

# CSIR IN MEDIA



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भारत का नवाचार इंजन

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**NEWS BULLETIN**

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## CCMB inaugurates PM Bhargava auditorium on occasion of 37th Foundation Day

CSIR-CCMB

25<sup>th</sup> November , 2024

The Centre for Cellular and Molecular Biology (CCMB) inaugurated the PM Bhargava auditorium, a day before its 37th Foundation Day. Named after the institute's Founder Director, Dr Pushpa Mittra Bhargava, renowned for his vision of how science should integrate with society, the auditorium is the first one for CCMB to have on its campus. Dr N Kalaiselvi, Director-General, Council of Scientific and Industrial



Research (CSIR), who was the Guest of Honor, inaugurated the auditorium complex, which is a three-floored complex with a 300-seater auditorium, a 100-seater lecture hall and 2 smaller 25-seater lecture halls.

Alluding to the many research institutes and Osmania University in the vicinity of CCMB, Dr Kalaiselvi said, "Hyderabad should consider naming this street as the Science Corridor of Hyderabad. An auditorium complex like this is an asset for the entire community."

Dr Kalaiselvi was joined by Dr D Srinivasa Reddy and Dr Prakash Kumar, Directors, CSIR-Indian Institute of Chemical Technology and CSIR-National Geophysical Research Institute, Hyderabad. Senior scientists and Heads of CSIR laboratories opined that the auditorium adds to the scientific infrastructure of the city, and augments the possibilities of the kinds of programs that the CSIR labs and other research institutes in the city can consider hosting.

The first events to be hosted in the auditorium included a CCMB-themed art exhibition by Urban Sketchers Hyderabad and a book discussion with Dr Dinesh C Sharma on his new book,



Beyond Biryani: The Making of a Globalized Hyderabad. “Hyderabad is a city with rich scientific heritage and has one of the fastest growing innovation ecosystems in the country. At CCMB itself, the number of conferences, skill development and outreach programs have increased manifold. We hope that our auditorium becomes an active space for discussing cutting-edge science and technology for CCMB and the bigger science community of the city,” remarked Dr Vinay K Nandicoori, Director, CCMB.



## CSIR-NIIST director Anandharamakrishnan to get Tata Transformation Prize

CSIR-NIIST

25<sup>th</sup> November , 2024

C Anandharamakrishnan, agricultural scientist and Director of the Council for Scientific and Industrial Research (CSIR) National Institute for Interdisciplinary Science and Technology (NIIST), has been selected for this year's Tata Transformation Prize, the institute said here on Monday. The award is jointly instituted by Tata Sons and the New York Academy of Sciences.



The Tata Transformation Prize recognises outstanding scientists working on pioneering technologies in the fields of food security, sustainability, and healthcare, a release said. A pioneer in food engineering research, Anandharamakrishnan's work towards the development of fortified rice has the potential of making a far-reaching impact in addressing the dual challenges of providing a vital nutritional boost and a healthier diet to millions, the New York Academy of Sciences noted while announcing the award. Award winners are selected by a confidential jury, independently chosen by the New York Academy of Sciences, comprising experts from academia, industry and government, it stated. Anandharamakrishnan has also served as the Chairman and Convener of the Capacity Building and Research initiative for the Prime Minister's Formalisation of Micro Food Processing Enterprises Scheme, a project under the Ministry of Food Processing Industries (MoFPI), the release said. (Only the headline and picture of this report may have been reworked by the Business Standard staff; the rest of the content is auto-generated from a syndicated feed.)

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[Business Standard](#)



## NML Jamshedpur celebrates 75 Years of Excellence

CSIR-NML

25<sup>th</sup> November , 2024

The CSIR-National Metallurgical Laboratory (NML), Jamshedpur, has completed an illustrious journey of 75 years, establishing itself as a global leader in metallurgical and materials research. Since its foundation stone was laid by Hon'ble Sri C. Rajagopalachari on November 21, 1946, and its formal inauguration by Pandit Jawaharlal Nehru on November 26, 1950, the laboratory has remained committed to innovation and excellence in the fields of minerals, metals, and advanced materials.

Speaking at the inauguration, Nehru described the laboratory as being established “in a spirit of hope and in a spirit of faith in the future.” These words resonate as the laboratory continues to drive scientific and industrial growth in India.

Over the years, CSIR-NML has diversified its research and development activities through its four R&D divisions and four support divisions. The laboratory has built strong alliances with premier research institutes both in India and abroad, fostering innovation in the minerals and metallurgical sector. Its focus spans across various domains, including: Mineral Processing and Engineering – Research in coal and iron ore, petrography, and pilot-scale studies.

Metal Extraction– Expertise in extractive metallurgy, hydrometallurgy, Applied Chemistry – Advancements in water and surface chemistry, alongside chemical analysis. Materials Engineering – Development of advanced alloys, materials processing, and metal forming. Energy and Environment– Emphasis on waste utilization, recycling, and pollution mitigation. NML is also recognized for developing certified reference materials, setting benchmarks for raw materials, metals, alloys, and spectrographic standards. Beyond research, CSIR-NML has undertaken numerous social initiatives that demonstrate its commitment to community development. Some notable programs include: School-NML Interactive Program – Introducing students to the wonders of science.



