यादा विविधिता पायी जाती है। लद्दाख में कारगिल क्षेत्र एवं हिमाचल प्रदेश में पुष्पीय सर्वेक्षण में जिरेनियम जीनस की तीन नई प्रजातियाँ जिरेनियम एडोनियानम, जिरेनियम जैनी, जिरेनियम लाहुलेंस को खोजा गया है। ध्रुवीय एवं शुष्क रेगिस्तानों और कम ऊंचाई वाले उष्णकटिबंधीय क्षेत्रों को छोड़कर जिरेनियम जीनस अपनी 325 प्रजातियों के साथ लगभग हर महाद्वीप और पारिस्थितिकी तंत्र में पाया जाता है।

जिरेनियम पौधे का उपयोग मुख्य रूप से सगंध तेल बनाने में होता है। इस तेल का उपयोग औषधीय एवं कॉस्मेटिक उत्पादों में किया जाता है। इसके साथउपयोग किया जाता साथ जिरेनियम का सजावटी पौधे के रूप में भी बहुतायत में-है। एलाओकार्पस जीनस की एक नई प्रजाति एलाओकार्पस गाडगिलाई को पश्चिमी घाट के दक्षिणी भाग से खोजा गया है। यह एलाओकार्पसी समूह का लगभग600 प्रजातियों का सबसे बड़ा जीनस है। रुद्राक्ष का पेड़ इसी समूह से संबंधित है।

सीएसआईआरनेटरएनबीआरआई में एरिया कॉर्डि-, प्लांट डायवर्सिटी, सिस्टैमेटिक्स ऐंड हर्बेरियम डिविजन के मुख्य वैज्ञानिक डॉ टी राणा ने बताया कि .एस."नई वनस्पति प्रजातियों का पाया जाना महत्वपूर्ण है क्योंकि इससे पहले पूरे विश्व में इनके बारे में कहीं जानकारी मौजूद नहीं थी। कई बार किसी पौधे की उपजातियाँ देखने में एक जैसी हो सकती-हैं। लेकिन, ऐसी वनस्पति प्रजातियों के भौतिक एवं रासायनिक लक्षणों के गहन अध्ययन से उनके भिन्न गुणों का पता चलता है और उनकी पहचान नई प्रजाति के रूप में होती है।"

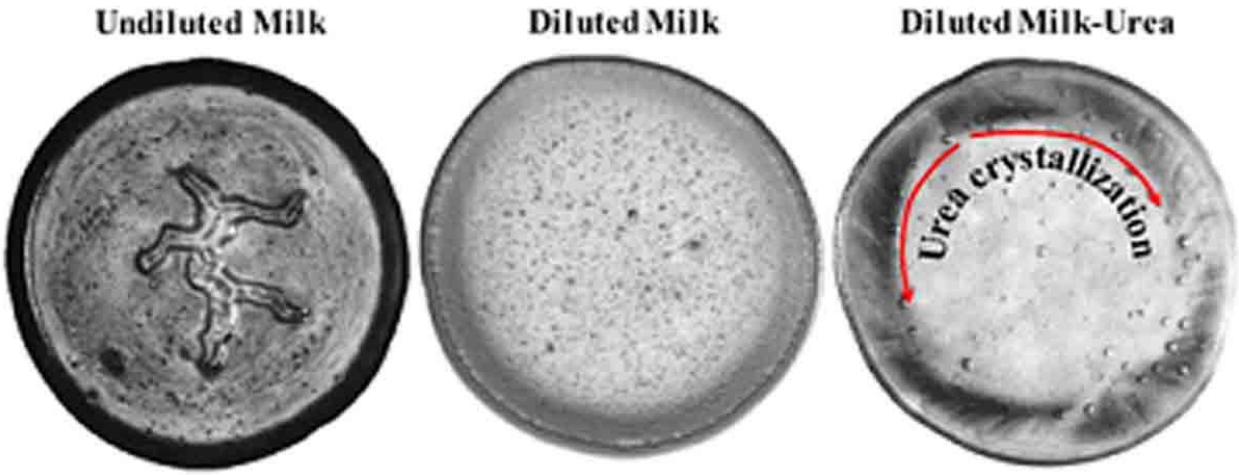
उन्होंने यह भी बताया कि इस तरह की ज्यादातर प्रजातियाँ पूर्वोत्तर भारत, पश्चिमी घाट और हिमालय के जैव विविधता बहुल क्षेत्रों से पायी जाती हैं। सीएसआईआरएनबीआरआई द्वारा जारी एक ताजा वक्तव्य में बताया गया है कि संस्थान ने - गत वर्ष पादप विज्ञान से संबंधित कुल132 परियोजनाओं पर अनुसंधान एवं विकास कार्य को आगे बढ़ाया है। इनमें 45 नई परियोजनाओं की शुरुआत की गयी है। इन परियोजनाओं में कॉटन मिशन एवं फ्लोरीकल्चर मिशन प्रमुखता से शामिल हैं।

कॉटन मिशन का उद्देश्य कपास की खेती को प्रोत्साहित करना और फ्लोरीकल्चर मिशन का उद्देश्य देश के 21 प्रदेशो में पुष्प कृषि को बढ़ावा देना है। इस संस्थान द्वारा संचालित अन्य परियोजनाओं में भारत के विलुप्त होने वाले पौधों के संरक्षण, भांग तथा अफीम में मेटाबोलाइट आनुवंशिकी, कृषि विज्ञान, चयापचय और भारतीय कमल के जीनोमिक्स पर नई बहुप्रयोगशाला परि-योजनाएं शामिल हैं। (एमएलपी)

Telangana Today
FOR LOCAL TO GLOBAL NEWS

New method for detecting adulterants in milk

BY INDIA SCIENCE WIRE PUBLISHED: 28TH OCT 2021 11:52 PM



New Delhi: Researchers at the Bengaluru-based Indian Institute of Science (IISc) have developed a low-cost and effective method to detect adulterants in milk, by merely analysing the deposition patterns after evaporation. The team used the method to test for the presence of urea and water, the most common adulterants, and suggest that the technique can be extended to other adulterants also.

Adulteration of milk is a pressing concern in developing countries like India, where a significant portion of supplied milk fails to comply with the standards set by the Food Safety and Standards Authority of India. Water is frequently added to increase the volume of milk, along with urea, which makes the watered-down version whiter and foamier – this can potentially endanger the normal functioning of the liver, heart, and kidneys.

In their study, the researchers looked at evaporative deposition patterns – those that emerge when a liquid mixture like milk completely evaporates, causing volatile components to dissipate and solids or non-volatile components to arrange themselves in distinctive patterns. Milk with and without water or urea showed very different evaporative patterns.

