CSIR IN MEDIA

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CSIR-INDIA

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CSIR
भारत का नवाचार इंजन
The Innovation Engine of India

NEWS BULLETIN
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Compiled by Science Communication and Dissemination Directorate (SCDD), CSIR, Anusandhan Bhawan, New Delhi

CSIR Technologies to Contribute to Infrastructure like Shelters, Roads, Drinking Water Systems in the Model Village

CSIR-CBRI, CSIO, IMTECH

20th January , 2025

In a significant step toward rebuilding and strengthening resilience in disaster-affected areas, the foundation stone for a Model Resilient Village was laid on January 20, 2025, at Sil/Sunani in Bawasni Gram Panchayat, Baddi, District Solan, Himachal Pradesh. This initiative follows the devastating cloudburst-induced landslide that struck the region on August 14, 2023, causing extensive loss of property and livelihoods.

The project, a collaborative effort by the Council of Scientific and Industrial Research (CSIR), the Government of Himachal Pradesh, Bal Raksha Bharat, and Zee Entertainment, aims to redevelop the village and prepare it for future resilience through a comprehensive redevelopment plan. The initiative focuses on creating essential infrastructure such as housing, schools, anganwadis, healthcare facilities, community centres, and support systems for livelihoods and agriculture.

Dr. (Mrs.) N. Kalaiselvi, Secretary, DSIR, and Director General, CSIR, was the Chief Guest for the occasion, while Shri Ram Kumar Chaudhary, Member of Legislative Assembly, graced the event as the Guest of Honour. Key dignitaries, including Prof. R. Pradeep Kumar, Director, CSIR-CBRI; Shri Avinash Singh, Bal Raksha Bharat; Ms. Shalini Kotiya, Zee Entertainment; Shri Manmohan Sharma, Deputy Commissioner, Solan; Shri Vinod Kumar Dhiman, Superintendent of Police, Baddi; and Shri Vivek Mahajan, Sub-Divisional Magistrate, Baddi, participated in the event. Directors of CSIR-CSIO and CSIR-IMTECH, Prof. Shantanu Bhattacharya and Dr. Sanjeev Khosla, respectively, were also present.

Dr. Kalaiselvi highlighted the initiative's transformative vision to uplift rural living standards by improving infrastructure, education, and healthcare facilities. She reiterated CSIR's commitment to providing technical expertise and knowledge support for similar projects across the country.

Prof. R. Pradeep Kumar, Director, CSIR-CBRI, detailed CSIR's technical contributions, including designing infrastructure like shelters, roads, drinking water systems, sanitation facilities, a health center, and a community hall.

An exhibition showcasing resilient, site-specific construction technologies for buildings and livelihoods, based on extensive post-disaster research, was a key highlight of the event. Visitors commended the innovations and the forward-looking habitat planning and design.

Dignitaries interacted with local residents, including women and children, to understand the specific needs of the community. Local administration representatives pledged continued support to ensure the success of the initiative.

The event witnessed enthusiastic participation from local residents and panchayat members, who described the program as a historic step toward rural development and disaster preparedness.

This collaborative endeavour is a testament to the Government of India's commitment to transforming disaster-hit areas into resilient communities, ensuring sustainable development and improved quality of life for its citizens.

Published in:
Pib

Union MoS (I/C) for science and technology Dr Jitendra Singh inaugurates International Congress on Glass

CSIR-CGCRI

20th January , 2025

Inaugurating the "XXVII International Congress on Glass (ICG), 2025" at the Biswa Bangla Convention Centre here today, Union Minister of State (independent charge) for Science and Technology, Dr Jitendra Singh highlighted India's technology driven rapid ascent in the last one decade since Prime Minister took over in 2014. The ICG 2025 is being organised from January 20-24, 2025 by CSIR-Central Glass and Ceramic Research Institute (CSIR-CGCRI).

Dr Jitendra Singh said these are better times for science in India as the country is on an ascent, for which Prime Minister Narendra Modi has been an enabler. The minister said that India, unlike in the past, is not following cues₹0 from other countries but is leading the way and setting examples in science and technology and other sectors. He cited the notable example of ISRO's landing near the Moon's southern pole and the Bio E3 policy.

Dr Jitendra Singh said that the journey towards Prime Minister Narendra Modi's vision of Viksit Bharat in 2047 will be mostly technology driven.

The Minister stressed on the importance of synergy across academia and the industry and said that the ultimate goal of science is to improve ease of living. To highlight initiatives to this end, Dr Jitendra Singh spoke about the "one week, one theme" programmes for CSIRs in line with the "one week, on lab" theme in the past, which promoted such interactions and synergy.

Highlighting the wide and pervasive use of glass in daily life, Dr jitendra Singh said that the sector is now taking off in a new way, with glass being an important component for space, atomic energy, optics and defence sectors. He reiterated the significance of glass in this age, stating, “glass has indeed broken the glass ceiling”. Dr Singh also spoke about the reusability and commercial potential of glass.

Eminent figures from the global glass community including the president of International Commission on Glass and professor at the University of Tokyo, Hiroyuki Inoue were present on the occasion, besides, Director, CSIR-CGCRI, Professor Bikramjit Basu. The ICG 2025 will host over 550 delegates, including 150 international participants.