Teacher-CSIR NML Interactive Program HNIP)– Empowering educators with scientific resources.

Village Adoption Projects– Promoting sanitation, health, education, and employment generation. Vocational Training– Providing skill development opportunities for youth. JIGYASA Program – In partnership with Kendriya Vidyalaya Sangathan, this initiative seeks to inspire scientific curiosity among schoolchildren.

As CSIR-NML celebrates 75 years, its focus remains unwavering on delivering cutting-edge solutions to meet the demands of the metallurgical and materials science sectors. With its state-of-the-art facilities and a dedicated team of scientists and engineers, the laboratory is poised to continue its legacy of excellence and innovation.



## IIIM celebrates Janjatiya Gourav Divas

CSIR-IIIM

25<sup>th</sup> November , 2024

The CSIR-Indian Institute of Integrative Medicine, Jammu, has proudly celebrated the Janjatiya Gourav Divas here today. As part of the celebrations, the institute organized an educational tour for about 60 tribal students drawn from the various divisions of Jammu region. The students were exposed to various scientific activities at the institute, providing them with a real-time, hands-on experience in basic research laboratories.



During the event, lectures on the scientific and career progressions were also delivered by Dr. Saurabh Saran, Principal Scientist and Dr. Deepika Singh, Principal Scientist and Head, QMI.

As Keynote speaker, Dr Javaid Rahi, a noted tribal scholar, explained the genealogy and development of tribal culture and societies through the ages. He emphasized the importance of preserving indigenous ways of life and culture, encouraging students to take pride in their identity and achieve their true potential. He also exhorted the students to preserve the traditional knowledge available within the tribal groups so that the coming generations are not deprived of this vast knowledge base.

On this occasion, Dr Zabeer Ahmed, Director of CSIR-IIIM, welcomed the tribal students and briefed them about the institute's mandate and activities, emphasizing the importance of their visit for gaining knowledge and awareness.

He hoped that today shall be the momentous and memorable day for all the students who



visited the campus and learnt about the various scientific activities being undertaken for the larger good and benefits of the society. He expressed hope that from today's batch a few students would have developed some liking for science and may consider it as their future career.

Later in the evening, an impressive cultural program showcasing the rich tribal traditions and folk culture of J&K was also held. The visiting students were felicitated with mementos and certificates for their participation in the event by Dr. Zabeer Ahmed, Director, CSIR-IIIM, Jammu, Vikram Singh, Senior Controller of Administration & Er. Abdul Rahim, Chief Scientist, CSIR-IIIM. The programme was coordinated by Abhisek Gupta, Akhil Verma, Vishal Kunyal & Kajol Sharma.

Rajesh Gupta, Administrative Officer, presented the formal vote of thanks and encouraged the young students to prioritize education for a better future and societal upliftment.



## NGRI discovers geothermal reservoir linked to springs

CSIR-NGRI

24<sup>th</sup> November , 2024

A potential new geothermal reservoir has been uncovered in eastern Ladakh by scientists from the city-based National Geophysical Research Institute (NGRI). Ladakh is known for hot springs in areas such as Nubra Valley, Panamik, Wanla, and Damchok. This discovery opens up the possibility of harnessing geothermal energy in the region, which could have noteworthy implications for sustainable energy development in Ladakh.

The research was conducted along the Ukdungle-Hanle-Koyul-Fukche profile in eastern Ladakh, focusing on both the geothermal potential and the tectonic evolution of the area. The NGRI team, using magnetotelluric (MT) surveys along a 40 km profile in the region, mapped the upper crustal structure and identified significant electrical resistivity variations. These findings pointed to a deep hot water aquifer, potentially linked to a widespread zone of partially molten rock beneath.

The Ladakh Himalaya, part of the India-Eurasia plate margin, was shaped by the collision of the Indian and Eurasian tectonic plates. The research revealed that a sizeable conductive zone exists approximately 4 km beneath the surface, which is connected to deeper conductive layers extending from southern Tibet to Ladakh. These layers, representing partially molten material, are believed to be the source of geothermal energy observed at the surface.

"This system of connected conductive zones implies the presence of a new, potentially persistent geothermal resource in eastern Ladakh," the researchers said in the study published in the journal *Physics of the Earth and Planetary Interiors*. The NGRI research team included scientists G Pavankumar, A Manglik, M Demudu Babu, Raj Sunil Kandregula and Akashdeep Barman.

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## Laghu Udyog Bharati organises MSME Sangamam 2024

CSIR

24<sup>th</sup> November , 2024

The Laghu Udyog Bharati (LUB) has signed up with Council of Scientific and Industrial Research (CSIR) and a majority of technology transfers are happening in Tamil Nadu.

