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NEWS BULLETIN

21 TO 25 NOVEMBER 2023



Karnataka IT exports close to \$100 bn, Bengaluru Tech Summit begins on Wednesday

CSIR

25th November, 2023

IT exports from Karnataka are inching closer to the \$100 billion mark compared to \$91 billion in the 2022 fiscal, a significant milestone in the state's tech roadmap. Karnataka is home to over 5,500 IT/ITES companies, employing 18 lakh professionals directly and 55 lakh indirectly.

Karnataka's IT exports bodes well for the state ahead of the three-day flagship event -- Bengaluru Tech Summit 2023 – which begins on Wednesday. The theme for the 26th edition is Breaking Boundaries which sets the stage for a convergence of tech leaders, startups, investors, and research labs from 30 countries.

Bengaluru Tech Summit 2023 will feature a diverse spectrum, encompassing a multi-track conference on IT & electronics, deep tech, startups & biotech, international exhibition, Global Innovation Alliance, India-USA Tech Conclave, R&D-Lab2Market, STPI IT export awards, rural IT quiz, bio quiz and bio posters. Some of the key speakers include Dr R.A Mashelkar, former director general, Council of Scientific and Industrial Research (CSIR), Nobel laureate and American biologist Dr H Robert Horvitz; among others.

A fireside chat, 'Legend, Legacy & Leadership,' featuring Infosys founder NR Narayana Murthy in conversation with Nikhil Kamath, co-founder of Zerodha, is one of the highlights of the event. Other Indian leaders participating in the event include Wipro chairman Rishad Premji, Biocon executive chairperson Kiran Mazumdar-Shaw, Kris Gopalakrishnan, chairman, Vision Group on IT in Karnataka government Prashanth Prakash, chairman, Vision Group on Startups and founding partner of Accel Partners India among others.

The Karnataka government is accelerating its push for the Beyond Bengaluru initiative to encourage companies to expand its footprint outside the city leveraging other talent

ecosystems. "The entire world is looking at India and particularly Bengaluru," said IT minister Priyank Kharge said. "We are not incentivising proposals in Bengaluru, but encouraging companies to look at opportunities outside the city," he added. He also said the government will refresh and relaunch animation, visual effects, gaming, and comics (AVGC) and biotech policies.

The highlight of this year's Bengaluru Tech Summit is the Chandrayaan 3 ISRO industry pavilion. The pavilion not only showcases ISRO's achievements, but also emphasises the contributions of SMEs, startups, and the private sector that contributed to the success of the moon mission. A scale model of Chandrayaan 3 lander will be on display. Also, a geodesic dome, using AR/VR technology, an immersive experience is created to learn about lunar missions, space science, and technology behind Chandrayaan. The summit has over 75 sessions, 400 speakers, 350 startups, 600 exhibitors, and 20,000 business attendees.

Box: Even as the Centre is contemplating new regulations to combat the threat of deepfakes, Karnataka IT minister Priyank Kharge said, "The government's priorities are wrong. Deepfakes are a threat to democracy and to society. What is priority is misinformation and fake news. The Supreme Court judge said it's a problem, so has the Election Commission. Where are you (centre) doing it? You're doing nothing about the threat at your doorstep. Deepfake is a menace, and we should tackle it. Right now, it's an expensive thing. The most dangerous thing affecting our society is misinformation," he said.

The Minister addresses the CSIR-CBRI Technology Transfer Mela at Habitat Centre in New Delhi, where 75 building and construction technologies in one slot and transferred them to Industries

CSIR-CBRI

24th November , 2023



Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said, New Housing Technologies will shape the majestic mansion of India at 2047, when India will celebrate 100 years of its Independence.

Addressing the CSIR-CBRI Technology Transfer Mela in New Delhi, Dr Jitendra Singh said, Central Building Research Institute (CBRI) has developed world class and state-of-the-art building construction technologies, which are not only robust and climate and drought resilient, but also in tune with global environmental norms.