Published in:

Pib

On concluding day of NBRI's flower show, 4 new chrysanthemums unveiled

CSIR-NBRI

20th January , 2025

The CSIR-National Botanical Research Institute (NBRI) on Sunday unveiled four new chrysanthemum varieties on the concluding day of the rose and gladiolus exhibition.

The first variety, NBRI-Stuti, is a dwarf, highly floriferous chrysanthemum featuring bright red flowers with a contrasting yellow disc. It blooms from Dec to early Jan and takes approximately 120 days to grow from a rooted cutting to full bloom. The plant, standing at about 30 cm tall, spreads evenly in a pot, creating a dome-like appearance with numerous sprays of flowers (capitula) and buds, contributing to its abundant flowering.

The second variety, NBRI-Jagannath, is another dwarf and highly floriferous variety with 'mini' bright yellow flowers. Its distinct small, button-shaped central disc gives it a unique appearance as a 'Single-daisy' type. Blooming from late Nov to Dec, the plant grows to around 30 cm in height and produces between 120 to 170 flowers per plant. It requires approximately 115 days from a rooted cutting to reach the full bloom stage. NBRI-Saraswati stands out with its nascent white flowers and turmeric-yellow disc, offering a distinctive charm. The ray florets are slightly reflexed at the upper distal part, giving the flower a radiant look under sunlight. This floriferous variety grows to a height of 40-45 cm, producing around 120 flowers (capitula) and buds. It takes about 120 days to raise from the rooted cutting stage to full bloom.

The cutest of all was NBRI-Padma, a cut-spray, pompon-type small colour mutant that bears dark pink flowers. The plant is upright, reaching a height of 35 cm or less and takes about 124–130 days to grow full bloom.

Published in:

Times of India

Heritage tree on which 52 martyrs were hanged

CSIR-NBRI

20th January , 2025

The Banthra campus of CSIR-National Botanical Research Institute (NBRI) has established a 'Heritage Tree Garden' where over 30 plants related to the freedom movement or of historical importance have been planted.

"The heritage trees, which hold significant historical importance and are linked to freedom movements in the region, were planted with the aim of propagating these trees to ensure their legacy continues. So far, heritage trees from several historically significant regions, including Uttar Pradesh, Champaran in Bihar, and the Dandi March Route in Navsari, Gujarat, were introduced in the garden," said the NBRI scientists.

They said that the govt has identified heritage trees that either have mythological relevance, are historical, related to the freedom movement, or others. Such trees have been planted in this garden. The NBRI team brought planting and propagation material of such trees and planted it on our Banthra campus.

Scientists further explained, for example, in Fatehpur, there is '52 (Bawan Imli ka ped)'. Bawan Imli is a tree that is honoured as a Martyr's Memorial in Fatehpur.

During the 1857 First War of Independence, the revolutionaries and freedom fighters under the leadership of Thakur Jodha Singh Attaiya attacked the British forces and successfully defeated them. However, the joy of their victory was short-lived. The British were able to capture the revolutionaries and Thakur Jodha Singh Attaiya, along with 51 freedom fighters, was imprisoned. On April 28, 1858, all the revolutionaries, including Jodha Singh, were hanged from the Tamarind tree on Mughal Road in Fatehpur. The British forces also announced that whoever tried to bring the bodies down would also be hanged in the same manner. The bodies were left hanging from the Tamarind tree for 37 days.

In June 1858, the bodies were finally brought down and cremated. Later, the Bawan Imli tree was designated as a ‘memorial' to honour the sacrifices of the brave revolutionaries. "It's a unique and must-visit garden for people. People can scan the barcode and learn about the relevance of all historical trees," said NBRI scientists.

Published in:
Times of India

Union Minister Dr. Jitendra Singh inaugurates India's First-of-Its-Kind CSIR Mega "Innovation Complex" at Mumbai, dedicates it to Start Ups and Industry stakeholders

CSIR

19th January , 2025

Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, Minister of State in the Prime Minister's Office, Department of Atomic Energy, Department of Space, and Personnel, Public Grievances, and Pensions, Dr. Jitendra Singh inaugurated India's first-of-its-kind CSIR Mega "Innovation Complex" at Mumbai on 17th January through virtual mode and dedicated it to StartUps and Industry stakeholders.

The new Innovation Complex at Mumbai, inaugurated by the Science & Technology Minister, is a huge state-of-the-art set up spread over nine floors, equipped with 24 "ready-to-move" incubation labs in addition to furnished office and networking spaces for innovative StartUps, MSMEs, industry, and CSIR labs. The Mega facility will provide high-end scientific infrastructure, expertise, and regulatory support to stakeholders including CSIR labs, StartUps, MSMEs, and industry, for the SOP-driven studies necessary for regulatory submissions and compliance.

The Complex includes ready-to-move world-class incubation labs and IP/business development support for innovative start-ups, companies partnering with CSIR labs, MSMEs, deep-tech companies from India and abroad, public-funded research institutions, and CSIR labs." Catching up with the excitement of the audience, Dr. Jitendra Singh remarked, "This inauguration is just the beginning. We are excited about the future potential and the immense contributions this Innovation Complex will make to India's growth story."