At the MSME Sangamam 2024 organised by Laghu Udyog Bharati, its All India General Secretary, Om Prakash Gupta, said, “We have tied up with various organisations like CSIR. And in the last 60 days, we have signed 57 technologies with them and almost 25 more are in pipeline. And 50% of Transfer of Technology has happened from Tamil Nadu and majority are from women entrepreneurs.” According to data shared by Mr. Gupta, LUB has its presence in 27 States and 583 districts. It has 4,000 members, including 3,500 women entrepreneurs.

V. Anantha Nageswaran, Chief Economic Advisor to Government of India, delivered his special address through video and said: “The SME sector in India is hobbled by extensive regulations, compliance, inspection and regulatory regime still dominate and stifle the aspiration for growth. I’m also aware that even when companies think big or a successful entrepreneur thinks big he or she may not be allowed to grow because they are intimidated by the extent of regulatory compliance, which may become inevitable once they exceed a certain threshold.”

“That is why both policy makers and industry must think in very big terms,” he added.

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[The Hindu](#)



## From being led, India in a position to lead, says S& T Minister

CSIR

23<sup>rd</sup> November , 2024

Union Minister of State (Independent Charge) for Science and Technology; Earth Sciences and Minister of State for PMO, Department of Atomic Energy, Department of Space, Personnel, Public Grievances and Pensions, Dr. Jitendra Singh said here today that from being led, India is today in a position to lead others across the world and this is amply borne out by recent success

stories accomplished under PM Sh Narendra Modi including Space sector headway, Biotechnology Vaccine breakthroughs and CSIR Purple Revolution.

The Union Minister was addressing the 8th Convocation of "Academy of Scientific & Innovative Research", possibly the only one of its kind in India.

On the occasion, Dr Jitendra Singh presented Doctor of Science degrees to four renowned scientists - Dr. Raghunath A. Mashelkar, Prof. Samir K. Brahmachari, Prof. Suresh Bhargava and Dr. Thirumalachari Ramasami, during the 8th convocation of the Academy of Scientific and Innovative Research (AcSIR), recognizing their groundbreaking contributions to science and technology.

A celebrated figure in polymer science and engineering, Dr. Mashelkar was honoured for his pioneering research and exceptional leadership. Recognized as a trailblazer in genomics, Prof. Brahmachari was awarded for his work on repetitive DNA's role in health and disease. Prof. Bhargava received the honour for his groundbreaking contributions to chemical sciences and engineering. Dr. Ramasami was lauded for his seminal research in chromium chemistry, which





has led to innovative products and processes in academia and industry. Addressing graduating scholars, Dr. Jitendra Singh highlighted AcSIR's role in fostering interdisciplinary learning, promoting industry-academia collaboration, and driving India's ascent in global science and technology rankings. The Minister called the institution's futuristic academic approach a cornerstone for achieving Prime Minister Narendra Modi's vision of a "Viksit Bharat 2047."

The Minister commended AcSIR for ranking among the top 3% of global universities despite being a relatively young institution. He attributed this success to its innovative model, which blends diverse disciplines such as engineering, biosciences, and information sciences with emerging fields like medical research and agriculture.

"AcSIR is not just an academic institution; it's a torchbearer of a new academic culture in India," he said, adding that its partnerships with 82 institutions, including CSIR, ICMR, and DST, exemplify effective collaboration in research and development.

The Minister highlighted AcSIR's role in promoting India's burgeoning startup culture, particularly through its innovative Integrated PhD (iPhD) program. "iPhD links innovation, imagination, and industry right from the start of research journeys, ensuring sustainable startups," he said. He tied these efforts to India's meteoric rise in the global innovation ecosystem, moving from 81st to 40th in the Global Innovation Index under the Modi government.

Dr. Jitendra Singh also spotlighted success stories in emerging areas like space and biotechnology. India has progressed from a single-digit count of space startups to over 300, while the biotechnology sector now boasts nearly 9,000 startups, contributing significantly to the country's economy.

He celebrated the accomplishments of women in science, noting the historic appointment of CSIR's first woman Director General. "India's woman power has always been the foundation of great achievements, but it is now receiving the recognition it deserves," the Minister stated.



Dr. Jitendra Singh emphasized that AcSIR embodies the principles of the National Education Policy 2020, offering students unparalleled flexibility in their academic pursuits. He shared anecdotes of students combining unconventional subjects like biotechnology and economics, calling it a revolutionary step in Indian education.

He also linked AcSIR's mission to the government's futuristic policies, including the recent BioE3 Biotechnology policy and advancements in quantum technology. "India no longer waits to adopt global technologies; we are now leading their development," he declared.

AcSIR's collaborations with world-renowned institutions such as the University of Western Australia and AIST Japan were highlighted as benchmarks of its academic excellence. The Minister noted that these partnerships validate the global competitiveness of Indian science and education.