Dr Jitendra Singh said, the One-Week One Lab programme visualised and inaugurated by him last year to showcase the unique technologies of the each of 37 CSIR Labs across the country has resulted in positive outcomes as CSIR-CBRI showcased 75 building and construction technologies in one slot and transferred them to Industries. In coming days 108 such technologies will be made available to Industries for Safe, Sustainable and Affordable building construction.

Dr Jitendra Singh lauded the CBRI for becoming the mainstay in terms of technology provider to Prime Minister Narendra Modi's most ambitious and the most prioritised scheme Pradhan Mantri Awas Yojana (PMAY). The Minister reminded the august gathering that Shri Modi after becoming Prime Minister has promised that no Indian will live in Kuccha house and all the deserving beneficiaries will have a pucca roof with toilets and lighting facilities. He said that as a public representative it is gratifying to see the smile on the faces of poor beneficiaries residing in PMAY houses.

Dr Jitendra Singh also complimented CBRI for developing Foldable Salt Shelters, which is weather and fire resistant and said that it has huge social implications. He said, almost all the reforms and innovations and initiatives of Prime Minister Modi has societal underpinnings and aimed at "Ease of Living" for common man.

Dr Jitendra Singh said, this remarkable achievement is a testament to the dedication and expertise of the scientists and researchers at CSIR-CBRI, Roorkee and added that building technologies play an important role in shaping the lives of individuals and communities. He said, these technologies have the power to transform the living conditions of humans, increase sustainability, and improve the overall well-being of people. By bridging the gap between research institutions and industries, CSIR-CBRI Roorkee has taken a giant leap toward realizing the vision of affordable, sustainable, and innovative housing for all, the Minister added.

Dr Jitendra Singh said, "the challenges we face today in the housing sector are multifaceted, ranging from affordability and sustainability to disaster resilience and energy efficiency. However, with the expertise and knowledge we have here today, I am confident that we can overcome these challenges in the country and build a future where every person has access to safe and comfortable housing".

Dr Jitendra Singh urged all the industry leaders and representatives to adopt these technologies and harness their potential to bring positive change in the country. He said, by

incorporating these advancements into best practices, one can have the opportunity to not only increase competitive edge, but also make a significant contribution to the well-being of society.

Secretary DSIR and DG CSIR, Dr N. Kalaiselvi said in her address that through continuous research and development over the past 77 years, CSIR-CBRI Roorkee has emerged as a leading institute in the field of housing technology. She said, many advances made by the brilliant minds not only revolutionized the construction industry but also positively impacted the lives of countless individuals. Some of the notable technologies are under-reamed piles, waste to wealth, prefabricated housing, fire protection, wood without trees, protective coatings, and many more including those being transferred today, she added.

Director of CBRI Shri Pradeep Kumar said that it is a matter of great pleasure to mention that CSIR-CBRI has focused on projects of societal benefits and contributed extensively to “Housing for All” national Mission of Government of India for PMAY-G. The institute has developed rural housing Typology compendium “PAHAL” for the inclusive development of rural buildings.

Dr Jitendra Singh also released the Technology Compendium, a comprehensive guide to its various sustainable and affordable technologies in two volumes covering time-tested proven technologies vis-à-vis current advanced technologies developed in-house in the area of Building Science and Technology.

CSIR-IIIM celebrates Janjatiya Gaurav Diwas

CSIR-IIIM

24th November , 2023

CSIR-Indian Institute of Integrative Medicine, Jammu, a constituent of Council of Scientific and Industrial Research under Union Ministry of Science & Technology, Govt. of India Friday celebrated the Janjatiya Gaurav Diwas. An official spokesperson said as part of the celebrations, CSIR-IIIM organized the educational tour more than 75 tribal students from the districts of Jammu, Rajouri and Poonch.