Narendra Modi for his vision, which has enabled India to emerge as a global hub for start-ups and innovation. He described the inauguration of this complex as another landmark step. He reiterated that under the visionary leadership of Prime Minister Shri Narendra Modi, India has emerged as a global hub for start-ups and innovation.

Dr Jitendra Singh said, “We are proud to be the third-largest start-up ecosystem in the world, with over 100 Unicorns that stand as testaments to India's entrepreneurial spirit. This remarkable growth is a reflection of the transformative initiatives and policies introduced by our government to empower the youth and drive economic self-reliance.”

The Science and Technology Minister further highlighted that the CSIR Innovation Complex Mumbai comes at a pivotal moment in India’s start-up journey.

According to the Minister, the state-of-the-art facility has been designed to provide incubation and business spaces, enabling start-ups, MSMEs, and industry stakeholders to collaborate with CSIR’s network of researchers and innovators. It serves as a bridge between cutting-edge science and its application to address real-world challenges, thereby contributing to the vision of Atmanirbhar Bharat.

He called the Innovation Complex a significant milestone for CSIR, representing a giant leap forward in India’s innovation landscape and reinforcing the nation’s position as a global leader in science and technology. Dr. Jitendra Singh underscored the high-end scientific infrastructure and expertise designed to foster critical translational unmet needs (spanning lab-to-regulator and regulator-to-industry domains) for start-ups, MSMEs, and CSIR labs, while catalyzing faster tech-transfer processes.

Dr. Jitendra Singh informed that the IC-Mumbai will provide high-end scientific infrastructure, expertise, and regulatory support to stakeholders (CSIR labs, start-ups, MSMEs, and industry) for the SOP-driven studies necessary for regulatory submissions and compliance.

Adding further, he said, “The facility includes ready-to-move world-class incubation labs and IP/business development support for innovative start-ups, companies partnering with CSIR labs, MSMEs, deep-tech companies from India and abroad, public-funded research institutions, and CSIR labs.

Informing the industry and start-ups, Dr. Jitendra Singh shared that the complex will function as an innovation and incubation hub to support, collaborate, and partner in key industrial sectors such as healthcare (pharma, biopharma, medtech), chemicals, materials, energy, and other relevant areas of interest to CSIR labs.

Speaking about the physical infrastructure of IC-Mumbai, Dr. Jitendra Singh informed that the facility, spread over nine floors, is equipped with 24 “ready-to-move” incubation labs and furnished office and networking spaces for innovative start-ups, MSMEs, industries, and CSIR labs.

Concluding his remarks, Dr. Jitendra Singh said, “The inauguration is just the beginning. We are excited about the future potential and the immense contributions this Innovation Complex will make to India’s growth story.” He added that facilities like the C-ICM embody the spirit of collaboration, innovation, and inclusivity that define the nation’s approach to building a self-reliant India.

The event was attended by Dr. V.K. Saraswat and Dr. V.K. Paul, Members of NITI Aayog; Dr. N. Kalaiselvi, Secretary of DSIR and DG CSIR; and Dr. Ram Vishwakarma. The inaugural event witnessed participation from industry leaders, foreign delegates from Norway, Switzerland, and Germany, MSMEs, start-ups, and over 1,000 scientists from CSIR labs across India.

Published in:
Pib

NBRI flower show opens with blooming roses, gladioli

CSIR-NBRI

19th January , 2025

An exceptional collection of roses and virtually every hue of gladiolus captivated flower enthusiasts during the two CSIR-National Botanical Research Institute's shows, which commenced on Saturday. From Rosa floribunda ‘Anthony Meilland' rose, a deep, rich shade of yellow that maintains its vibrancy and radiates like the sun to grandiflora and autumn damask rose varieities, the impeccable blooms showcased at NBRI gardens enchanted visitors. Every conceivable colour was represented in the institute's gladiolus collection.

"I have been residing in Lucknow for over a decade and have never missed NBRI flower show as it's both an opportunity to witness the rarest flower collection as well as purchase plants," said retired professor Abhinva Sahai.

Another group of visitors, comprising young students, delighted in taking selfies with roses and remarked that not just the colours of flowers their exquisite fragrance created an indelible impression too.

CSIR-NBRI director A K Shasany said, "NBRI has been organising annual rose and gladiolus show regularly for more than 60 years for popularising rose and gladiolus in the north Indian plains and to educate plant lovers and popularising various varieties of roses and gladiolus.“

Meanwhile, NBRI garden in charge and distinguished scientist S K Tiwari, the convener of

the flower show, said there were two major classes and 10 sections including 16 trophies for the exhibitors to win. Entries under different classes of the show have been received from various govt, semi-govt departments, autonomous bodies, nurserymen, individual growers, gardeners, housewives and others. This year, the show received a total of 205 entries belonging to 17 exhibitors from Lucknow and outstations.

State agriculture production commissioner Monika Garg was the chief guest.