In unadulterated milk, the evaporative pattern consisted of a central, irregular blob-like pattern. Water was found to cause distortion or complete loss of this distinctive pattern, depending on how much of it is added. Urea also completely erases the central pattern. Being a non-volatile substance, it does not evaporate but instead crystallises, starting at the interior of the milk drop and extending along the periphery.

Current techniques such as lactometers look for changes in the freezing point of milk to detect the presence of water, but they have certain limitations. For instance, the freezing point technique can detect water only up to 3.5% of the total milk concentration. In addition, although biosensors with high sensitivity are available to test for urea, they are expensive, and their accuracy tends to decrease with time. The IISc team, on the other hand, was able to detect water concentrations as high as 30% and urea concentrations in diluted milk as low as 0.4% using pattern analysis.

The technique was designed by Dr. Virkeshwar Kumar, a postdoctoral researcher, and Susmita Dash, Assistant Professor in the Department of Mechanical Engineering at the Institute. They have published a report on their work in the journal ACS Omega.

The test does not require a laboratory or any other specialised process. “It can be done in any place. It can be easily adapted for use even in remote areas and rural places,” said Dr Kumar.

He and Dr. Dash believe that this technique can potentially be extended to test for adulterants in other beverages and products too. “The pattern that you get is highly sensitive to what is added to it. So, I think this method can be used to detect impurities in volatile liquids. It will be interesting to take this method forward for products such as honey, which is often adulterated”, Dr. Dash said.

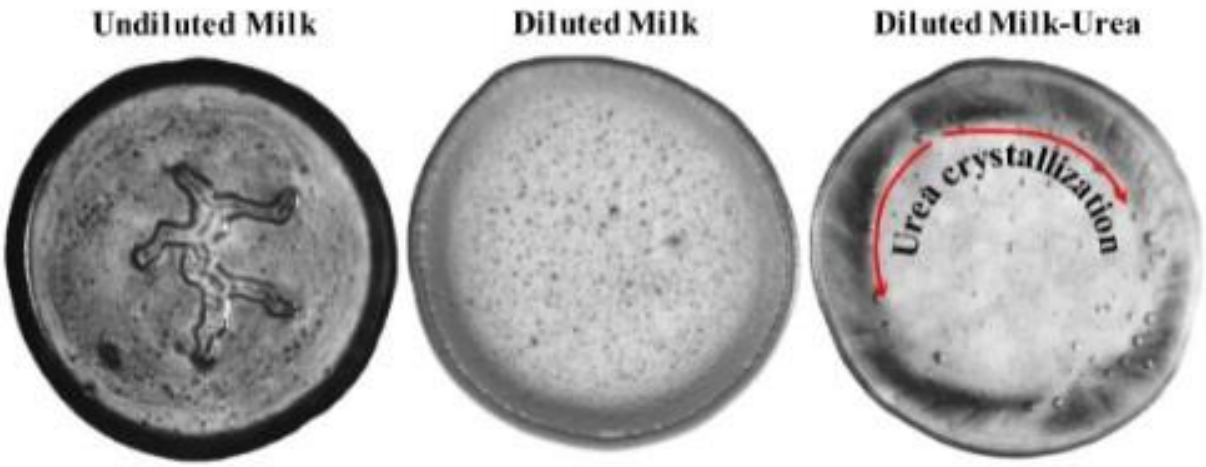
They noted that the simplicity of this method may also lend itself to easy automation, once the patterns for adulterants and their combinations are standardised. These could be fed into image analysis software, for example, which would compare a photo – even one taken with a mobile phone – of the sample’s evaporative pattern with other standard patterns to accurately detect the adulterants present.

“The next step that we are looking at is to test for adulterants, such as oil and detergents that form an emulsion resembling milk. We plan to continue work in this direction, creating a repository of patterns corresponding to various concentrations of different adulterants,” Dr Dash said.

Voice of the Nation
ORGANISER

A new method for detecting adulterants in milk

WEBDESK Oct 29, 2021, 10:35 AM IST



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The technique was designed by Dr. Virkeshwar Kumar, a postdoctoral researcher, and Susmita Dash, Assistant Professor in the Department of Mechanical Engineering at the Institute. They have published a report on their work in the journal ACS Omega.

The test does not require a laboratory or any other specialised process. “It can be done in any place. It can be easily adapted for use even in remote areas and rural places,” said Dr Kumar.

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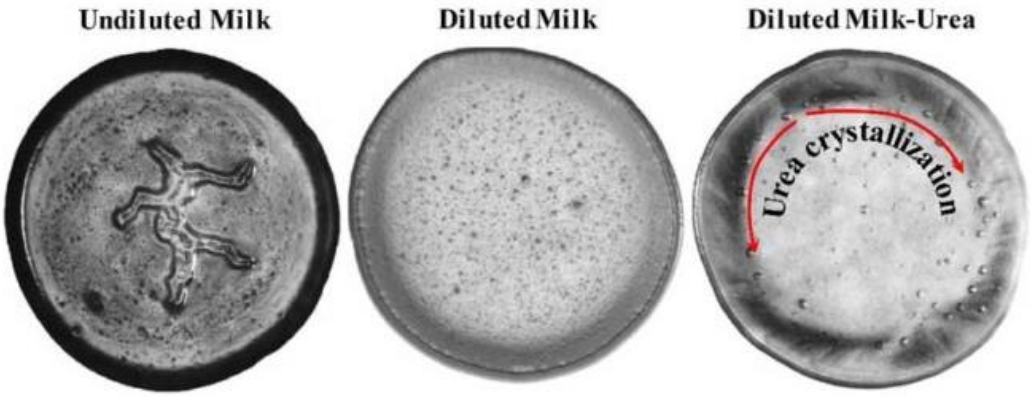
“The next step that we are looking at is to test for adulterants, such as oil and detergents, that form an emulsion resembling milk. We plan to continue work in this direction, creating a repository of patterns corresponding to various concentrations of different adulterants,” Dr Dash said.