He said during the event, the students were exposed to various scientific activities being carried out at the institute besides giving them a real-time hands-on experience of research laboratories. “The students were shown short movie documentaries on the important issues and subjects”.

Spokesperson further stated that an impressive programme was also held in the auditorium of institute which was attended by Dr. Musheer Ahmed Mirza, Director Tribal Affairs Deptt. J&K, Dr. Javaid Rahi, noted Gujjar scholar and Prof. Mushtaq Ahmed, professor in Centre for Molecular Biology, Central University of Jammu.

Speaking on the occasion, Dr. Zabeer Ahmed, Director of CSIR IIIM, welcomed the tribal students and briefed them about the mandate and the activities of the institute. He highlighted the importance of their visit and hoped that they will go back with much more knowledge and awareness after this visit.

Keynote speaker Dr. Javaid Rahi while addressing the students explained the genealogy and the development of Tribal Culture and societies through the ages. He explained finer nuances and the Importance of preserving the indigenous way of life and culture. He encouraged the students to take pride in their identity and to make all efforts to achieve their true potential.

Prof Mushtaq Ahmed, Prof Central University Jammu also called upon the students to broaden their horizons and not limit themselves to the traditional employment avenues only.

Dr. Musheer Ahmed, Director, Tribal Affairs Deptt., while speaking on the occasion, gave brief highlights of the various schemes and plans of the Government of J&K in promoting education and all round development of the tribal students.

While addressing the gathering he informed about the Eklavaya Residential Schools started by the Government of J&K to promote all round personality development of the students from remote areas.

Er. Abdul Rahim while presenting the vote of thanks encouraged the young students to study as education holds the key for a better future and the overall societal upliftment.

He expressed his hope that after today's visit, some of the young minds would be ignited and they will leave no stone unturned to achieve their dreams. Late in the evening, a mesmerizing cultural programme showcasing the rich tribal traditions and folk culture of J&K was held in which the visiting students also gave their performance.

‘CSIR empowers farmers, growers, promotes floriculture sector in UT’

CSIR-IIIM

24th November , 2023

CSIR IIIM Jammu, under the CSIR Floriculture Mission, conducted a two-day workshop on "Production and Scientific Crop Management of Commercial Cut Flowers" at CSIR (Branch) Srinagar. The event, held under the patronage of Dr. Zabeer Ahmad, Director CSIR IIIM, and Er. Abdul Rahim, Head CSIR IIIM Branch Srinagar, saw the participation of 70 individuals, including farmers, floritech entrepreneurs, florist traders, and Horticulture graduates from SKUAST Kashmir.



The workshop aimed to enhance knowledge and promote scientific practices in the cultivation of commercial cut flowers. Dr. Shahid Rasool, Nodal Scientist CSIR Floriculture Mission, Dr. Nasheeman Ashraf, Principal Scientist, CSIR IIIM, Dr. Imtiyaz T. Nazki, Professor and Head, Division of Floriculture and Landscape Architecture, SKUAST-K, and other experts were present at the workshop.

Dr. Khursheed Ahmad Bhat, Principal Scientist, CSIR-IIIM, highlighted the institute's role in farmer-oriented programs and initiatives in the Union Territory. Dr. Shahid Rasool provided an overview of the CSIR Floriculture Mission and its objective to promote the floriculture sector in Jammu and Kashmir.

Dr. Imtiyaz Nazki delivered a lecture on the scope and opportunities in commercial floriculture in the region. He discussed various upcoming schemes and initiatives aimed at the promotion and expansion of the floriculture sector for sustainable growth. The presentation covered diverse aspects of commercial floriculture, including nursery and seed production, cut

flowers, dry flowers, landscaping, turfing, and value addition. Tejinder Singh commended the efforts of the CSIR Floriculture Mission team in empowering farmers, growers, and promoting the floriculture sector in the UT. He highlighted the visible impact of the mission's initiatives in every district, emphasizing the economic returns achieved by farmers.

