

CSIR IN MEDIA



सीएसआईआर

CSIR

भारत का नवाचार इंजन

The Innovation Engine of India

NEWS BULLETIN

06 TO 10 MAY 2023



Principal Scientific Advisor to Government of India, Dr Ajay Kumar Sood and Secretaries of six Science Ministries and Departments, including Science & Technology, Biotechnology, CSIR, Earth Sciences, Space and Atomic Energy attend the meeting

CSIR

08th May , 2023



Continuing with the trend initiated by him of holding joint meetings of different scientific streams in order to break the silos and evolve a synergistic integrated approach, Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh chaired a high level joint meeting of Science Ministries and departments, including Science & Technology, Biotechnology, CSIR, Earth Sciences, Space and Atomic Energy, wherein the Minister said that this year all the Science Ministries and Departments will jointly observe National Technology Day on May 11th 2023.

Dr Jitendra Singh said that this is in keeping with the whole of the government approach suggested by Prime Minister Shri Narendra Modi and his increasing emphasis on time to time of working in synergy and breaking silos between Ministries and Departments.

Dr Jitendra Singh said that National Technology Day, celebrated on 11th May in India, highlights the achievements of tech giants, researchers, and engineers in technology in our country. This year, the focus theme of National Technology Day will be “Atal Tinkering

Labs”, a pathbreaking initiative undertaken in 2016 under the leadership of Prime Minister Narendra Modi to create and promote innovation StartUps and entrepreneurship via intervention at the level of school and teaching institution, in a bid to ignite the young minds.

The Minister emphasised that India has witnessed explosive growth in technological advancements in the past 9 years, thanks to the landmark reforms undertaken by the government led by Prime Minister Narendra Modi. National Technology Day is the perfect occasion to acknowledge the effort of scientists and engineers as growth drivers, he said.

Apart from review of the preparations for the National Technology Day to be observed on 11th May, the agenda of today’s meet were discussion on Awards rationalisation, status update on the creation of Science Media Communication Cell (SMCC) and review of relaxation in age for technical staff for appointment in projects.

Dr Jitendra Singh said, once the Science Media Communication Cell (SMCC) comes into force, the success stories of all the departments must be compiled and disseminated to common people to create general awareness among all stakeholders about India’s Scientific Prowess. He also directed that all Ministries and departments work together to disseminate information in regional languages, engage in creative content creation and preparation of daily news bulletins related to Science & Technology.

The meeting was attended by Principal Scientific Advisor to Government of India, Prof Ajay Kumar Sood and Secretaries of the Science Ministries and Departments, including Science & Technology, Biotechnology, CSIR, Earth Sciences, Space and Atomic Energy.

Hyderabad: CSIR-IICT signs MoU with 101 Therapeutics

CSIR-IICT

06th May , 2023

Hyderabad: CSIR-Indian Institute of Chemical Technology (CSIR-IICT) has entered into an agreement with 101 Therapeutics Ltd., Israel under healthcare for conducting clinical trials of a novel COVID-19 drug that has enormous therapeutic potential. The collaboration is the result of an initiative taken by CSIR in connecting their labs, working in healthcare themes with Israel's nominated industries to explore synergies and jointly contribute



innovative solutions that can be affordable and accessible to the Indian population.

CSIR-IICT will be the knowledge partner for the clinical trial study by offering expert guidance, monitoring, and smooth execution of the programme with the CRO identified by 101 Therapeutics Ltd. The agreement will be for 3 years tenure and on successful completion of the clinical trials, this drug would prove to be highly appropriate and effective in the treatment of COVID-19 and also help combat future pandemics, noted a press release.

Dr. Srinivasa Reddy, Director, of CSIR-IICT, and Dr. Sistla Ramakrishna, Chief Scientist, and Project Leader joined the meeting online, while Dr. D. Shailaja, Chief Scientist and Chair, Business Development & Research Management signed the agreement on behalf of CSIR-IICT. Alec Goldberg signed the agreement from 101 Therapeutics Ltd., in the presence of Michael Goldberg, who attended the meeting online from Israel.