Courtesy: India Science Wire

New method for detecting adulterants in milk

October 28, 2021



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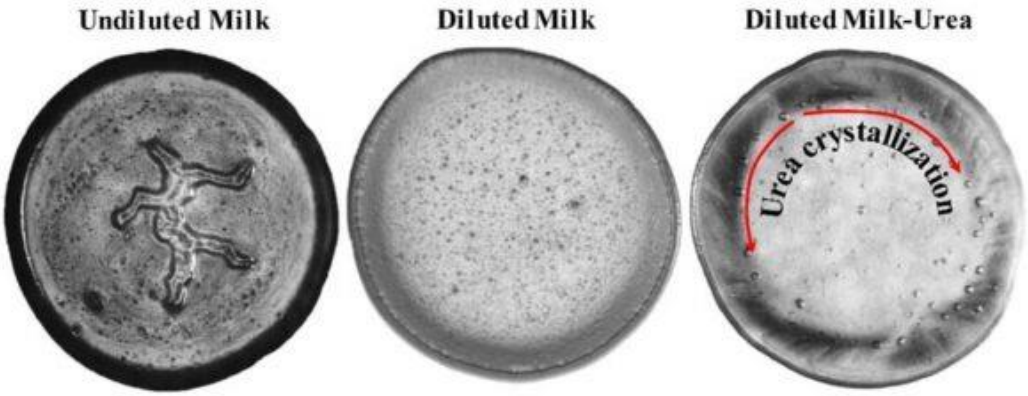
The IndianBulletin
www.theindianbulletin.com

New method for detecting adulterants in milk

By **The Indian Bulletin Online** - October 28, 2021



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Republic NewsIndia

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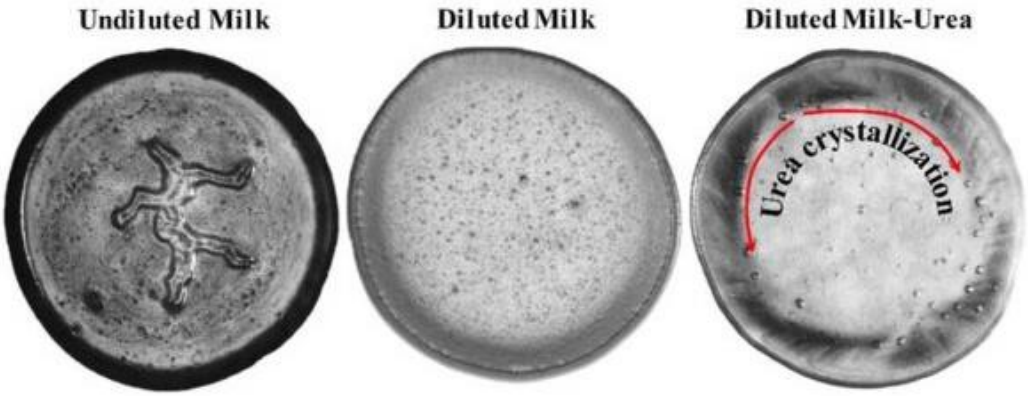

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News अक्तूबर 29, 2021

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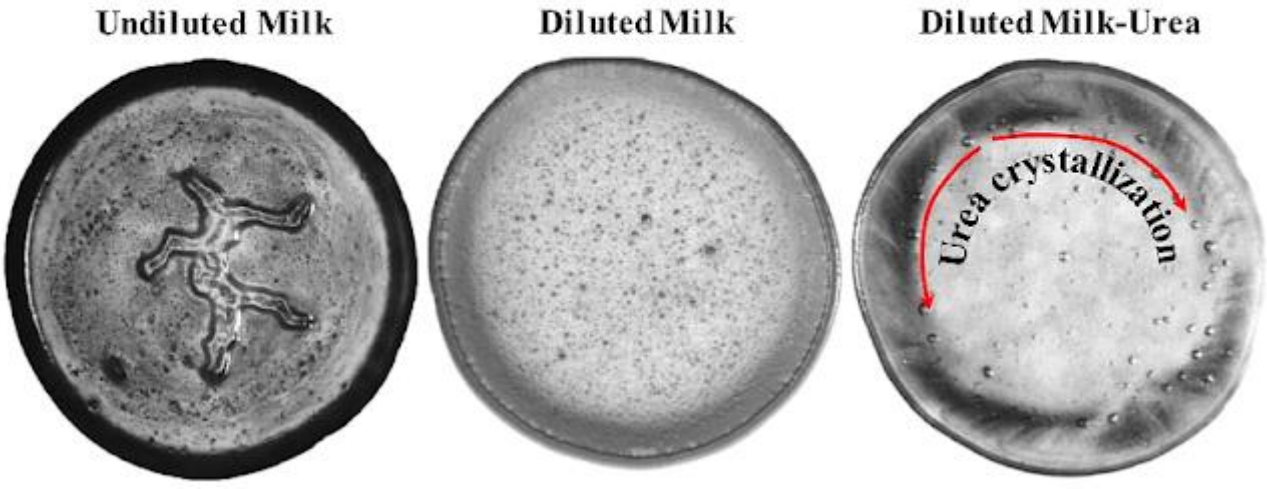

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Initiate News Agency (INA), New Delhi

Telangana Today
FOR LOCAL TO GLOBAL NEWS

Study finds mental illness may have unusual evolutionary basis

BY INDIA SCIENCE WIRE PUBLISHED: 28TH OCT 2021 11:45 PM

New Delhi: A new study has found that the common syndromes of severe mental illness, such as schizophrenia, bipolar disorder, dementia, obsessive-compulsive disorder, and addiction, may have an unusual evolutionary basis.

The constant prevalence of mental illness across the history of the human species suggests a Darwinian paradox. Despite causing significant disease, there seems little impact on selection for fitness. Genetic variation that predisposes to psychiatric disease is seen across all populations and is quite common. Previous selection, over evolution, may produce a bias towards certain kinds of variation that may cause disease later in life.

These mechanisms may protect against inflammation or infection when young, only to predispose towards disease when one is older. In the new study, researchers at the National Institute of Mental Health and Neurological Sciences (NIMHANS), Bengaluru, and Institute of Genomics at the University of Tartu, Estonia, explored these aspects through the genetic analysis of individuals from families who have multiple affected members, considering that the increased prevalence of illness in a particular family should point to even more extreme evidence of the risky alleles.

The study compared the genetic sequences of exomes (the regions that are translated into proteins)

from individuals in 80 such families and compared them against African and South Asian populations. They also looked for evidence of Neanderthal genes in the sample, as the persistence of these ancient genomes in modern humans seems to correspond to some traits as well as the risk of disease.

“We observed evidence of selection in 74 genes, which were mainly involved in immunological and defense responses, including activation and regulation of interferon-gamma, cytokine and immune system, and different signaling pathways”, said Dr. Ajai K. Pathak, one of the lead authors of the study.

The study inferred that almost one-fourth, 20 out of the 74 putatively selected genes were implicated in the risks of illnesses such as schizophrenia, dementia, and Parkinson’s disease and general attributes such as intelligence and cognitive abilities.

“There was also evidence of Neanderthal genes, but their variation and distribution were much the same in the south Indian population and did not correlate with the risk of disease or demonstrated signs of adaptive selection” stated one of the senior authors of the paper, Dr. Mayukh Mondal.

