CSIR IN MEDIA

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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 IHBT Palampur distributes 1200 varieties of ornamental plants under CSIR-Floriculture Mission-II

CSIR-IHBT

31st August , 2023

CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur has 16 in 15 government schools of Haryana under CSIR-Floriculture Mission-II and Jigyasa program 1200 varieties of ornamental plants were distributed on August 29, 2023. These plants in school premises will be installed Saplings were distributed keeping in view the geographical features of the school area. Dr.

Sudesh Kumar Yadav, director of the institute said that under Floriculture Mission-II and the Jigyasa program, Beautification work is being done by planting saplings in government educational institutions. This will increase the beauty of the campus Along with this, a clean environment will also be maintained for the children. In addition to this, the students are exposed to horticulture activities and new

Identification of plant species can also be informed Dr. Bhavya Bhargava, Senior Scientist, CSIR-IHBT said that so far the institute has Successfully established flower gardens in more than 200 schools and institutions under Floriculture Mission-II Have done and these efforts will continue in the future. The teachers and other staff members of the schools took an active part in the occasion. as well as the javelin throw. Mr. Satish Chopra, father of Olympic and World Champion Mr. Neeraj Chopra in 2006 also participated in the plantation program and appreciated the work done by CSIR-IHBT.

Published in:

Himachalheadlines

Open Day and Skill Development Event during One Week One Lab programme at CSIR-CGCRI, Kolkata

CSIR-CMERI

30th August , 2023

In India, agriculture is the primary source of livelihood for nearly 55% of Indian population, feeding 1.3 billion people and contributing significantly to the country GDP. Tractors play a crucial role in increasing agricultural productivity by mechanization. Indian tractor industry has come a long way in terms of production capacity and technology in last few decades.

CSIR CMERI is having the long history in Design and development tractors of various ranges and capacities. Its journey starts with the very first indigenously developed SWARAJ Tractor in 1965, followed by 35hp sonalika tractor in 2000 and then Small diesel tractor of 12hp Krishishakti in 2009 for small and marginal farmers demand. To take the legacy to the next level CMERI started working with the advance technology in the tractor, in result this e-tractor has been developed. Traditionally tractors use diesel, thus contributing significantly to the environmental pollution. According to an estimate they consume about 7.4% of our country's annual diesel usage and account for 60% of total agricultural fuel usage. Also their PM2.5 and NOx emissions are likely to increase 4-5 times the current level in next two decades. Global carbon foot print reduction strategy necessitates rapid transition of this sector towards electrification. In COP26 summit held at Glasgow in the year 2021, India announced to work towards reducing the total projected carbon emissions by one billion tones

by the year 2030. Also target was kept to achieve Net Zero carbon emission by the year 2070. Therefore, electrification of tractors is a necessary step that aids our country in achieving these targets. Considering the need to further reduces the greenhouse gas emissions and the eventual scarce availability of fossil fuels shortly, electric tractors have been identified as a possible solution in the context of more sustainable farming. However, most of the commercial equipment consists of high-power machines, which are only feasible to large area Farming and poses a challenge for Indian marginal farmers having around 2 hectare of farming land or less and this small & marginal farmer consist of more than 80% of farmer community.

Addressing to this, CSIR-CMERI has indigenously designed and developed compact 100% Pure Electric Tractor named CSIR PRIMA ET11 mainly to cater small and marginal farmers of India.

Salient features of the developed CSIR PRIMA ET11 are as follows:

1) The first very important point that entire tractor has been designed and manufactured with indigenous components and technologies.

2) Since the main purpose of the tractor is to cater the demand of agriculture field application, it has been designed in such a way that its dynamics, weight distribution, transmission engagements, then lever and pedal position everything has been well designed and considered.

3) Another USP of the developed technology is that it Women friendly. For this we have given special attention in the ergonomics, for eg: All the lever, switches etc has been placed for easy approach to the women. Further to minimize the effort many mechanical system is being replaced with electronic switches for easy operations.

4) The farmers can charge the tractor using conventional home charging socket in 7 to 8 hours and operate the tractor for more than 4 hours at field. Otherwise, tractor can run more than 6 hours in case of normal Haulage operation. We have seen that the usual practice of farmer in India that they start their work from morning and at noon they usually take the rest and during this time they can charge their tractor so that theyr can again use it for their work

in the afternoon.