Technical presentations on the scientific production of commercially important crops like Gerbera, Lilium, Tulip, and Gladiolus were delivered by experts, including Dr. Markanday Singh from IARI and representatives from KF Biotech and Natural Blooms, Pune.

The workshop included an exposure visit to the Experimental Field of the Division of Floriculture and Landscape Architecture, providing on-farm training and demonstrations for crop production under protected conditions. Overall, the event aimed to equip participants with knowledge and skills to contribute to the growth of the floriculture sector in the region.

CSIR-NEERI's answer to sewage, water shortage: Two low-cost, wastewater treatment techniques

CSIR-NEERI

24th November , 2023

At a time when cities are grappling with perennial water shortage and increasing sewage load, city's CSIR-NEERI has developed two low-cost and energy-efficient wastewater treatment technologies to cut pollution at source and curtail ever-increasing burden on centralized sewage networks. One such technology, called the Upflow Compact Constructed Wetland (UCCW), can treat 1,000 to 3,000 litres of sewage in just 24 hours in a single tank as big as a domestic overhead tank.

The water thus recycled can be used for non-drinking purposes and reduce pressure on drinking water supply systems. NEERI director Dr Atul Vaidya said the first technology (UCCW) is affordable with low operation and maintenance cost while the second (HIM-STP) may be useful for upper Himalaya and military camps located at high altitude.

Dr Ritesh Vijay, senior principal scientist at the waste water technology division at Neeri, said that UCCW was commissioned on the NEERI campus in 2022. "The UCCW technology can be scaled up by increasing the tank size, laying pipelines and providing more space," he said. Principal scientist Dr Rima Biswas, who cultivated the bacteria for the last six years at the CSIR-NEERI lab, said that methaneogens are added in the tank's reactor as a catalyst to degrade the sewage because bacteria turns sluggish in low temperatures.

Dr Sudesh Kumar Yadav, director of CSIR-IHBT, said sewage treatment in the Indian Himalayan region is difficult, especially during winter when the temperature drops significantly. "The high influx of tourism after the opening of Atal tunnel has further increased the quantum of wastewater generation, thus putting additional stress on the fragile ecosystems of the region," he said.

Published in:

[Times of India](#)

Headquarters, Integrated Defence Staff & Council of Scientific and Industrial Research ink MoU on joint research and development in field of Defence Technology

CSIR

23rd November , 2023

A Memorandum of Understanding between the Headquarters, Integrated Defence Staff and the Council of Scientific and Industrial Research (CSIR) was signed on November 23, 2023 in New Delhi for technical collaboration and joint research and development in the field of Defence Technology.

The MoU was signed by Lt General JP Mathew, Chief of Integrated Defence Staff to the Chairman Chiefs of Staff Committee (CISC), Ministry of Defence (MoD) and Dr. N Kalaiselvi, Director General, CSIR & Secretary, Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology (MoST).

The MoU between the HQ IDS and CSIR aims to provide an umbrella framework for initiating collaborative interaction between CSIR Labs, HQ IDS and Armed Forces, namely Indian Army, Indian Navy and Indian Air Force, for enhancing scientific understanding of technologies related to defence and undertaking joint research and development in dual use technologies.

The HQ IDS and CSIR both share a common interest to undertake joint research and development in defence technologies for mutual benefit, in the true spirit of 'scientific cooperation in support of Indian Armed Forces'. This partnership will also accelerate the indigenisation efforts of Armed Forces for achieving 'Atma Nirbhar Bharat'.

Published in:

[Pib](https://pib.gov.in)

Effective strategies needed to contain effects of persistent organic pollutants, say experts

CSIR-NEERI, NIIST

23rd November , 2023

Experts have underscored the need for effective strategies to contain the long-lasting effects of persistent organic pollutants (POP).