Noting that the human population has expanded from 1 billion 200 years ago, to more than 6 billion now, and that over the same period human longevity has also increased three-fold, the scientists said that perhaps, in common with many other diseases like diabetes and hypertension that begin later in life, the risk of psychiatric disease was embedded in the biology and the nature and extent of genetic variation of our species.

Another lead author, Dr. Jayant Mahadevan, said that the study adds to the growing evidence that the risk of psychiatric disease may be linked to variations in the shared gene pool, which in turn depends on the evolutionary history of the species.

RD TIMES.in

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By **RD Times Online** - October 28, 2021

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Voice of the Nation
ORGANISER

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WEBDESKOct 29, 2021, 09:39 AM IST

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Courtesy: India Science Wire

Republic NewsIndia

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By **Rupesh Dharmik** - October 28, 2021

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TOPICS: Alzheimer's Dementia Estonia Mental Health NIMHANS Protein Schizophrenia

nimhans campus

POSTED BY: HASTAKSHEP NEWS 28TH OCTOBER 2021

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In the new study, researchers at the **National Institute of Mental Health and Neurological Sciences** (NIMHANS), Bengaluru, and Institute of Genomics at the University of Tartu, **Estonia**, explored these aspects through the genetic analysis of individuals from families who have multiple affected members, considering that the increased prevalence of illness in a particular family should point to even more extreme evidence of the risky alleles.

The study compared the genetic sequences of exomes (the regions that are translated into proteins) from individuals in 80 such families and compared them against African and South Asian populations. They also looked for evidence of Neanderthal genes in the sample, as the persistence of these ancient genomes in modern humans seems to correspond to some traits as well as the risk of disease.

"We observed evidence of selection in 74 genes, which were mainly involved in immunological and defence responses, including activation and regulation of interferon-gamma, cytokine and immune system, and different signalling pathways", said Dr Ajai K. Pathak, one of the lead authors of the study.

The study inferred that almost one-fourth, 20 out of the 74 putatively selected genes were implicated in the risks of illnesses such as schizophrenia, dementia, and Parkinson's disease and general attributes such as intelligence and cognitive abilities.

"There was also evidence of Neanderthal genes, but their variation and distribution were much the same in the south Indian population and did not correlate with the risk of disease or demonstrated signs of adaptive selection" stated one of the senior authors of the paper, Dr Mayukh Mondal.

Noting that the human population has expanded from 1 billion 200 years ago, to more than 6 billion now and that over the same period human longevity has also increased three-fold, the scientists said that perhaps, in common with many other diseases like diabetes and hypertension that begin later in life, the risk of psychiatric disease was embedded in the biology and the nature and extent of genetic variation of our species.

Another lead author, Dr Jayant Mahadevan, said that the study adds to the growing evidence that the risk of psychiatric disease may be linked to variations in the shared gene pool, which in turn depends on the evolutionary history of the species.

(India Science Wire)

New Delhi: Study finds mental illness may have unusual evolutionary basis

News अक्तूबर 29, 2021

New Delhi: A new study has found that the common syndromes of severe mental illness, such as schizophrenia, bipolar disorder, dementia, obsessive-compulsive disorder, and addiction, may have an unusual evolutionary basis. The constant prevalence of mental illness across the history of the human species suggests a Darwinian paradox. Despite causing significant disease, there seems little impact on selection for fitness. Genetic variation that predisposes to psychiatric disease is seen across all populations and is quite common. Previous selection, over evolution, may produce a bias towards certain kinds of variation that may cause disease later in life. These mechanisms may protect against inflammation or infection when young, only to predispose towards disease when one is older.

In the new study, researchers at the National Institute of Mental Health and Neurological Sciences (NIMHANS), Bengaluru, and Institute of Genomics at the University of Tartu, Estonia, explored these aspects through the genetic analysis of individuals from families who have multiple affected members, considering that the increased prevalence of illness in a particular family should point to even more extreme evidence of the risky alleles. The study compared the genetic sequences of exomes (the regions that are translated into proteins) from individuals in 80 such families and compared them against African and South Asian populations. They also looked for evidence of

Neanderthal genes in the sample, as the persistence of these ancient genomes in modern humans seems to correspond to some traits as well as the risk of disease.

"We observed evidence of selection in 74 genes, which were mainly involved in immunological and defense responses, including activation and regulation of interferon-gamma, cytokine and immune system, and different signaling pathways", said Dr. Ajai K. Pathak, one of the lead authors of the study. The study inferred that almost one-fourth, 20 out of the 74 putatively selected genes were implicated in the risks of illnesses such as schizophrenia, dementia, and Parkinson's disease and general attributes such as intelligence and cognitive abilities.

There was also evidence of Neanderthal genes, but their variation and distribution were much the same in the south Indian population and did not correlate with the risk of disease or demonstrated signs of adaptive selection" stated one of the senior authors of the paper, Dr. Mayukh Mondal. Noting that the human population has expanded from 1 billion 200 years ago, to more than 6 billion now, and that over the same period human longevity has also increased three-fold, the scientists said that perhaps, in common with many other diseases like diabetes and hypertension that begin later in life, the risk of psychiatric disease was embedded in the biology and the nature and extent of genetic variation of our species. Another lead author, Dr. Jayant Mahadevan, said that the study adds to the growing evidence that the risk of psychiatric disease may be linked to variations in the shared gene pool, which in turn depends on the evolutionary history of the species.

Initiate News Agency (INA), New Delhi

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उनकी ख़बरें जो ख़बर नहीं बनते

शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति

उपाध्याय अमलेन्दु अक्टूबर 28, 2021 Latest, तकनीक व विज्ञान, देश, समाचार

Researchers develop new method to detect adulteration in milk

नई दिल्ली, 28 अक्तूबर 2021: भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथसाथ किफायती भी - है। यह अध्ययन ***बेंगलुरु स्थित भारतीय विज्ञान संस्थान*** (Indian Institute of Science, Bangalore – आईआईएससीके शोधकर्ताओं द्वारा किया गया है। (

दूध में आमतौर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है।

शोधकर्ताओं का कहना है कि इस पद्धति का विस्तार मिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरिया मिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है।

इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है। जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों के नष्ट हो जाने पर बचा हुआ ठोस घटक स्वयं को एक विशिष्ट पैटर्न में व्यवस्थित कर लेता है।

पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलगगया। पाया पैटर्न वाष्पीकरणीय अलग-

शोधकर्ताओं का कहना है कि मिलावटी दूध के वाष्पीकरणीय पैटर्न में एक केंद्रीय, अनियमित बूँद जैसा पैटर्न होता है। इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है।

शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैरवाष्पशील घटक होने के कारण यूरिया भी केंद्रीय पैटर्न को प-ूरी तरह मिटा देता है। यूरिया वाष्पित नहीं होता, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है।

आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि ***लैक्टोमीटर का उपयोग (use of lactometer)*** करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है।

यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है। इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है।

इस अध्ययन से जुड़े आईआईएससी के पोस्ट डॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि

“यह परीक्षण कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।”

विर्केश्वर कुमार के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है।

शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है।

प्रोफेसर दास ने बताते हैं,

“इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।”

उन्होंने कहा,

“मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।”

शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है। इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्लेषण करके पैटर्न का आकलन करता है।

प्रोफेसर दास कहती हैं,

“अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।”

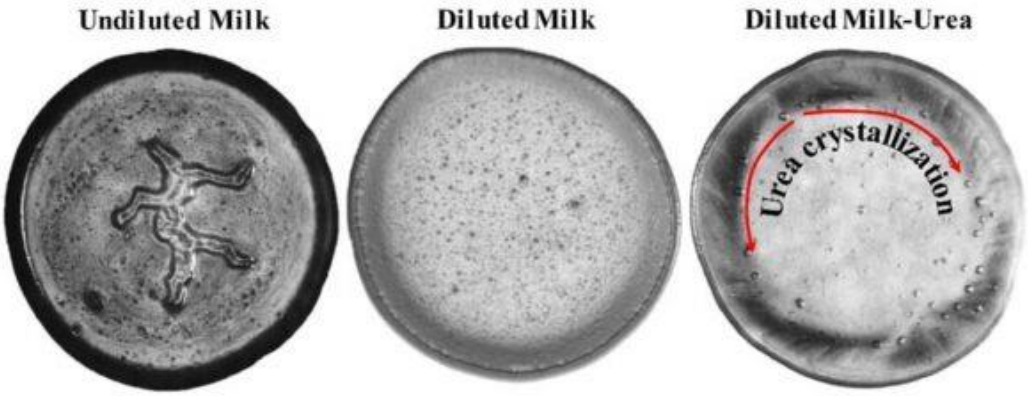
वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है।

(इंडिया साइंस वायर(

Topics: Evaporation, Adulteration, Milk, IISc, method to detect adulteration in milk,

शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति

By RD Times Hindi | October 28, 2021



नई दिल्ली, 28 अक्तूबर :(इंडिया साइंस वायर) भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथसाथ - के शोधकर्ताओं द्वारा (आईआईएससी) किफायती भी है। यह अध्ययन बेंगलूरू स्थित भारतीय विज्ञान संस्थान किया गया है।

दूध में आमतौर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है। शोधकर्ताओं का कहना है कि इस पद्धति का विस्तारमिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरियामिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है।

इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है। जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों केनष्ट हो जाने पर बचा हुआ ठोसघटक स्वयं को एकविशिष्ट पैटर्न में व्यवस्थित कर लेता है।

पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलगअलग वाष्पीकरणीय पैटर्न पाया गया। शोधकर्ताओं का - कहना है कि मिलावटी दूध के वाष्पीकरणीय पैटर्न में एक केंद्रीय, अनियमित बूँद जैसा पैटर्न होता है।इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है। शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैरवाष्पशील - घटक होने के कारण यूरिया भी केंद्रीय पैटर्न को पूरी तरह मिटा देता है। यूरिया वाष्पित नहीं होता, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है।

आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि लैक्टोमीटर का उपयोग करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है। यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है।इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है।

इस अध्ययन से जुड़े आईआईएससी के पोस्टडॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि “यह परीक्षण कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।”विर्केश्वर कुमार के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है।

शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है। प्रोफेसर दास ने बताते हैं, “इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।” उन्होंने कहा, “मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।”

शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है। इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्वलेषण करके पैटर्न का आकलन करता है।

प्रोफेसर दास कहती हैं, “अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।” वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है। (इंडिया साइंस वायर(

शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति

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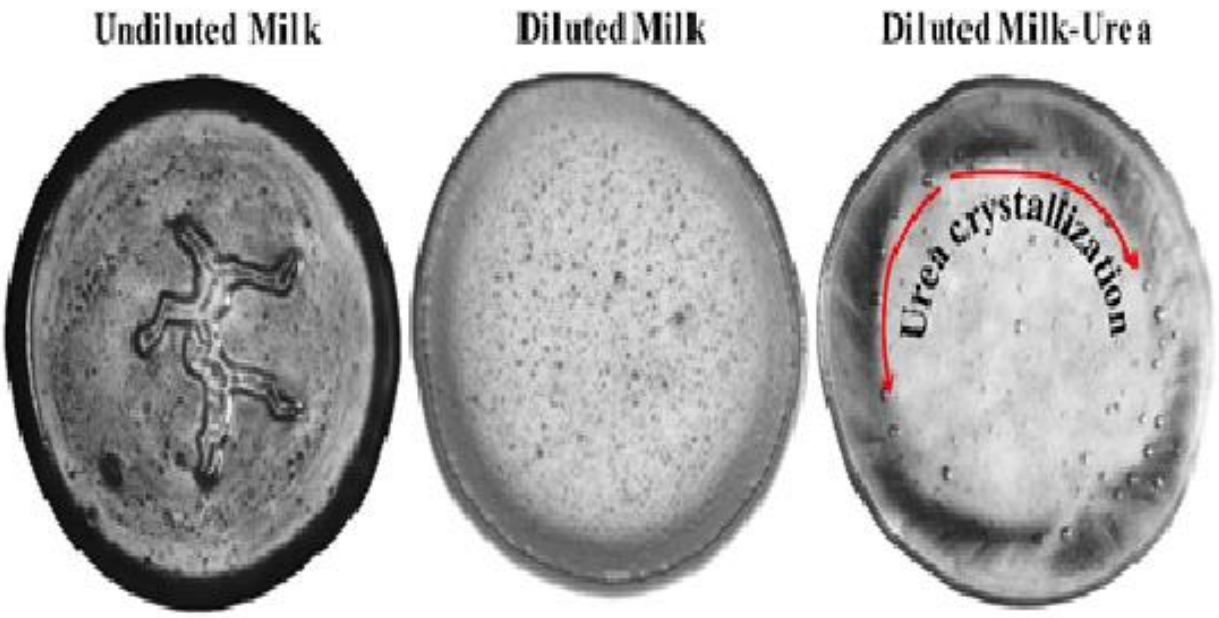