5) Coming to Transmission: The tractor is being designed with the robust and efficient transmission system by using the semi Synchronized type gearing system. The design helps to achieve the desired efficiency in min cost.

6) The tractor is equipped with best in class hydraulic with lifting capacity of 500 kg or more. It implies that tractor can lift implement required not only for field operation but also hauling operation. It is also to be mentioned that the tractor can tow 1.8-ton capacity trolley with a max speed of 25 kmph.

7) Its robust designed along with necessary covers and guards protects it from mud and waters.

8) Coming to electric aspects the battery we have chosen as the state of art Lithium ion battery with Prismatic cell confirmation. It has deep discharge capability for farming application and having a life of more than 3000 cycle.

9) The controller and the instrument cluster has been modified to suit the agriculture needs.

10) Another distinct feature, we have provided that there is a port called V2L i.e. vehicle to load, This means when the tractor is not in operation, it battery power can be utilized for other secondary application like pump and irrigation etc.

This first of it's kind electric tractor has been launced by Union Minister for Science and technology Dr. Jitendra Singh in our One Week One lab curtain raiser ceremony held at New Delhi in the presence of, Secretary, DSIR Dr. N Kalaiselvi and many other dignitaries. Also this impactful technology has been licensed to K N bioscience, Hyderabad based Company famous for its Kushal Tractor brand and many bioscience related development/product for take it to the ground level and mass production; we are hoping for its grand success. It is expected that this tractor CSIR PRIMA ET11 will create a breakthrough in sustainable agriculture while meeting ch the demands of small and marginal farmers in India. And thereby this development will trigger to lead India in the global tractor industry with revolutionary vision of "Make for the World"

Published in:

Pib

Oil, gas drilling puts residents of Godavari district at risk: Study

CSIR-NGRI

30th August , 2023

People living close to oil and gas drilling sites in East and West Godavari districts of Andhra Pradesh are at risk of health issues, including cancer, due to toxic concentrations of heavy metals in soil, according to a study by the National Geophysical Research Institute (NGRI), Hyderabad, and Academy of Scientific and Innovative Research (AcSIR), Ghaziabad.

The study, 'Spatial distribution, sources and health risk assessment of heavy metals in topsoil around oil and natural gas drilling sites, Andhra Pradesh, India,' revealed disconcerting levels of heavy metals arsenic, chromium, copper, nickel, lead, and zinc, in the soil near drilling sites. The study highlighted a persistent significant risk, especially due to high concentrations of arsenic, lead, and chromium. These heavy metals, often dubbed silent killers, pose a dual threat to villagers. The other probable source of contamination by heavy metals could be attributed to agriculture, the study stated. The Total Carcinogenic Risk (TCR) calculated for arsenic and chromium was found to be above the threshold value set by the US EPA (United States Environment Protection Agency). Non-carcinogenic risks due to lead and chromium were found to be higher as their hazard index value was above the recommended limit of one.

The study also highlighted the potential for heavy metals to leach into groundwater. "Villagers, unknowingly, could find themselves consuming a deadly cocktail, further exacerbating the health risks," the study stated. While the ingestion of heavy metal-contaminated water might result in severe health hazards, it can also cause non-carcinogenic health problems, including malfunction of internal organs, gastrointestinal dysfunction, renal dysfunction, neurological diseases, skin lesions, vascular damage, immune system malfunction and birth abnormalities, it said.

Published in:

Deccan Chronicle

Will conduct research on data sent by Chandrayaan 3, says NGRI scientist

CSIR-NGRI

29th August , 2023

The Principal Scientist of the National Geophysical Research Institute (NGRI), P. Senthil Kumar, said on Monday that using the data sent by Chandrayaan 3, the institute will conduct research on the minerals, mud, and rocks on moon. Participating in a function at the Salem Government Arts College at Kumarasamipatti, Mr. Senthil Kumar said research was being done on the solar system and moon, across the world. Through the photos and data sent by Chandrayaan 2, we are conducting research. Now the Chandrayaan 3 lander is taking images of the moon. Using the data, we are going to do research about minerals, mud, and rock on the moon surface, Mr. Senthil Kumar added.