Published in:
Times of India

Auretics Ltd and CSIR-NRDC Join hands for healthcare innovation

CSIR-NIO, IHBT

18th January , 2025

In a milestone for healthcare innovation, Auretics Limited signed a Technology Transfer Agreement (ToT) with the Council of Scientific and Industrial Research (CSIR), facilitated by the National Research Development Corporation (NRDC). The agreement, finalized during the inaugural ceremony of the CSIR Innovation Complex, Mumbai, marks a step forward in addressing joint health challenges through science-backed solutions.

The partnership revolves around a clinically-tested herbal formulation for cartilage formation, developed at CSIR-IHBT, Palampur, Himachal Pradesh. The event, held at the CSIR-NIO Regional Centre Campus, Andheri (West), Mumbai, witnessed the presence of key dignitaries, including Dr. Jitendra Singh, Minister of State for Science and Technology, Dr. V.K. Saraswat, and Dr. V.K. Paul, members of NITI Aayog.

Dr. N. Kalaiselvi, Director General of CSIR and Secretary, Department of Scientific and Industrial Research (DSIR), underscored the importance of partnerships between science and industry in advancing national goals.

Arjun Gupta, CEO of Auretics Limited, highlighted the transformative potential of the agreement, stating, "This collaboration between Auretics and CSIR exemplifies how scientific research can directly benefit society. By bringing this innovative herbal formulation to market, we aim to address widespread cartilage-related issues while fostering wellness across India."

The formulation, rooted in rigorous scientific research, is positioned to provide an affordable and effective treatment for early-stage arthritis and joint health problems. Gupta emphasized that the partnership reflects a convergence of scientific excellence and entrepreneurial vision.

Dr. Arvind Kumar Gupta of CSIR-IHBT praised the project's foundation in robust clinical research. He remarked, "This herbal formulation represents a breakthrough in addressing cartilage degeneration. It showcases how India's scientific advancements can positively impact public health.“

The collaboration is poised to yield multi-faceted benefits like Enhanced Healthcare Access, Boost to Innovation and Economic Growth.
This agreement aligns with India's vision of integrating traditional knowledge with modern science to build a healthier and self-reliant nation.

Published in:
Aninews

Use information communication technology for efficient waste management: Experts

CSIR-NEERI

18th January , 2025

A one-day conclave on Information Communication Technology (ICT) and Solid Waste Management was organized in the city by The Times of India, supported by bigV Telecom and ITI Ltd (Govt of India enterprise). Experts discussed National Green Tribunal's (NGT) directives and technology's role in optimizing waste management.

The NGT observed that delays in project implementation are due to lengthy tendering processes at urban local bodies (ULBs). Experts suggested the Urban Development Department (UD) standardize specifications and implement projects through empanelled PSUs, a model followed by Maharashtra.

Brajesh Dubey, professor at IIT Kharagpur, emphasized a broader technology-driven approach. "Waste management needs ICT for better efficiency. Challenges like handling Styrofoam demand serious attention and investment," he said.

Nabam Rich, HoD (Civil Eng), NIT Arunachal Pradesh, stressed the importance of public awareness for ICT adoption. "If people are aware of the technology, there won't be a need for government intervention," she said.

Sunil Kumar, senior scientist at CSIR-NEERI, called for a common platform for technocrats, environmentalists, and policymakers to find feasible solutions. He highlighted the need to promote student innovations, such as those from IIM Nagpur.

Arun Kumar Thalla, professor at NIT Karnataka, stressed on forging partnerships between local authorities and private entities. "Announcing schemes and installing QR codes isn't enough; follow-up inspections are crucial," he said. Ashootosh S Mandpe, assistant professor at IIT Indore, rooted for grievance redressal apps for citizens. "Nagpur had such an app, but its

usage has declined in recent years," he noted. Deval Singh, a scholar at IIT Bombay, highlighted India's low waste management expenditure compared to the US. "We must personalize technology based on regional demographics and build from basics," he said.

Kapil Kumar, HoD (Civil Eng), NIT Delhi, pointed out economic, technological, and environmental challenges in implementing ICT. He stressed upon segregation, collection, and incentive-based policies while integrating modern solutions with older infrastructure.

Ved Prakash Ranjan, assistant professor at IIT Jammu, called for NGT policy amendments based on research. "For example, microplastics need to be addressed in policies. Paper cups, once considered ‘green,' now block gutters," he said. Pratik Kumar emphasized the need for honest data in policymaking.

Bijayananda Mohanty, associate professor at NIT Mizoram, highlighted funding shortages as a barrier to waste management in Mizoram. "Proper disposal infrastructure is essential for improving living standards," he said.

Kishore Daga, MD of Nagpur-based bigV Telecom, emphasized ICT's role in optimizing operations. "We've installed QR codes in over 40 lakh properties, allowing users to track data and analyze performance," he said. bigV Telecom showcased ICT's potential in monitoring vehicles and manpower for efficiency.

Published in:
Times of India

CSIR-SERC transfers tech to industry partners

CSIR-SERC 18th January , 2025

The CSIR-Structural Engineering Research Centre (CSIR-SERC), a premier national laboratory under CSIR, has successfully transferred three innovative technologies to Industry partners.