The convocation at AcSIR reflected India's growing scientific prowess and the government's commitment to fostering a knowledge-driven economy. By blending innovation, entrepreneurship, and academic excellence, institutions like AcSIR are not only transforming education but also shaping India's path to becoming a global leader in science and technology. Dr. Jitendra Singh's address underscored this vision, reinforcing the nation's ambition to achieve "Viksit Bharat 2047" and usher in an era of sustainable development and innovation.

The event witnessed the participation of eminent dignitaries, including Prof. Ajay Kumar Sood, Principal Scientific Advisor, Government of India; Prof. N. Kalaiselvi, Director General, CSIR & Secretary, DSIR; Prof. Rajiv Bahl, Director General, ICMR & Secretary, DHR and Prof. P. Balaram, Chancellor, AcSIR, who presided over the ceremony.



## NML Scientist, known for research advancing passenger safety and reducing vehicle weight and emissions, honored with Young Metallurgist Award by Ministry of Steel

CSIR-NML

22<sup>nd</sup> November , 2024

Dr. Biraj Kumar Sahoo, a Senior Scientist at the National Metallurgical Laboratory (NML), Jamshedpur, has been awarded with the prestigious 'Young Metallurgist (Metal Science) Award – 2023' under National Metallurgist Awards (NMA)-2023 by the Ministry of Steel, Government of India. The award was presented by the Union Minister of Heavy Industries and Steel H. D.



Kumaraswamy, in presence of Sajjan Jindal, Chairman JSW group of companies, Amarendu Prakash, Chairman SAIL, Prof. B. S. Murty, Director IIT-Hyderabad and other dignitaries.

The award was presented in IIM-ATM 2024 and NMA function at Bengaluru on 21st November 2024.

This recognition underscores his outstanding contributions to the field of metallurgy, particularly in steel development, materials processing, characterization, and metallurgical failure analysis.

Over the course of his illustrious career, Dr. Sahoo has contributed to over 40 R&D projects. His work has led to significant scientific advancements and the successful implementation across various industries, including steel, oil and gas, power plants, and manufacturing. He has actively collaborated with esteemed organizations such as ISRO, NMRL-DRDO, RDCIS-SAIL, the Indian Navy, and the Indian Air Force for various R&D projects.

Dr. Sahoo's research has resulted in 10 Indian patents, over 25 peer-reviewed publications, and



numerous accolades, including the “Nijhawan Award-2022,” “M S Khan Memorial Award 2023”. His innovative approach to steel design has led to the development of next-generation medium-Mn advanced high-strength steels, which offer exceptional strength and crashworthiness, thereby enhancing passenger safety while reducing vehicle weight and emissions.

Dr. Sahoo’s relentless pursuit of excellence and innovation has not only advanced the field of metallurgy but has also contributed significantly to India’s industrial and strategic sectors. His recognition as a Young Metallurgist is a testament to his dedication and impact, and he continues to inspire future generations of metallurgists with his pioneering work.



## CFTRI Announces 24 New Courses for 2023-24

CSIR-CFTRI

22<sup>nd</sup> November , 2024

CFTRI announces 24 new courses for year-long training under CSIR Integrated Skill Initiative, the courses are run encompassing all the major areas in food science and technology. Under the CSIR Integrated Skill Initiative, the CSIR-Central Food Technological Research Institute (CFTRI), Mysuru, has recently announced approximately 25 regular training programmes, skill development programmes, and short-term courses for this fiscal year that cover all the key areas of food science and technology.

The 24 course schedule for 2023–2024 is available on the institute's website ([www.cftri.res.in](http://www.cftri.res.in)). These courses are brief yet intense, jam-packed with lectures and practicals. The course instructors are experts in their respective fields of food science and technology.

The demonstrations and practical classes are conducted in the state-of-the-art laboratories and pilot plants of CSIR-CFTRI. Training includes theory and hands-on practical sessions on Food Safety Issues; Paddy and Rice Processing; Animal Cell Culture; Liquid Chromatography – Mass Spectrometry (LC -MS); Flour Milling Baking and Confectionery Technology; Fumigation and Pest management; Rodent management; Electrical Safety in Food Processing Industry; Molecular Biology; Post-Harvest Technologies for Fruits and Vegetables; Grain Processing; Spice processing; Sensory analysis; Probiotic Dairy Product Development; Food analysis; Food Packaging; and Edible Oil Extraction.

At the conclusion of the course, successful participants will get certificates. The short-term courses are well appreciated by students, academics, employed persons, and entrepreneurs who are unable to spare more time due to their brief duration and condensed, concentrated, and capsulated syllabus. In addition, these courses help unemployed youngsters or aspiring entrepreneurs launch start-up businesses centred on the food processing industry, according to a release.



The institute is a Training Partner (TP) for conducting Skill Development Programmes (SDPs) aligned with National Skill Development Corporation (NSDC) under Skill India Mission of Government of India for skills like Baking Technician/Operative (FIC/Q5005), Food Microbiologist (FIC/Q7603) and Spice Processing Technician (FIC/Q8502).