They also called for an all-India mitigation project in this regard at a workshop on ‘Review and update of national strategies for persistent organic pollutants management’ held at the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST).

Sharad P. Kale, former scientist at Bhabha Atomic Research Centre, Mumbai, highlighted the need to consider waste management as an “individual responsibility.” CSIR-National Environmental Engineering Research Institute Principal Scientist A. Ramesh Kumar, stressed the need for stronger public awareness about POPs and the ways to reduce them.

CSIR-NIIST director C. Anandharamakrishnan presided. Kerala State Pollution Control Board Chairman K.P. Sudheer explained the toxic nature of POPs and their capacity to serve negative effects on a prolonged basis. This necessitated its mitigation at the national level.

Central Pollution Control Board (Bangalore Zonal Centre) Director J. Chandrababu, Sukumar Devotta, former director of CSIR-NEERI, CSIR- NIIST Head (Environmental Toxicology Division) C. Kesavachandran, Senior Scientist K.P. Prathish spoke.

The workshop was held as part of a project funded by Global Environment Facility-United Nations Environment Programme (GEF-UNEP) on the Review and Update of the NIP for the Stockholm Convention for POPs in India.

Published in:

[The Hindu](https://www.thehindu.com)

IIIM organises Global Bio India roadshow

CSIR-IIIM

21st November , 2023

IIIM BioNEST Bio-Incubation Centre under the aegis of CSIR-Indian Institute of Integrative Medicine, Jammu alongwith its key ecosystem partner, Biotechnology Industry Research Assistance Council (BIRAC), DBT, GoI today organised a one-day Global Bio-India Road Show in which more than 300 students drawn from different colleges of Jammu have participated.



A statement said that the whole event was conducted under the patronage of Dr Zabeer Ahmed, Director of CSIR-IIIM Jammu and chairman BioNEST Bioincubation Centre who also presided over the programme. Dr Chhaya Chauhan, Sr. Manager Incubation, BIRAC was a special guest while Dr Shreya Malik Domain Head – Biotech & Cleantech Vertical, SIIC, IIT-Kanpur and Akhileshwar Singh, Chartered Accountant were among the guest speakers for the technical session.

Dr Zabeer Ahmed, Director, CSIR-IIIM, in his presidential address, highlighted the need of innovation nurturing and entrepreneurship development in the UT of Jammu & Kashmir and shared with the audience how CSIR-IIIM is constantly working for the promotion of the startup ecosystem in the region.

He said that the institute is doing cutting-edge research to discover newer drugs for Cancer, Diabetes mellitus, Rheumatoid arthritis and Alzheimer besides running societal mission programmes and also mentioned a few achievements of CSIR-IIIM including purple revolution, phytopharmaceutical drug leads and other technologies produced by the institute.

He underscored the significant role of the incubator in creating awareness among the local community in Jammu & Kashmir via its roadshows, hackathons, city camps and similar initiatives. Here is the unique opportunity that CSIR-IIIM has only BioNEST incubator sanctioned by the Department of Biotechnology in the UT of J&K where the innovators and startups can find incubation support right from the lab. to market, he added.

Dr Chhaya Chauhan, Sr. Manager Incubation, BIRAC special guest for the event discussed the major initiatives taken by the BIRAC, Department of Biotechnology by organising Global Bio-India Road Show in all the 75 BioNEST Incubator across the country as the precursor events of the mega show which is going to be held at Bharat Mandapam, Pragati Maidan, New Delhi between 4th-6th December 2023 wherein a large number of startups from pan India will participate including 3000+ delegates, 500+ exhibitors from across the globe to connect the Indian Biotechnology ecosystem with the International ecosystem.

Take measures considering health hazards of residents due to air pollution, NGT to govt

CSIR-NPL

21st November, 2023

The National Green Tribunal has observed that the Delhi government's action plan to improve the worsening air quality in the national capital failed to provide any "concrete proposals" while asking authorities to take "best possible measures" to reduce pollution considering the serious health hazards faced by the residents especially asthmatic patients, elderly persons and pregnant women.