The three technologies are the "Emergency Retrieval System" (ERS), the "High Velocity Multi-Hit Resistant Movable Protective Booth/Shack for Security Personnel," and the "Portable Lightweight Foldable Module for Make-Shift Hospitals (PoliTal-M)", a PIB release here on Saturdaysaid.

The technologies were transferred to M/s. Hi-Tech Systems and Services Limited., Kolkata, and M/s. Hemagni Build-Pro Industries Private Limited., Hosur, during the inaugural function of the Innovation Complex in Mumbai.

The event was attended by esteemed dignitaries, Dr. N. Kalaiselvi, DG, CSIR, Dr V K Saraswat, and Dr VK Paul, Members of NITI Aayog, Dr Ram A Vishwakarma Distinguished Scientist. Union Minister of State for Science and Technology and Earth Sciences Dr. Jitendra Singh participated via video-conferencing.

The technology transfer agreement of ERS was signed by Dr. N. Anandavalli, Director, CSIR-SERC, with Mr. Bibhu Ranjan Parida from M/s. Hi-Tech Systems and Services and the Security Booth and PoliTal-M with Mr. Subramani Reddy G from M/s. Hemagni Build-Pro Industries.

The inventor of ERS technology Dr. R.P. Rokade, Senior Principal Scientist participated in the event. This achievement signifies a major step forward in delivering cutting-edge solutions to enhance safety, mobility, and emergency response capabilities in critical sectors.

On Emergency Retrieval System, it said it is an indigenous ERS technology for power lines, which allows for the quick restoration of power transmission in the event of a transmission line tower failure.

The technology creates a bypass corridor, ensuring temporary power restoration while permanent repairs are made in the main corridor.

On the key features of ERS, it said it stands out for its unique design, featuring lightweight modules connected via an innovative system and supported by a novel two-pin gimbal joint and an easily constructible foundation; this scalable system is designed for transmission lines ranging from 33 to 800 KV, making it the first of its kind in India; aligned with the 'Make in India' and 'Atmanirbhar Bharat' initiatives, the ERS promotes self-reliance and innovation.

Additionally, it serves as an import substitute, contributing to reduced dependency on foreign technologies and this this indigenous development has led to the filing of two patents, both in India and internationally.

Published in:
Uni India

CSIR chief urges NIO to work on energy security

CSIR-NIO

18th January , 2025

The first woman to be appointed director general of the Council of Scientific and Industrial Research (CSIR), N Kalaiselvi, said the National Institute of Oceanography (NIO) can play a crucial role in advancing cutting-edge solutions that meet India's energy, food, and strategic security needs.

"The country is looking at energy, food, health, and strategic security. It is high time that NIO participates in all five securities, both directly and indirectly," she said while speaking at the diamond jubilee celebrations of the Goa-based institute.

Drawing inspiration from international examples, Kalaiselvi pointed to Norway's pioneering efforts in energy diversification. "Despite being a relatively small country, Norway has integrated five different forms of energy harvesting: solar, electrical, tidal, wind, and geo-energy.

This comprehensive approach has made Norway one of the global leaders in sustainable energy practices, particularly in carbon capture and utilisation," Kalaiselvi said.

She also highlighted that such nations have developed a wealth of knowledge and other technological expertise that India could adapt to its needs. "These countries provide invaluable insights that we can learn from and embed into our systems," she said.

"There is no dearth of knowledge or expertise within NIO, and I encourage them to feel free to collaborate with global experts to create a new model," she said.

Published in:
Times of India

Dr. Santosh Kumar Behera, Senior Principal Scientist, CSIR-IMMT, Bhubaneswar honored with the Prestigious ISOI Fellow for 2024

CSIR-IMMT

18th January , 2025

Santosh Kumar Behera, Senior Principal Scientist, CSIR-IMMT, received the prestigious Fellow of the Instrument Society of India (ISOI) for the year 2024 at the Indian Institute of Science (IISc), Bangalore.

Dr. Santosh Kumar Behera, Senior Principal Scientist at the CSIR-Institute of Minerals & Materials Technology, Bhubaneswar, has been awarded the prestigious Fellow of the Instrument Society of India (ISOI) for the year 2024. The award was presented on 10th January 2025 at the Indian Institute of Science (IISc), Bangalore, in recognition of his outstanding contributions to the field of instrumentation in India and his dedicated service to the Instrument Society of India and the global instrumentation community.

Published in:

Orissadiary

With successful trials, CDRI a step closer to antimalarial vaccine

CSIR-CDRI

18th January , 2025

Moving a step closer to developing an antimalarial vaccine, a team of scientists from CSIR-Central Drug Research Institute (CDRI) has succeeded in developing a novel whole parasite vaccine (a vaccine that contains every molecule of a malaria-causing parasite strain. Following successful trials on animals, the team has now begun research on developing the vaccine for humans. The research was led by scientists Akancha Mishra, Plabita Paul and Satish Mishra, and was published in the journal NPJ Vaccines.

"This vaccine was developed by deleting two genes — SCD and SCOT1 — and weakening the parasite, allowing it to multiply in the liver and help the body develop immunity against malaria," said CDRI scientist Satish Mishra. "After mosquito bites, the first phase of infection in the liver goes completely unnoticed and doesn't cause any symptoms of malaria. When the parasites are released from the liver, they infect red blood cells, causing malaria," he explained.