Academic institutions, government departments, industry and FPOs can contact CFTRI for custom-made programmes exclusively designed for their students/staff/sponsored-participants in the area of Food Processing. CSIR-CFTRI has trained nearly 2,800 personnel in 2022-23 under various training streams such as Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) Scheme, farmer-centric training programmes, SDPs aligned with NSDC and short-term courses, the release said.

These courses will be held from the third week of May 2023 onwards and end during the third week of January 2024 in different time intervals. The course calendar for the financial year 2023-24 has been announced. For more information and registration, [CLICK HERE](#).



## Telangana's Adivasi Farmers Embrace Apple Orchards in Komaram Bheem

CSIR-CCMB

22<sup>nd</sup> November , 2024

Farmers in Komaram Bheem Asifabad district, including from the Adivasi communities, are showing increasing interest in cultivating apples in the mandals of Kerameri, Wankidi, Tiryani, and Sirpur (U), thanks to the district's favourable climate.

Dubbed the "Kashmir of Telangana," the old Adilabad region experience cold weather during winter that supports the growth of apples. Apple trees require cold temperatures for sapling growth and flowering. Once flowering begins, it takes approximately 120 days for the apples to mature. Pruning typically starts in December, and the harvest begins in May.

The first crop of apples in Dhanora village, Kerameri mandal, is notable for its sweetness and vibrant red colour, drawing significant attention. Minimum temperature in the region drops to 3°C in December and remains below 6°C for many nights until February. In December 2017, Kerameri recorded 2.5°C.

A scientist from the Centre for Cellular and Molecular Biology (CCMB) stated that the weather and soil in Kerameri mandal are well-suited for apple farming. The area's natural features, including hillocks, forests, and perennial streams, further enhance its potential. Farmers are eager to explore apple cultivation if the state government provides support, including the free distribution of saplings. Currently, apple saplings, costing around ₹300 each, are sourced from Kashmir.

Some progressive farmers already succeeded in growing apple orchards. A farmer belonging to the backward community in Dhanora, Kendre Balaji, was recognised with the Farm Innovation Award by the ICAR-Agriculture Technology Application Research Institute, Hyderabad, in 2018. Balaji first planted 10 apple saplings in 2014, purchasing them for ₹50 each through an friend who was in the Army. The plants have now reached the flowering



stage. Balaji shared that CCMB scientists Veerabadhrarao and Ramesh Agarwal tested the soil in his fields and confirmed its suitability for apple cultivation. Since 2015, Balaji has planted 450 hybrid Hariman-99 apple trees, provided free of cost by CCMB, Hyderabad. The institute distributed a total of 4,000 apple saplings to interested farmers in the region. However, Balaji noted that apple plants' growth is hindered when intercropped with other plants. While he has harvested apples weighing around 150 grams, the ideal weight for commercial sale is approximately 200 grams.

An Adivasi farmer from Dhanora named Sidam Mahadu has cultivated 50 apple plants. Mahadu stated that many farmers are now willing to raise apple orchards if the government supplies free saplings and provides technical support.



## Ph.D awardees from CFTRI

### CSIR-CFTRI

22<sup>nd</sup> November , 2024

The following students, who carried out their research at CSIR-CFTRI this year between July 1 and Sept. 30, have been awarded Ph.D degrees from Academy of Scientific and Innovative Research (AcSIR): Sangeetha Sher Bahadur Singh – Thesis: trans-Ferulic acid and sugar beet pulp-phenolic extract as a potential activators of AMPK: Molecular mechanism and implications in amelioration of hyperglycemia; Supervisor: Dr. K. Neelakanteshwara Patil, Principal Scientist, Department of Microbiology & Fermentation Technology, CFTRI.

P. Sruthi – Thesis: Studies on Phenolic compounds from cashew nut (*Anacardium occidentale* L.) testa and its value addition; Supervisor: Dr. M. Madhava Naidu, Chief Scientist, Department of Plantation products, Spices and Flavour Technology, CFTRI.

Raghavakumari Ramesh Sunagar – Thesis: Impact of milling on phenolic profiles of browntop millet and its anti-diabetic potential; Supervisor: Dr. Y.N. Sreerama, Sr. Principal Scientist, Department of Grain Science and Technology, CFTRI. Sandesh Suresh – Thesis: Production and characterization of bio-diesel from fish discards; Supervisor: Dr. Tanaji Kudre, Principal Scientist, Department of Meat and Marine Science, CFTRI.

Sreevathsan – Thesis: Studies on ozonation for treatment of complex organic waste waters; Supervisor: Dr. Sandeep Mudliar, Chief Scientist, Department of Plant Cell Biotechnology, CFTRI. Anusha – Thesis: Anti-aging potential of mealworm (*Tenebrio molitor*) protein-enriched fruit and vegetable-based products in in-vitro and in-vivo models; Supervisor: Dr. P.S. Negi, Chief Scientist, Department of Fruits and Vegetable Technology, CFTRI.