Published in:

Bharattimes

CSIR-IICT transfer technology to convert PET bottles to private firm

CSIR-IICT

29th August , 2023

CSIR-Indian Institute of Chemical Technology (IICT) offering 'WOW' (Wealth out of Waste) technology from plastic waste has developed and transferred a process design for converting the PET bottles or Polyethylene Terephthalate (PET) bottles to safer 'phthalate free Dioctyl Terephthalate (DOTP)' plasticiser to Chandantara Dugar Group (CDG) Petchem Ltd., Hyderabad, to set up 6000 TPA plant at Medchal on Monday.

More than 70 million tonnes of PET bottles are manufactured worldwide every year and accumulation of PET waste has become a global pollution concern, highlighting the need for the urgent development of technologies to tackle it.

The 'DOPT-technology' mitigates the challenge of plastic waste management and provides a sustainable solution as it can be a replacement in the formulation and moulding of PVC in flexible products such as toys, upholstery, fabrics, pipes, flooring surfaces, gaskets, automotive parts, etc

The process design documents and reports were handed over to Chirag Dugar and Manoj Dugar of the private firm by IICT scientists led by Vineet Aniya in the presence of director D. Srinivasa Reddy and other senior scientists, said a press release.

Published in:
The Hindu

Tata Steel partners with CSIR-CIMFR to accelerate research and development in mining

CSIR-CIMFR

28th August , 2023

Tata Steel has signed a Memorandum of Understanding (MoU) with the Council of Scientific and Industrial Research-Central Institute of Mining and Fuel Research (CSIR-CIMFR) to accelerate research and development in mining. Through this MoU, Tata Steel and CSIR-CIMFR will identify potential areas of research and development in mining, including exploration, mining, and processing.

They will also collaborate on developing and delivering sustainable cutting-edge technologies for the mining industry. This partnership is a significant step for Tata Steel in its commitment to innovation and sustainability. It will help the company to develop new technologies that can improve the efficiency and sustainability of its mining operations.

“We are excited to partner with CSIR-CIMFR to accelerate research and development in mining. This partnership will help us to develop new technologies that can help us to mine more efficiently and sustainably,” said D B Sundara Ramam, vice-president (Raw Materials), Tata Steel. This partnership is a win-win for both Tata Steel and CSIR-CIMFR. It will help Tata Steel to develop new technologies that can improve its mining operations, while it will also help CSIR-CIMFR to gain access to Tata Steel’s expertise in the mining industry.

Published in:

Lagatar24

NML Jamshedpur: DST-Women Technology Park Program trainees get certificate

CSIR-NML

28th August , 2023

CSIR-National Metallurgical Laboratory (NML), Jamshedpur, in association with the National Institute of Advanced Manufacturing Technology (NIAMT), Ranchi, organized Job Oriented Training (JOT) programs on "3D printing, Basic Computer Software, Innovative product development, and Waste Management" for women. These training programs were organized as a part of the project "Women Technology Park (WTP) for Capacity Building and Entrepreneurship Development" sponsored by the Department of Science & Technology (DST), Government of India. The second and third batch of the 3-month training was over, and it was time to recognize the hard work and achievements of the participants. The trainees were handed over certificates during a program at CSIR-NML on August 28.

The training programs on "3D printing, Basic Computer Software, Innovative product development, and Waste Management" were an attempt of CSIR-NML and NIAMT to find ways to empower the women from the state of Jharkhand and to include the women workforce in the entrepreneurial ecosystem.

Dr Mita Tarafder, Chief Scientist and Head KRIT Division, CSIR-NML discussed product development activities and the necessity of skill training for women. She also discussed the importance of women in entrepreneurship roles.

Y Usha, Senior Scientist, Engineering Division, talked about the importance of design and quality of product and the training program related to product development.

Dr Animesh Jana, Senior Scientist, KRIT Division, discussed the skill training activities taken up by the CSIR-NML. He mentioned the significance of skill training in personal and professional development, empowerment, and overall well-being.

Roshan Kumar, Scientist, Engineering Division and Project Leader DST-WTP of CSIR-NML, expressed his thoughts about the importance of the learning process during this training program, and he also congratulated the participants for completing the training program.

Trainees also participated in the feedback session and expressed their opinions during this training program.