"The vaccine strain was generated by deletion of two parasite genes out of the approximately 5,500 in the malaria parasite genome. This malaria parasite vaccine strain, when injected, infects the liver but gets arrested there, and does not enter the bloodstream to cause infection, thus preventing malaria," the scientist said.

The vaccine "has achieved 100% efficacy in preclinical studies", and has the potential to save millions of lives, Mishra said. "We are planning to generate SCD/SCOT1 GAP in the human

malaria parasite, plasmodium falciparum, and assess the vaccine in clinical trials. The World Health Organization has recognised the need for malaria vaccines that prevent more than 90% of infections," he added. Currently, there is no malaria vaccine that provides protection against both liver and blood stages of the parasite.

Published in:
Times of India

CSIR-NCL IP Campaign Reaches Tier 2, Tier 3 Cities, and Remote Regions Across India

CSIR-NCL

17th January , 2025

The Intellectual Property Group of CSIR-National Chemical Laboratory (CSIR-NCL), in collaboration with the Indian Patent Office, successfully conducted 113 awareness events nationwide as part of the National Intellectual Property Awareness Mission (NIPAM) 2.0 in 2024. This initiative, launched by the Government of India, seeks to enhance understanding of Intellectual Property (IP) and its role in fostering innovation and national progress.

The year-long campaign extended to all 26 states, with a particular focus on Tier 2 and Tier 3 cities, including remote areas like Leh-Ladakh, Andaman & Nicobar Islands, and Lakshadweep. Over 10,000 participants, including students from Institutions of National Importance such as 12 IITs, 5 NITs, 3 IISERs, and 15 schools, benefitted from the initiative.

A grand online valedictory session on January 14, 2024, marked the culmination of this effort. The session featured notable dignitaries, including Prof. Unnat P. Pandit, Controller General of Patents & Trademarks, and Dr. Raghavender GR, Senior Consultant, DPIIT.

Alongside CSIR-NCL Director Dr. Ashish Lele, they emphasized the importance of IP in achieving Sustainable Development Goals (SDGs) and leveraging technological innovations for societal benefit.

In response to growing interest, a follow-up session titled ‘Careers in IP’ was also conducted.

This session featured insights from renowned experts, including Rajneesh Kumar (BITS Pilani), Shweta Uttam (AIC-SEED IISER Pune), Dr. Shikha Rastogi (CSIR), and Dr. Vinita Jindal (DBT-BIRAC).

The session, moderated by Dr. Nitin Tewari, Head of CSIR-NCL's Intellectual Property Group, explored career prospects, challenges, and required skills in the dynamic field of IP.

Through its efforts under NIPAM 2.0, CSIR-NCL continues to demonstrate its commitment to fostering a culture of innovation and intellectual property awareness in India.

Published in:
Thebridgechronicle

Science and Technology Minister Dr. Jitendra Singh dedicates India's 1st of its kind CSIR Innovation complex in Mumbai

CSIR

17th January , 2025

Science and Technology Minister Dr. Jitendra Singh dedicated India's 1st of its kind CSIR Innovation complex through virtual mode in Mumbai today.

Union Minister of State (Independent Charge) for Science and Technology, Minister of State (I/C) for Earth Sciences, Minister of State in the Prime Minister's Office, Department of Atomic Energy, Department of Space, and Personnel, Public Grievances and Pensions, Dr. Jitendra Singh credited Prime Minister Shri Narendra Modi for his vision enabling India to emerge as a global hub for start-ups and innovation. He said the inauguration of this complex is another landmark step.

Dr. Singh shared pride that we have third-largest start-up ecosystem in the world, with over 100 unicorns that stand as testaments to India's entrepreneurial spirit. He said "This remarkable growth is a reflection of the transformative initiatives and policies introduced by our government to empower the youth and drive economic self-reliance."

The science and technology Minister lauded CSIR and said that it has been playing a

significant role in the scientific and technological progress of the country by addressing national needs through its innovative research, industrial and societal partnerships, entrepreneurship, capacity building, and policy formulation. In order to boost innovation, industry collaboration and employment generation the 6 memorandum of association signed between CSIR and 6 prestigious institutes such as IIT Bombay, icreate, NRDC . Strengthen startups 50 technology transfer took place from CSIR institutes to startups, Msme's and institutions.

Dr. Singh remarked that CSIR-IC Mumbai is a state-of-the-art innovation-cum-incubation facility with high-end scientific infrastructure and expertise, designed to foster critical translational unmet needs (lab-to-regulator and regulator-to-industry domains) for start-ups, MSMEs and CSIR labs and to catalyze faster tech-transfer.

He highlighted that the Ready-to-move world-class incubation labs and IP/ business development support to innovative start-ups, companies partnering with CSIR labs, MSMEs, deep-tech companies from India and abroad, public-funded research institutions, and CSIR labs will further strengthen our innovation capacity.

He expressed his confidence that the IC-Mumbai will be used to strengthen the business development and tech-transfer activities of CSIR labs, leveraging the unique opportunities offered by Mumbai. This will serve as a hub for the other incubators operating within the CSIR Labs.