## CSIR-CRRI to Host Conference on Use of Waste Materials in Road Construction

CSIR-CRRI

22<sup>nd</sup> November , 2024

CSIR-Central Road Research Institute (CSIR-CRRI) is set to organize a conference on "Use of Waste Materials in Road Construction" on 12th December 2024 at the bauma CONEXPO INDIA, India Expo Mart, Greater Noida.

The conference will delve into:

Session 1: Waste Materials in Granular Layers

Session 2: Utilization of Slag Aggregates

Session 3: Waste Materials in Bituminous Layers

The event will take place alongside the 7th edition of bauma CONEXPO INDIA, the country's leading exhibition for construction machinery, building material machines, mining equipment, and construction vehicles. The exhibition is organized in collaboration with the Indian Construction Equipment Manufacturers' Association (ICEMA) and the Builders Association of India (BAI), combining global expertise from bauma Munich and CONEXPO-CON/AGG North America.

Reserve your complimentary seat now: [bit.ly/3ZuMt9g](https://bit.ly/3ZuMt9g).

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## CCMB Hosts Indo-German Innovators' Connect Event

CSIR-CCMB

22<sup>nd</sup> November , 2024

The Atal Incubation Centre at the Centre for Cellular and Molecular Biology hosted the Innovators Connect Tandem, from November 14 to 19, inviting 28 Indo-German tandems on a single platform to exchange knowledge between innovators and entrepreneurs. The institute hosted seven Indo-German tandems by engaging them in a week-long immersion programme. The event was organised in collaboration with DWIH, German House for Research and Innovation, Delhi, and the DAAD, German Academic Exchange Service. IIITH and University of Hyderabad featured dynamic workshops on critical entrepreneurial topics.



## विद्यार्थियों ने किया सीमैप का भ्रमण

CSIR-CIMAP

22<sup>nd</sup> November , 2024

उच्च माध्यमिक विद्यालय कपकोट के 50 विद्यार्थियों ने अध्यापकों के साथ सीमैप शोध केंद्र पुरारा में भ्रमण किया। विद्यार्थियों को सीमैप भ्रमण के माध्यम से देश में विज्ञान के क्षेत्र में चल रहे शोध कार्य एवं नवाचारों से अवगत कराना था। भ्रमण के दौरान सभी विद्यार्थियों को सीएसआईआर की विज्ञान के क्षेत्र में उपलब्धियों से अवगत कराया गया। विद्यार्थियों को शोध केंद्र में औषधीय एवं सुगंध वाले पौधों की पहचान कराई गई, साथ ही चिकित्सा एवं इत्र उद्योग में प्रयोग होने वाले पौधों के गुणों को भी विस्तार से विद्यार्थियों को बताया गया। विद्यार्थियों को वरिष्ठ तकनीकी अधिकारी प्रवल पीएस वर्मा ने सीएसआईआर के समाज के लिए देश में किए जा रहे अनुसंधान के बारे में विस्तार से बताया, साथ ही विज्ञान के विद्यार्थियों को भविष्य में सीएसआईआर से जुड़ कर वैज्ञानिक बन कर देश को विकसित करने में योगदान देने की अपील भी की। भ्रमण के दौरान सभी विद्यार्थियों को गुलाब जल बनाने एवं हर्बल चाय बनाने की तकनीकी से भी अवगत कराया गया। इस दौरान राउमावि कपकोट की प्रधानाचार्य गीता उप्रेती, अध्यापक डॉ. विनोद मेहता, मनोज, रीमा गाड़िया एवं किशन राम आदि भी मौजूद रहे।



## IIT Bhilai's Common Research and Technology Development Hub receives Plaque of Honor at DSIR Conclave 2024

CSIR-IMMT

22<sup>nd</sup> November , 2024

The Common Research and Technology Development Hub (CRTDH) at IIT Bhilai was honoured with a Plaque of Honour at the Department of Scientific and Industrial Research (DSIR)-CRTDH Conclave-2024, which took place at CSIR-IMMT. The CRTDH at IIT Bhilai exemplifies a crucial partnership between DSIR and IIT Bhilai. This advanced facility aims to support chemical industry progress, particularly benefiting Micro, Small, and Medium Enterprises (MSMEs).



Led by IIT Bhilai Director Professor Rajiv Prakash, the centre provides technological solutions and innovative processes for various sectors, including chemical, pharmaceuticals, pigments, textile, dye and dye intermediates, metal, and mineral industries.

Dr Sanjib Banerjee, Associate Professor, Department of Chemistry, serves as the PI and Coordinator of the CRTDH at IIT Bhilai. The recognition was received during the DSIR-CRTDH Conclave-2024 at CSIR-IMMT (Institute of Minerals and Materials Technology) during November 13-14.

The facility focuses on supporting industries through specialised technological solutions addressing specific needs. Its services encompass effluent and waste treatment, process optimisation, and new chemical product development.