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Avenue Mail

CSIR-IHBT Palampur under CSIR Floriculture Mission-II distributed 2.15 lakh Chrysanthemum to farmers

CSIR-IHBT

27th August , 2023

CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur under CSIR Floriculture Mission-II distributed 2.15 lakh Chrysanthemum rooted cuttings to 23 farmers of Himachal Pradesh, Punjab, and Uttarakhand on 22 nd and 23 rd August 2023. In India, non-availability of the quality planting material is a major hurdle in the floriculture sector.

CSIR Floriculture Mission is a nationwide program being implemented in 22 states with an aim to enhance the income of farmers and develop entrepreneurship through high-value floriculture utilizing CSIR technologies. The CSIR-IHBT has been active in boosting the nation's floriculture business. The institute has standardized technologies for plant multiplication and cultivation of floriculture crops in open as well as protected environments.

Dr Sudesh Kumar Yadav, Director, CSIR-IHBT said that the disease-free quality planting material being distributed under the mission is helping in increasing the farmers' income. Dr. Bhavya Bhargava, Mission Nodal, CSIR-IHBT, said that this year the institute proposes to provide quality planting material for covering an area of 170 ha in five states. The benefited farmers from different states expressed their gratitude towards CSIR- Floriculture Mission and CSIR-IHBT for providing them the quality planting material.

Published in:

Himachalheadlines

CSIR's new plan to tackle air pollution

CSIR-NEERI

27th August , 2023

The CSIR's National Environmental Engineering Research Institute on Saturday said it will develop a grid-based mitigation strategy to tackle the air pollution problem in Delhi.

Presenting the plan during the India Clean Air Summit (ICAS) 2023 in Bengaluru, S K Goyal, Chief Scientist and Head, CSIR'NEERI, Delhi Zonal Centre, said: "We will develop a grid-based mitigation strategy, termed 'Local Area Management Plan' (LAMP), for each hotspot, for each season."

The 'one size fits all' approach has rarely worked for air pollution mitigation, he said, adding that LAMP will allow policymakers to devise tailored strategies for pollution control within their jurisdiction, aligning with the National Clean Air Programme (NCAP) goals.

Inspired by a tile-by-tile concept, the approach involves segmenting the entire NCR into a grid of tiles, each covering two sq km. These tiles will be closely monitored through a network of stationary and mobile sensors over two seasons.

Goyal emphasised the importance of hotspot-specific actions alongside the broader airshed approach to combatting pollution effectively.

Published in:
Newindianexpress

‘Bellada Parishe’ in Mandya on August 28

CSIR-CFTRI

26th August , 2023

In a first, Mandya, which is known for jaggery production being one of the largest sugarcane growers, is hosting a unique initiative ‘Bellada Parishe’ on Monday.

It is organised as part of the Millets’ Mela, an enterprise of the Ministry of Food Processing, Government of India, and the Department of Agriculture, Karnataka,

Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC), Karnataka Agribusiness Development Corporation (KABDC), district administration, and zilla panchayat, Mandya.

In the presence of Nirmalanandanatha Swami of Adichunchangiri Mutt, Minister for Agriculture N. Cheluvarayaswamy will inaugurate the event at Dr. Rajkumar Layout Grounds, near KSRTC depot on Monday at 10.30 a.m.

Bellada Parishe is providing a platform for producers and consumers as jaggery varieties, including organic jaggery, will be available under one roof.

A note from the joint director of agriculture, Mandya said farmers, entrepreneurs, farmer producer companies, SHGs, jaggery producers are expected to attend the event in big numbers to make use of the benefits of the programme. Millet growers have organised an exhibition.

Scientists from CSIR-CFTRI, NIFTEM, and IIMR will be providing scientific information at the event.

Nearly six to seven lakh tonnes of sugarcane produced in Mandya goes for jaggery making. Around one quintal of jaggery can be produced crushing one tonne of sugarcane. Mandya has

around 591 “alemanes” in the sugarcane producing areas. It is said that Mandya has the highest number of jaggery units in the State. Sugarcane is cultivated in 42,500 hectares and nearly 45 lakh tonnes of sugarcane is produced annually, according to the agriculture department.