The IC Mumbai, spread over nine floors, is equipped with 24 "ready-to-move" incubation labs and furnished office/ networking spaces for innovative start-ups, MSMEs and industry and CSIR labs. He underscores that facilities like these embody the spirit of collaboration, innovation, and inclusivity that define our approach to nation-building.

Dr. N Kalaiselvi shared that not just in India but CSIR is collaborating internationally with 4 countries namely Germany, Norway, Switzerland etc. She called it shaping of decadal dream

into reality. Crediting her predecessors. She also remarked the Purple revolution as novel one reflecting dedication towards indigenous technologies. Dr. Kalaiselvi informed that every year 10-15 technologies are developed by CSIR which are globally appreciated. She informed that currently 5 national highways are using steel slag technology developed by CSIR.

Referring to India's indigenization process she recalled the development of India's indigenous Paracetamol. Another development is the zero liquid discharge plant which is 1st of its kind in India. She emphasized on 'Aatmanirbhar' and 'self reliance' to be the way forward for making India Viksit Bharat @2047.

Dr. V.K. Paul , member NITI Aayog recalled the untiring efforts of CSIR team during pandemic. He termed them as Covid warriors. He categorically mentioned CSIR for developing CRISPR diagnostic test - Being 1st in the World. Development of Oxygen concentrators and sending it to every remote corner of the country.

Dr.V.K Saraswat, member, NITI Aayog adviced to take innovation to industry rather than calling industry to innovation. He said we develop everything in a cost-effective manner and we should leverage this to our advantage. Dr. Ram Vishwakarma who has a lion shre in bringing this complex into reality informed that complex houses 24 labs of 500 sq. ft. each. 24 office-spaces for startups along with 6 conference rooms and lounges.

Published in:

Pib

Bainguinim waste treatment plant will be reality: Babush

CSIR-NEERI

16th January , 2025

Stating that all the processes required for setting up of garbage treatment plant at Bainguinim in Old Goa have been completed, Minister for Waste Management Atanasio 'Babush' Monserrate on Wednesday said a fresh tender for the same will be floated soon. "Plant work shall start before August 2025," Monserrate said and added that the garbage treatment plant will benefit the entire Tiswadi taluka.

Soon after the announcement was made by Monserrate, BJP MLA from Cumbarjua Rajesh Faldessai challenged the minister to start work on the plant in his current tenure.

Monseratte told media that the process for floating a revised tender for setting up of the Bainguinim garbage treatment plant has been completed following the clearance granted by the Supreme Court. The minister also claimed that there is no single issue as far as the Sonsodo dump yard is concerned.

Stating that he will not allow Monserrate to start work on the Bainguinim garbage treatment plant, Faldessai said, "There are residential complexes, a muth, hospital and schools where the site for setting up of the garbage treatment plant has been identified. The plant will be harmful to the people and hence, I strongly oppose it."

The government had proposed an integrated solid waste management facility with a capacity of 100 TPD at Bainguinim.The facility was proposed to cater to the central zone of Goa that is Tiswadi and the neighbouring taluka. This was done to handle the increasing waste generated in the talukas of Tiswadi and Ponda due to the rapid urbanisation and development.

The departments of Science and Technology and Waste Management have already notified 1.7 lakh square metres of land for setting up the project.

Council of Scientific & Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur has carried out the Rapid Environmental Impact Assessment for the project and in accordance with Environmental Impact Assessment (EIA), the detailed project report for the same was readied.

Public hearing for the facility at Bainguinim was conducted on July 28, 2019 and Environmental Clearance (EC) was granted for the project by Goa State Environment Impact Assessment Authority on January 6, 2020.

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Navhindtimes

Scientists use glass tech to take on global warming

CSIR-CGCRI

16th January , 2025

A glass that can block infrared rays without obstructing light and, in turn, reduce heat by 40%: This innovation by Central Glass and Ceramic Research Institute, India's only glass science institute, will go a long way in fighting climate change, say experts.

Apart from the infrared-blocking glass, CGCRI has also created a radiation-resistant glass, used in atomic energy reactors, which ensures visibility while shielding deadly radiation. "From ‘space-grade optical glass' to radiation-shielding glass, we truly are in the glass age," said Sitendu Mandal, chief scientist of speciality glass division at CGCRI, which will host the International Congress on Glass (ICG'25) at Biswa Bangla Convention Centre from Jan 20 to 24. Mandal, also the president of the meet, added, "Glass is a critical material for sustainable development, contributing to 11 of the 17 UN sustainable development goals." The UN had declared ‘2022' as ‘International Year of Glass', stressing its transformative role in addressing climate change and other global challenges.

The conference, to be inaugurated by Union MoS for science & technology and earth sciences Jitendra Singh, will be a platform for exchanging ideas and addressing challenges in glass science, bringing together 550 delegates, including 150 foreign participants from 20 countries. It will include 11 plenary speakers, 22 keynote speakers, 94 invited talks, 140 poster presentations and 111 contributory presentations, involving researchers, academics, industry leaders and students who will explore innovations and foster collaborations. The event, clinched by a single vote over Japan at International Commission of Glass meeting in Boston, marks a historic moment for CGCRI, which last hosted it in 1986.