According to the IIT spokesperson, the hub provides testing services for intermediates,



products, and raw materials. Utilising IIT Bhilai's expertise and infrastructure, it serves as a comprehensive resource centre for the chemical sector, actively seeking partnerships with industry for collaborative research and development initiatives. The centre houses advanced analytical instruments that enable precise analysis and specialised chemical processes.



## CSIR-NIIST develops microbial solution for organic waste

CSIR-NIIST

21<sup>st</sup> November , 2024

In a breakthrough in bulk waste management, the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) developed a microbial consortium called 'Jaivam', which facilitates a clean and speedy composting process, besides producing high-quality compost for agricultural use. Jaivam is suited for both decentralised waste treatment units like household composting bins and bulk handling systems like the organic waste converters (OWCs) and centralised facilities like windrow composting.

The development of Jaivam and R&D initiatives by CSIR-NIIST on similar lines will help address challenges such as greenhouse gas emissions (methane and nitrous oxide) from bulk composting facilities and improve the compost quality through bio-augmentation, said C Anandharamakrishnan, director NIIST. This can also complement state govt efforts in addressing urban waste management challenges effectively, he said.

Jaivam was developed by a team of researchers led by Krishnakumar B in the environmental technology division at NIIST. The solid waste management rules mark aerobic composting and anaerobic digestion as two options for treating and managing organic waste. Corporations and municipalities lacking common organic waste treatment facilities often adopt decentralised approaches, including household-level aerobic composting units (bins).

Field trials of Jaivam have shown highly encouraging results. It can effectively reduce composting time to 15-20 days for municipal organic wastes, wastes from meat rendering units, and wastes from restaurants with high oil and fat content. Shortening the composting period will enable facilities, especially centralised ones, to handle more wastes efficiently.



## Science & Tech Ministry signs agreements under PACE programme

CSIR

21<sup>st</sup> November , 2024

The Ministry of Science & Technology on Thursday announced that it has signed agreements under the Patent Acquisition and Collaborative Research and Technology Development (PACE).

The PACE programme by the Department of Scientific & Industrial Research (DSIR) fosters collaborative research between Indian industries and R&D organisations, academic institutions, and universities. It emphasises innovative work and supports the development of new technologies focused on the commercialization of products and processes addressing unmet industrial needs.

The ministry notified the signing of two separate tripartite agreements with Devashish Polymers (DPPL), Mumbai and GPS Renewables, Bangalore, and Agarkar Research Institute (ARI), Pune.

The MoU with DPPL aims to develop compounded elastomers and evaluate their performance for diverse applications under this project. The GPS Renewables in collaboration with ARI seeks to scale up and conduct pilot trials for enhanced microbial methane production from agricultural residues using anaerobic fungi.

“The PACE programme represents a cornerstone of DSIR’s commitment to fostering innovation and collaborative research in India,” said Dr. N. Kalaiselvi, Secretary, DSIR & Director General, CSIR.

“Through this initiative, we aim to catalyse the development of new products, processes, and solutions that are not only technologically sound but also have a clear path leading to commercialisation,” Kalaiselvi added.



Kalaiselvi noted that the projects will help address pressing national challenges and contribute significantly to India's development goals. Kalaiselvi also underlined the critical role such projects play in fostering industry-academia partnerships to create sustainable solutions and drive the nation's progress in science, technology, and societal impact.

“DSIR remains committed to nurturing ideas that transform into impactful solutions, and the PACE programme is a testament to this mission. Together, we can drive sustainable industrial growth and technological self-reliance for India,” said Dr. Vipin Chandra Shukla, Scientist-G, & Head PACE.

The PACE programme encourages proposals targeting specific industrial sectors with practical applications. It supports projects demonstrating proof-of-concept to address significant unmet industrial needs, with a duration of one to three years.



## **CSIR Skill Coordinators' Conclave and Brainstorming on Future Skills at CSIR IMMT Bhubaneswar**

CSIR-IMMT, HRDC

21<sup>st</sup> November , 2024

CSIR-Human Resource Development Centre (HRDC), Ghaziabad (UP), the Training Unit of CSIR has been playing a significant role by periodically reviewing, monitoring, and evaluating the performance of the Initiative.

To deliberate upon the various issues related to the effective implementation of this Initiative, CSIR-HRDC is organizing the “CSIR Skill Coordinators' Conclave and Brainstorming on Future Skills” from 21-22 November 2024 at CSIR-IMMT, Bhubaneswar with active support from CSIR-Institute of Minerals and Materials Technology (IMMT).

Over 100 professionals are participating in the Conclave, including CSIR scientists, senior representatives from the Industry Associations, academicians, and students. The Conclave is expected to discuss the plan of action by participating labs for the future in order to make this Initiative, a grand success. CSIR also records its sincere thanks to all stakeholders for their continuous support for this national important initiative.