The focus of ‘one district one product’ is on organic jaggery production for helping farmers improve their income besides increasing the chances of their product chosen for exports. The emphasis is also on making chemical-free jaggery.

Published in:
The Hindu

Pradhan calls for better collaboration between Industry, Academia to makes lives easier

CSIR-IMMT 26th August , 2023

There is a need for better collaboration between industry, academia, and research aimed at contributing to society and making lives easier, Union Education Minister Dharmendra Pradhan said. Speaking at the one-day research event at CSIR-IMMT jointly hosted by the Springer Nature and the Indian Ministry of Education, Pradhan said the India Research Conclave 2023 is not just an academic event.

It is a platform that builds dialogue, fosters collaboration and envisions a future grounded in innovation, inclusivity and ethical excellence for Indian researchers, he said. The event focused on bringing together government officials, policymakers, researchers, academics, students and start-up founders to discuss different aspects of the research landscape in India.

Dharmendra Pradhan was the Chief Guest at the event. He was accompanied by his Joint Secretary PK Banerjee, and the Minister of State for External Affairs and Education Rajkumar Ranjan Singh. The Union Minister, in his address said "The conclave marks the beginning of a nationwide learning, sharing and educating young researchers in the form of a national bus tour.

It is a unique space for budding researchers to learn about publishing opportunities, know about new ways of spreading their work on global platforms and to harness the full potential of research for nation building, he added. Renowned Indian academics, researchers and entrepreneurs actively discussed the importance of making research faster, more accessible, inclusive, ethical and innovative.

Steven Inchcoombe, President, Research Markets, Springer Nature said “Our mission is to advance science and research by meeting and serving the needs of researchers, their institutions and the wider research community.

This event, he said, is a testimony to our commitment towards supporting Indian research and researchers, and fostering national and international collaborations that will enable India's economic success. Managing Director of Springer Nature India Private Limited. Venkatesh Sarvasiddhi said "India is on the cusp of a major transformation over the next decade, with ambition, talent, and resources set to operate on the global stage.

Springer Nature will support the government to help create a hub for research and innovation in the country that will propel us to enhance research output from India," he said. The discussions at the event focused on the importance of Open Science and Open Research, the various opportunities available today to move research into reality and the innovative solutions that can help resolve the world's most urgent challenges.

CSIR-IMMT Bhubaneswar Director Dr. Ramanuj Narayan, said "Today, we are living in critical times where sound science needs to be valued and made available as soon as possible across the globe". He said it is equally important to support those who have innovative ideas and solutions and provide them with opportunities and platforms to bring their ideas to life.

Events like the India Research Conclave will help us to connect and collaborate with decision makers and researchers alike and will also provide researchers from different branches of science and technology a strategic direction for the future and realise initiatives like StartUp India and Atmanirbhar Bharat.", Narayan said Minister of state for External Affairs and Education Rajkumar Ranjan Singh launched Springer Nature's first Research Integrity Survey in India, along with a selection of few new academic books focusing on the Indian economy and the education landscape in the country.

Published in:
Uni india

20th Atma Ram Memorial Lecture delivered by Dr N. Kalaiselvi, Secretary DSIR and Director General, CSIR as part of 73rd Foundation Day Celebration of CSIR-CGCRI

CSIR-CGCRI

26th August , 2023



The One Week One Lab programme of CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata concluded with the 73rd Institute Foundation Day celebration on 26.08.2023. This occasion was marked with the 20th Atma Ram Memorial Lecture delivered by Dr (Mrs) N. Kalaiselvi, Secretary DSIR and Director General, CSIR, who was the Chief Guest. She spoke on "SDGs and S&T Opportunities", wherein she touched upon the alignment of CSIR themes with the SDGs vis-a-vis national mission programmes; the challenges in their implementation and the road ahead for achieving the same. The programme was also associated with felicitating institute staff members / divisions for their performance. Dr S.K. Mishra, Director CSIR-CGCRI welcomed the participants while Dr Debashis Bhattacharjee, Vice President (Technology and R&D) of Tata Steel was present as Guest of Honour besides

other dignitaries. Dr Kalaiselvi also opened the Atma Ram Memorial Museum & Archives to public. The museum envisages tracing the technological evolution of ceramics from historic period; and the journey of CSIR and CSIR-CGCRI since inception.

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Pib

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