नई दिल्ली, 28 अक्तूबर भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर :(इंडिया साइंस वायर)
दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथसाथ-
किफायती भी है। यह अध्ययन बेंगलूरू स्थित भारतीय विज्ञान संस्थान के शोधकर्ताओं द्वारा किया गया है। दूध (आईआईएससी)
में आमतौर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है। शोधकर्ताओं
का कहना है कि इस पद्धतिका विस्तार मिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरिया मिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है। इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है।

जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों के नष्ट हो जाने पर बचा हुआ ठोस घटक स्वयं को एक विशिष्ट पैटर्न में व्यवस्थित कर लेता है। पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलगअलग वाष्पीकरणीय पैटर्न - पाया गया। शोधकर्ताओं का कहना है कि मिलावटी दूध के वाष्पीकरणीय पैटर्न में एक केंद्रीय, अनियमित बूँद जैसा पैटर्न होता

है। इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है। शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैरवाष्पशील घटक होने के - कारण यूरिया भी केंद्रीय पैटर्न को पूरी तरह मिटा देता है।

यूरिया वाष्पित नहीं होता, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है। आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि लैक्टोमीटर का उपयोग करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है। यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले
बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है।

इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है। इस अध्ययन से जुड़े आईआईएससी के पोस्ट डॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि "यह परीक्षण कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।"

विर्केश्वर कुमार के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है।
शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है। प्रोफेसर दास ने बताते हैं, "इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।"

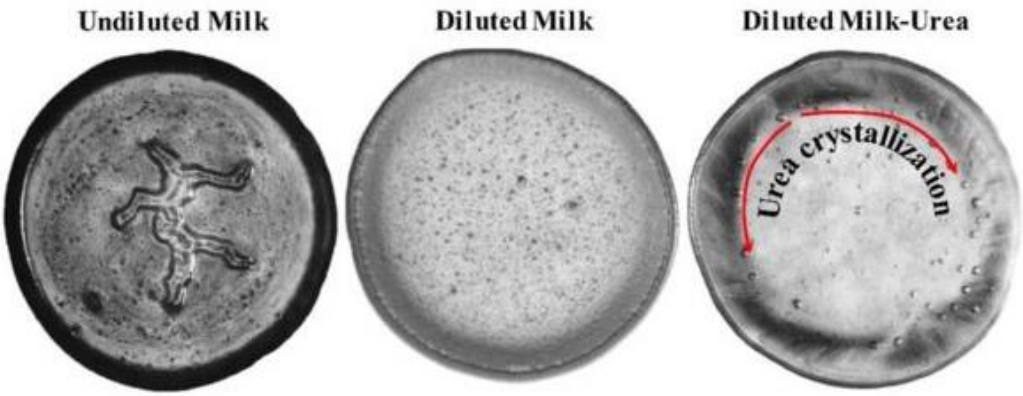
उन्होंने कहा, "मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।"
शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है।

इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्वलेषण करके पैटर्न का आकलन करता है। प्रोफेसर दास कहती हैं, "अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।" वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है।

रिपब्लिक न्यूज़इंडिया

शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति

By **Rupesh Dharmik** - October 28, 2021



नई दिल्ली, 28 अक्तूबर :(इंडिया साइंस वायर) भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथसाथ - के शोधकर्ताओं द्वारा (आईआईएससी) किफायती भी है। यह अध्ययन बेंगलूरू स्थित भारतीय विज्ञान संस्थान किया गया है।

दूध में आमतौर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है। शोधकर्ताओं का कहना है कि इस पद्धति का विस्तारमिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरियामिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है।

इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है। जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों केनष्ट हो जाने पर बचा हुआ ठोसघटक स्वयं को एकविशिष्ट पैटर्न में व्यवस्थित कर लेता है।

पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलगअलग वाष्पीकरणीय पैटर्न पाया गया। शोधकर्ताओं का - कहना है कि मिलावटी दूध के वाष्पीकरणीय पैटर्न में एक केंद्रीय, अनियमित बूँद जैसा पैटर्न होता है।इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है। शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैरवाष्पशील - घटक होने के कारण यूरियाा भी केंद्रीय पैटर्न को पूरी तरह मिटा देता है। यूरिया वाष्पित नहीं होता, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है।

आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि लैक्टोमीटर का उपयोग करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है। यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है।इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है।

इस अध्ययन से जुड़े आईआईएससी के पोस्टडॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि "यह परीक्षण कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।"विर्केश्वर कुमार के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है।

शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है। प्रोफेसर दास ने बताते हैं, "इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।" उन्होंने कहा, "मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।"

शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है। इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्वलेषण करके पैटर्न का आकलन करता है।

प्रोफेसर दास कहती हैं, "अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।" वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है। (इंडिया साइंस वायर)

नई दिल्लीशोधकर्ताओं ने विकसित की : दूध में मिलावट का पता लगाने की नई पद्धति

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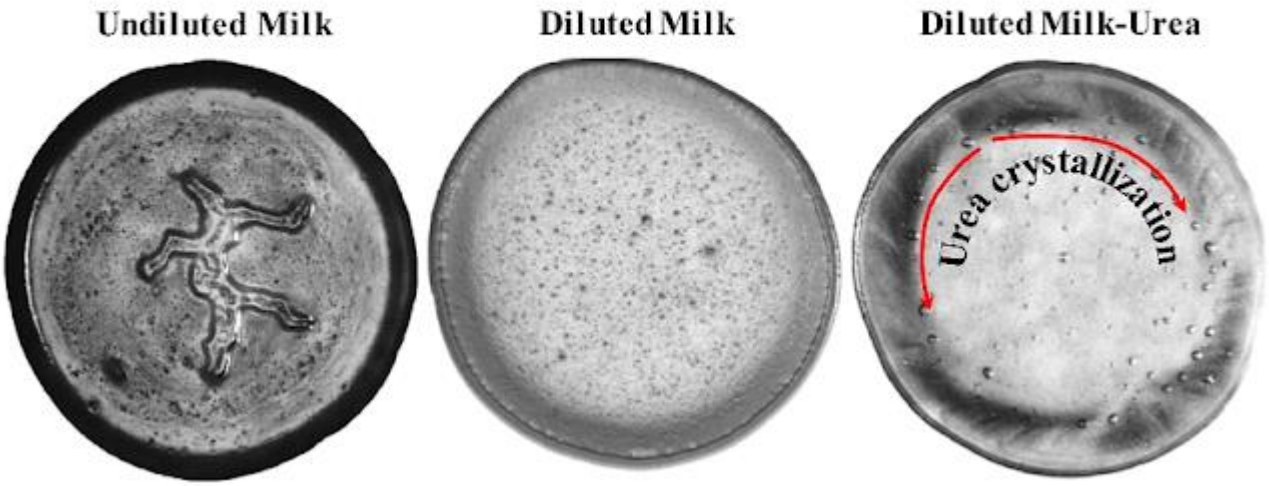
नई दिल्ली: भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथसाथ किफायती भी है। यह अध्ययन बेंगलूरू स्थित - के शोधकर्ताओं द्वारा किया गया है। दूध में आमतौ (आईआईएससी) भारतीय विज्ञान संस्थानर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है। शोधकर्ताओं का कहना है कि इस पद्धति का विस्तार मिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरिया मिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है।



इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है। जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों के नष्ट हो जाने पर बचा हुआ ठोस घटक स्वयं को एक विशिष्ट पैटर्न में व्यवस्थित कर लेता है। पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलगअलग वाष्पीकरणीय पैटर्न पाया -

गया। शोधकर्ताओं का कहन ा है कि मिलावटी दूध के वाष्पीकरणीय पैटर्न में एक केंद्रीय, अनियमित बूँद जैसा पैटर्न होता है। इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है। शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैरवाष्पशील घटक होने के कारण यूरिया भी केंद्रीय पैटर्न को पूरी तरह मिटा देता है। यूरिया वाष्पित नहीं होता-, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है। आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि लैक्टोमीटर का उपयोग करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है। यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है। इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है।

इस अध्ययन से जुड़े आईआईएससी के पोस्ट डॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि यह परीक्षण"कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।विर्केश्वर कुमार " के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है। शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है। प्रोफेसर दास ने बताते हैं, "इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।उन्होंने कहा ", "मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।"

शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है। इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्वलेषण करके पैटर्न का आकलन करता है। प्रोफेसर दास कहती हैं, "अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही " है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है।

Initiate News Agency (INA), नई दिल्ली

दी इंडियन बुलेटिन

शोधकर्ताओं ने विकसित की दूध में मिलावट का पता लगाने की नई पद्धति

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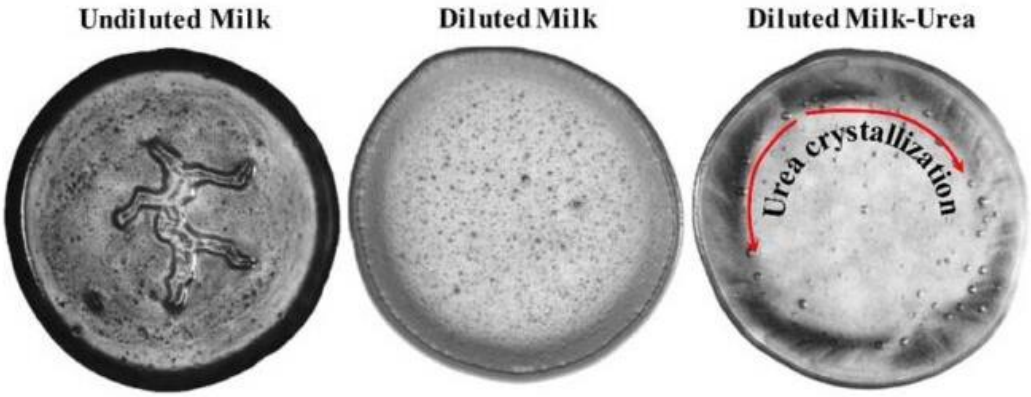

नई दिल्ली, 28 अक्तूबर :(वायर साइंस इंडिया) भारतीय शोधकर्ताओं ने वाष्पीकरण के बाद जमाव के पैटर्न का विश्लेषण कर दूध में मिलावट का पता लगाने की एक नई विधि विकसित की है, जो प्रभावी होने के साथ साथ-किफायती भी है। यह अध्ययन बेंगलूरू स्थित भारतीय विज्ञान संस्थान द्वारा शोधकर्ताओं के (आईआईएससी) है। गया किया

दूध में आमतौर पर की जाने वाली यूरिया और पानी की मिलावट के परीक्षण में इस विधि को प्रभावी पाया गया है। शोधकर्ताओं का कहना है कि इस पद्धति का विस्तारमिलावट के अन्य रूपों का पता लगाने के लिए भी किया जा सकता है।

दूध में मिलावट भारत जैसे विकासशील देशों में एक गंभीर चिंता का विषय है। विभिन्न अवसरों पर यह देखा गया है कि आपूर्ति होने वाले दूध की अधिकांश मात्रा भारतीय खाद्य सुरक्षा और मानक प्राधिकरण द्वारा निर्धारित मानकों का पालन करने में विफल रहती है। दूध की मात्रा बढ़ाने के लिए अक्सर उसमें पानी के साथ यूरियामिलाया जाता है, जो दूध को सफेद और झागदार बनाता है। यह मिलावटी दूध यकृत, हृदय और गुर्दे की सामान्य कार्यप्रणाली को प्रभावित कर सकता है।

इस तकनीक में, शोधकर्ताओं ने वाष्पीकरणीय जमाव के पैटर्न को केंद्र में रखा है। जब दूध जैसा तरल मिश्रण पूरी तरह से वाष्पित हो जाने एवं अस्थिर घटकों केनष्ट हो जाने पर बचा हुआ ठोसघटक स्वयं को एकविशिष्ट पैटर्न में व्यवस्थित कर लेता है।

पानी या यूरिया मिश्रिमत और इनसे मुक्त दूध में अलग का शोधकर्ताओं गया। पाया पैटर्न वाष्पीकरणीय अलग-केंद्रीय एक में पैटर्न वाष्पीकरणीय के दूध मिलावटी कि है कहना, अनियमित बूँद जैसा पैटर्न होता है।इस विशिष्ट पैटर्न के विरूपण या पूर्ण नुकसान के लिए पानी को जिम्मेदार पाया गया है। शोधकर्ताओं का कहना है कि पैटर्न की संरचना इस बात पर निर्भर करती है कि दूध में पानी की कितनी मात्रा मिलायी गई है। एक गैर वाष्पशील-होता नहीं वाष्पित यूरिया है। देता मिटा तरह पूरी को पैटर्न केंद्रीय भी यूरिया कारण के होने घटक, बल्कि यह क्रिस्टल में रूपांतरित हो जाता है, जो दूध की बूँद के आंतरिक भाग से शुरू होकर परिधि के साथ फैलता है।