"Glass is 100 times stronger than steel, yet fragile due to its amorphous structure with atomic gaps. By closing these gaps with ceramic molecules, we've halved the thickness of bulletproof glass, making armoured vehicles lighter, more fuel-efficient and faster," said Atiar Rahaman

Mollah, senior principal scientist at CGCRI and conference secretary, pointing out the institute's commitment to marrying innovation with sustainability.

CGCRI aims to attract industries to the region, easing tech transfer from lab to production scale. "Many of our innovations are ready for industrial application," a scientist said. The proximity of industries to the research institute is expected to accelerate the commercial success of the innovations.

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Times of India

Indian Institute of Metals Hosts Seminar on Screening and Sizing

CSIR-NML

16th January , 2025

The Indian Institute of Metals (IIM) Jamshedpur Chapter, in collaboration with Tata Steel, CSIR-NML, and NIT Jamshedpur, inaugurated the international seminar on Screening and Sizing (i3S) at Hotel Alcor on January 16, 2025. The seminar, chaired by Dr. Siddharatha Misra of Tata Steel, aims to enhance efficiency in mineral processing, promoting sustainable practices for a greener future. Delegates from global institutions and industries are sharing insights on transforming low-grade ores into valuable resources.

Expert Participation and Insights

The event has attracted prominent speakers, including Dr. Subodh Pandey, VP at Tata Steel, and Professor B K Mishra from IIT Bhubaneswar. Discussions emphasized the critical role of screening and sizing in modern steel production and waste management. Experts from leading institutes like Chalmers University, CSIRO Australia, and premier Indian IITs presented groundbreaking research, alongside representatives from companies like Sandvik, Metso, and FLSmidth.

Innovations and Demonstrations

Eight stalls by Original Equipment Manufacturers (OEMs) showcased cutting-edge technologies, offering hands-on experiences for participants. Additionally, students from top institutes displayed 11 posters highlighting advancements in mineral processing. The seminar stands as a milestone for the mineral engineering sector, fostering global collaboration and innovation in sustainable mineral practices.

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Townpost

No bacteria, no virus, no disease behind Budhal deaths: Government

CSIR

16th January , 2025

In a startling revelation, the government announced today that no microbe—bacteria, virus, or otherwise—has been identified as the cause of the 14 deaths reported over the past month in Budhal village, Rajouri. The exact cause of the fatalities is suspected to be a neurotoxin, the nature and source of which is being investigated.

Speaking to media persons today, Minister for Health and Medical Education Sakina Masood said that all the samples taken from the bodies of the victims of the cluster deaths as well as from their surroundings were found to be negative for microbes. The samples were studied at various reputed institutes: PGIMER (PGI Chandigarh), National Institute of Virology (NIV), Council of Scientific & Industrial Research CSIR (CSIR), National Center for Disease Control (NCDC) and other labs. “These were healthy individuals with no pre-existing disease, two were adults and the other were children, and their samples were found to have no kind of virus or bacteria that could have caused their deaths,” she said.

The 14 deaths in three different but related families have sent shock waves in J&K. The deaths were suspected to have ‘some epidemiological linkage’. Although no fatal disease-causing microbe was found in the studied samples, Masood confirmed the discovery of neurotoxins during investigations.

Neurotoxins are substances that disrupt the normal functioning of the nervous system by damaging nerve cells or interfering with their communication. They could originate from snake venom, bacterial toxins, or poisonous plants, as well as from environmental pollutants such as heavy metals and pesticides. Neurotoxins can cause symptoms ranging from numbness and muscle weakness to seizures, respiratory failure, or paralysis, depending on the type and level of exposure. The Budhal victims had been admitted for fever, vomiting, dehydration, sweating and episodic loss of consciousness. Earlier on Tuesday, J&K Chief Secretary

convened a meeting and stressed the importance of close collaboration between the Health and Police Departments to analyze reports from reputed microbiology institutions of the country and uncover the root causes of the deaths. He instructed the Police Department to leverage all available resources to aid the investigation. Similarly, the Health Department was tasked with thoroughly reviewing the reports to extract actionable insights. He expressed confidence that these reports would provide enough information to conclude the investigation and pinpoint the causes of the fatalities in the affected village.

A senior health official urging anonymity told Greater Kashmir that the latest victim's family had attended a congregational meal at the residence of the first victim family days before they started exhibiting symptoms. The first victim's family, he said, had a congregational meal event two days before they fell ill. He said the department had imposed a ban on congregational meals in the area till further notice. He said the victims could have consumed a poisonous substance, accidentally or through foul play. "We will find out very soon," he said.

Meanwhile, Sakeena Itoo also expressed her deepest condolences to the families of the deceased and assured the public that the government is treating this matter with the utmost urgency and seriousness. "The well-being of our citizens is our top priority and we will leave no stone unturned in uncovering the root cause behind these tragic deaths", the Minister maintained.

She appealed to the public to remain calm and extend full support to the district administration during the investigation being carried out to ascertain the actual cause of death.

Published in:
Greaterkashmir

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