The Tribunal presided over by Chairperson Prakash Shrivastava said, "it is difficult to accept the stand of different authorities that they are taking all possible measures to control air pollution and improve the quality", pointing out the air quality index shows otherwise.

Further, the green court sought an action taken report within one week while considering the news report highlighting serious health hazards been faced by the residents of the different age groups and categories due to pollution.

"As per the said report especially asthmatic patient, elderly persons, pregnant women are facing complication and health risk. Considering this human health aspect the authorities are expected to take best possible measure so that air quality in the city improves," the tribunal said in the order.

The court will hear the matter again on November 29.

It was also took note of the Central Pollution Control Board' submission that only the measure relating to control of dust emission using dust suppressant have been found to be effective and that the pilot study for assessment of reducing air pollution in urban areas by using outdoor cleaning systems (Smog Tower) is under evaluation and that the draft report in this regard has been received from IIT Bombay.

The report is under review from group of expert from IIT Delhi, IIT Kanpur, CSIR, CSIR – NPL and Engineers India Ltd, the apex pollution body said.

Municipal Corporation of Delhi said it has carried out measures including mechanical road sweepers, sprinkling of water on road, prohibiting open burning and others to battle the pollution.

BITS Goa prof to help retrieve membranes from old tyres, prove utility to purify water

CSIR

21st November, 2023

Every year, approximately over one million tonnes of used tyres in India are either burned or dumped in landfills, posing a significant environmental threat. The leachate from these tires can contaminate groundwater. Now, an innovative and environmentally-friendly solution to recycle these scrap tyres has been proposed by a study by Sampatrao D Manjare and his research group from the department of chemical engineering at BITS Pilani K K Birla Goa campus.

Manjare's study is for the effective recovery and modification of carbon black from scrap tires.

This modified carbon black derivative is to be applied in the fabrication of membranes for water desalination and purification.

According to pre-studies conducted by the research team comprising Manjare, Chandresh Dwivedi, and Pranjali Gonde, the advanced heating approach to process scrap tyres results in reduced gas emissions and yields solid and liquid derivatives from the tyres. These derivatives can be reused in water purification processes.

As the study has larger societal benefits, the Council of Scientific & Industrial Research (CSIR) of the government of India has granted funding of Rs 27 lakh to prove the concept before largescale implementations.

The CSIR-funded project is set to be completed within three years,

"The improper disposal of waste tyres is a major concern in India. Several studies across the globe indicate that a majority of used tyres end up either in landfill sites or are illegally burned, releasing hazardous leachate in groundwater or harmful gases into the air, thus polluting the environment," said Manjare.

‘Primary goal is to recover carbon black from end-of-life tyres’

Currently, the most common method for processing used tyres is pyrolysis heating, which involves heating the tires in the absence of oxygen to produce gases, carbon residue, and oil. However, conventional pyrolysis is environmentally unfriendly and has been banned in many places, although it is still used illegally, Manjare said.

To find a sustainable alternative, Manjare and his research team are using advanced heating techniques, specifically fast pyrolysis, using advance heating.

“The primary goal of the research is to recover carbon black from end-of-life tyres using innovative heating methods and to modify its surface to enhance its suitability for membrane synthesis. The research involves detailed characterisation of the modified carbon. Subsequently, activated carbon-based membranes will be developed for water desalination and purification,” said Manjare.

“The research will focus on studying membrane morphology, physico-chemistry, transport, separation, and fouling behavior,” he said.

Pilot-scale testing of the membranes is also on the agenda. However, Manjare emphasised that this project is in the research phase and will need to undergo on-ground testing in the future.

BITS Goa prof to help retrieve membranes from old tyres, prove utility to purify water
Flow diagram of carbon black recovery from waste tyres and application in fabrication of membrane for water desalination

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