आईआईएससी द्वारा जारी इस संबंध में जारी वक्तव्य में कहा गया है कि लैक्टोमीटर का उपयोग करने और दूध के हिमांक में परिवर्तन देखने जैसी वर्तमान तकनीकों का उपयोग पानी की उपस्थिति का पता लगाने के लिए किया जा सकता है, लेकिन उनकी कुछ सीमाएँ हैं। उदाहरण के लिए, हिमांक बिंदु तकनीक दूध की कुल मात्रा का केवल 3.5% तक ही पानी का पता लगा सकती है। यूरिया के परीक्षण के लिए उच्च संवेदनशीलता वाले बायोसेंसर उपलब्ध तो हैं, पर वे महँगे हैं, और उनकी सटीकता समय के साथ घटती जाती है।इस प्रकार के पैटर्न विश्लेषण का उपयोग करके पानी की सांद्रता अधिकतम 30% तक और पतले दूध में यूरिया की सांद्रता न्यूनतम 0.4% तक पता लगाने में प्रभावी पायी गई है। ऐसे में, यह तकनीक एक सुविधाजनक प्रतिस्थापन हो सकती है।

इस अध्ययन से जुड़े आईआईएससी के पोस्टडॉक्टोरल शोधकर्ता विर्केश्वर कुमार ने बताया कि "यह परीक्षण कहीं पर भी किया जा सकता है। इसके लिए प्रयोगशाला या अन्य विशेष प्रक्रियाओं की आवश्यकता नहीं होती है, और इसे दूरस्थ क्षेत्रों और ग्रामीण स्थानों में भी उपयोग के लिए आसानी से अनुकूलित किया जा सकता है।"विर्केश्वर कुमार के अलावा, इस अध्ययन में आईआईएससी के मैकेनिकल इंजीनियरिंग विभाग में सहायक प्रोफेसर सुष्मिता दास शामिल हैं। उनके द्वारा किया गया यह अध्ययन शोध पत्रिका एसीएस ओमेगा में प्रकाशित किया गया है।

शोधकर्ताओं का मानना है कि इस तकनीक को संभावित रूप से अन्य पेय पदार्थों और उत्पादों में मिलावट के परीक्षण के लिए भी उपयोग किया जा सकता है। प्रोफेसर दास ने बताते हैं, "इस पद्धति से जो पैटर्न मिलता है, वह किसी भी तरह की मिलावट के प्रति काफी संवेदनशील होता है।" उन्होंने कहा, "मुझे लगता है कि इस विधि का उपयोग वाष्पशील तरल पदार्थों में अशुद्धियों का पता लगाने के लिए किया जा सकता है। शहद जैसे उत्पादों के लिए इस पद्धति को आगे ले जाना दिलचस्प होगा, जिसमें अक्सर मिलावट होती है।"

शोधकर्ताओं का कहना है कि यह पद्धति काफी सरल है, और सभी तरह की मिलावट और उनके संयोजनों के लिए पैटर्न मानकीकृत हो जाएं तो इसका आसान स्वचालन सुनिश्चित हो सकता है। इन्हें तस्वीर का विश्लेषण करने वाले सॉफ़्टवेयर में फीड किया जा सकता है, जो तस्वीरों की तुलना एवं विश्वलेषण करके पैटर्न का आकलन करता है।

प्रोफेसर दास कहती हैं, "अगला कदम, जो हम देख रहे हैं, वह तेल और डिटर्जेंट जैसे कई अन्य मिलावटों का परीक्षण करना है, जो दूध जैसा इमल्शन बनाते हैं।" वह और उनकी टीम इस दिशा में काम जारी रखने की योजना बना रही है, जिसमें विभिन्न मिलावटों के विभिन्न सांद्रता के अनुरूप पैटर्न का भंडार तैयार किया गया है। (इंडिया साइंस वायर(

India Science Wire

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New Centre of Excellence in Disability & Assistive Technology

By India Science Wire

New Delhi, Friday, October 29, 2021

Indian Institute of Technology (IIT) Delhi and All India Institute of Medical Sciences (AIIMS), New Delhi, have come together to set up a Centre for Advanced Research and Excellence in Disability & Assistive Technology (CARE-DAT).

This Centre of Excellence (CoE) has been created under the aegis of the Indian Council of Medical Research (ICMR). The Center was inaugurated last Thursday by Prof V. Ramgopal Rao, Director, IIT Delhi, and Dr Randeep Guleria, Director, AIIMS, New Delhi.

The mandate of the Centre is to encourage comprehensive research on an identified problem, to generate new knowledge and improve the holistic understanding of neurological diseases such as stroke, and providing assistive technology solutions for patients' rehabilitation.

CARE-DAT is established with the vision - to design novel technological solutions, therapeutic protocols and clinical validation for the solutions in Neuro-assistive technology and thereby providing commercial-ready technology under the "Make in India" initiative.

Indian Institute of Technology (IIT) Delhi and All India Institute of Medical Sciences (AIIMS), New Delhi, have come together to set up a Centre for Advanced Research and Excellence in Disability & Assistive Technology (CARE-DAT).

Centre for Biomedical Engineering (CBME), a joint venture of both the institutions already established at the IIT Delhi. This new CoE is an outcome of active research for the last seven years by the joint collaboration of faculty from the CBME and the Department of Neurology at AIIMS, New Delhi. This collaboration has already registered its landmark with the products that have been developed and designed during the joint initiative. Already five patents have been filed and quality collaborative research has been jointly published.

Professor V. Ramgopal Rao, Director, IIT Delhi said, "This new CoE, CARE-DAT, will open new avenues in design, development and clinical validation of novel products for Neuro Assistive Technologies in Stroke Rehabilitation. IIT Delhi and AIIMS faculty currently collaborate on a variety of projects and technologies. We are looking forward to more collaboration between AIIMS and IIT Delhi, which will benefit the society and result in IP creation, technology transfers and incubation of startups."

Prof. M.V. Padma Srivastava, Head, Department of Neurology and Principal Investigator for this CoE from AIIMS, New Delhi added, "Stroke is leading cause of

high mortality and morbidity in the world, and in India we are having a high number of patient and economic burden for rehabilitation of these patients. Innovative solutions that will be developed under this initiative will be really important in framing the future of Neuro-Assistive Technologies in India."

"We displayed two of the products developed at IIT Delhi, which is being clinically validated at AIIMS, New Delhi at the inaugural function. One of these products, robotic exoskeleton for rehabilitation of upper limb, is in the phase-3 clinical trial, which will be part of this newly established CoE activity in next 2 years. We envision that more products and solutions will be developed in the future and this Center will be one of the pioneer facilities to encourage research in assistive technologies," added Prof. Amit Mehndiratta, CoE's Principal Investigator from IIT Delhi.

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