Speaking on this occasion Dr. Vinay Kumar, Sr. Principal Scientist at CSIR-HRDC, Ghaziabad, and Skill Nodal PI, stated, “This program aligns with initiatives like Skill India, bridging the gap between academic knowledge and industry needs. Since its launch in 2016, CSIR has provided hands-on training in fields like oceanography, geophysics, drug discovery, and biotechnology. The program focuses on entrepreneurship development and addressing societal challenges in human growth development. The second phase concludes in 2025, and we are prepared to enhance its success for the next phase.”

Dr. Abhishek Kumar, Principal Scientist, CSIR-Central Planning Directorate (CPD), expressed his gratitude to CSIR-IMMT for organizing this brainstorming session. He acknowledged the integrated skill development program launched in 2016, highlighting that



the entire team has successfully implemented and elevated it to new heights. He emphasized that the program offers opportunities for everyone, from dropouts to highly skilled individuals, to gain valuable knowledge, showcasing the strength and impact of the initiative.

Since its inception, CSIR has been sharing its research and skills through seminars, capacity building, and skill upgradation programs. In 2016, CSIR launched the CSIR Integrated Skill Initiative to centralize these efforts, offering high-end training in various industrial and service sectors. Over 1.50 lakh individuals have been skilled through more than 2,400 programs across India from April 2020 to March 2024.

Addressing the gathering Dr. T.S. Rana, Head, CSIR-HRDC, Ghaziabad, said, “Through our various initiatives, we have trained over 1.5 lakh trainees across different CSIR laboratories. CSIR plays a pivotal role in offering advanced skilling, reskilling, and upskilling in diverse domains. We are also in alignment with the Skill India mission of the Government of India. Even this program is featured on the Skill India digital portal of the Ministry of Skill Development and Entrepreneurship. Through this initiative, our goal is to maximize the potential and achieve excellence.”

Mr. Goutam Bhattacharya, CEO, Life Sciences Sector Skill Development Council (LSSSDC) stressed the need for industries to prioritize skills and integrate them into student curricula, noting that India’s global ranking in skilled manpower is below the top 50. He highlighted the importance of upskilling to keep pace with global advancements. Emphasizing CSIR’s focus on innovation and R&D, he expressed gratitude to CSIR-IMMT for prioritizing skill development and collaborating with industry. He also mentioned his pleasure in signing an MOU with CSIR Labs, which are already running programs and aiming for greater growth.

The initiative aligns with the Skill India Mission and is now integrated into the Skill India Digital Portal, enhancing employment and entrepreneurship opportunities for beneficiaries. The initiative focuses on equipping young minds with technological skills by exposing them to CSIR laboratories and addressing the technical gaps created by advanced technology. It



benefits a wide range of individuals, from school dropouts to farmers, ITI diploma holders, and graduates. To date, CSIR has trained over 1 lakh personnel, including special programs for rural citizens and women, covering areas like Biological, Chemical, Engineering, Physical, and Information Sciences. CSIR aims to train over 200,000 people in Phase-III (2025-2030).



## CSIR-NML Jamshedpur transfers PCB recycling technology to Novasensa

CSIR-NML

21<sup>st</sup> November , 2024

CSIR-National Metallurgical Laboratory (CSIR-NML), Jamshedpur, has transferred its advanced technology for recycling waste printed circuit boards (PCBs) to Novasensa Pvt. Ltd., New Delhi, on Thursday. This marks a significant step in addressing the growing e-waste crisis with an eco-friendly approach. The technology enables the recovery of valuable metals like gold, copper, and aluminum from PCBs while adhering to zero-waste principles, contributing to sustainable development and environmental conservation.



The process involves mechanical pre-treatment of waste PCBs followed by hydrometallurgical and electro-metallurgical techniques to extract high-purity metals and salts, with purity levels exceeding 99.99% for metals and 98.5% for salts. Developed by CSIR-NML's research team, the technology is cost-effective, environmentally friendly, and aligns with the principles of a circular economy.

The event was attended by CSIR-NML's Director, Dr. Sandip Ghosh Chowdhury, and a team of leading scientists, including Dr. Manis Kumar Jha, Dr. Sanjay Kumar, and Dr. Jhumki Hait, among others. Aseem Trivedi, Founder and CEO of Novasensa Pvt. Ltd., expressed enthusiasm for implementing this groundbreaking technology, emphasizing its potential to revolutionize e-waste management in India while conserving natural resources for future generations.

The growing volume of e-waste presents environmental and health challenges, often resulting



in the loss of valuable metals and contamination of soil and water. CSIR-NML's technology addresses these issues by providing a sustainable recycling solution, reducing pollution, and recovering critical materials.

Dr. Chowdhury highlighted the importance of such initiatives, stating that the transfer reinforces CSIR-NML's commitment to making India an e-waste-free society. The collaboration is expected to generate employment, foster startups, and encourage entrepreneurial ventures in the recycling sector. The scalable technology can also be adapted for small-scale and cottage industries, furthering its impact on economic and social development.

This partnership between CSIR-NML and Novasensa Pvt. Ltd. symbolizes a shared commitment to sustainability and innovation, offering a viable solution to the e-waste crisis while contributing to a greener and cleaner future.



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