Published in:

[Telangana Today](#)

CSIR-NIScPR organized a Meeting of the water & Environment Sub-Committee under SVASTIK initiative

CSIR-NIScPR

10th May , 2023

As a part of the national initiative for communicating India's scientifically validated traditional knowledge to the society branded as SVASTIK (Scientifically Validated Societal Traditional Knowledge), CSIR-National Institute of Science Communication and Policy Research (NIScPR) hosted the first meeting of the Water, Ecology & Environment Sub-committee chaired by Prof B N Jagatap, Senior Professor, IIT Bombay in hybrid mode.



Eminent experts including, Prof Pradeep P Mujumdar, Dr Virendra M Tiwari, Dr L S Rathore, Dr Manohar Singh Rathore, Prof Saroj K Barik, Prof Anil P Joshi, Dr Pushpendra K Singh, and Dr Viswajanani J Sattigeri attended the sub-committee meeting. SVASTIK team members from NIScPR were also present in the meeting. Prof Ranjana Aggarwal, Director, CSIR-NIScPR, welcomed the experts and gave a brief introduction about SVASTIK activities and its digital footprint. Dr Charu Lata, Head, IH&TKS, CSIR-NIScPR, gave a glimpse of the activities taken up under SVASTIK through her presentation.

The experts shared their experiences and suggested measures to document and disseminate Indian traditional knowledge and practices in the areas of water conservation, rainwater harvesting, surface water management, and water purification. Prof Pradeep P Mujumdar, IISc, Bengaluru provided a timeline of Hydrology in Ancient India through his brief presentation. Padma Bhushan Prof Anil Joshi exhorted on the need to understand the science behind nature for sustainably protecting and conserving water, ecology and environment.

Prof Saroj K Barik commented on the need to promote and create awareness of the importance of the ancient water conservation systems to society. In addition, traditional knowledge in biodiversity conservation measures such as scared groves and bun cultivation were also discussed.

The sub-committee meeting ended with an open discussion on measures to disseminate Indian traditional knowledge with scientific basis on water conservation and various ecological practices.

National Technology Day: 'Need to tackle today's agri problems with modern tech'

CSIR-NBRI

10th May , 2023

“Challenges like increasing global population, climate change and food security are things that need to be worked upon. Decreasing numbers of farmers due to low-income opportunities in agriculture with increasing numbers of labourers is another challenge in this direction, which needs to be addressed,” said prof Ashwani Pareek, executive director, National Agri-Food Biotechnology Institute (NABI), Mohali and chief executive officer, Centre of Innovative and Applied Bioprocessing (CIAB), Mohali.



Prof Pareek was speaking as the chief guest at the CSIR-National Botanical Research Institute, Lucknow while delivering a special lecture on 'Casting Indian Agriculture @2047' on the occasion of the National Technology Day on Wednesday.

“To meet the food needs of the world's approximately nine billion people, we must transform our agricultural system using modern techniques and technologies such as CRISPAR-CAS, cross breeding, mutagenesis, polyploidy, transgenics, genome editing, vertical farming, and so on,” he added while talking about some of the recent achievements: Golden Rice, Bt Cotton, plant-based vaccines, gluten-free rice, etc.

“Today every person is connected to technology in one way or another. The main purpose of celebrating this day is to popularise and showcase our technologies among the public at large,” said Ajit Kumar Shasany, director, CSIR-NBRI.

The Institute and its laboratories also remained open for the public where more than 250 students from various schools/colleges visited the institute and interacted with scientists.

Govt schools' students to visit labs

The institute will also remain open on Thursday (May 11) where 100 students of Class 9 to 12 of government schools will be taken to NBRI and National Bureau of Fish Genetic Resources (NBFGR) by the Council of Science and Technology, U.P, as an outreach event to promote technology.

“Students of Government Jubilee Inter College, Lucknow, Government Girls Inter College, Chhoti Jubilee, Ramadhin Singh Inter College and other schools will be participating in this programme and certificates will also be provided by the CSTUP to students,” said Sumit Kumar Shrivastava, scientific officer, Indira Gandhi Planetarium, Lucknow.

CSIR-NCL to organise 'One Week One Lab Program'

CSIR-NCL

10th May , 2023

The CSIR-National Chemical Laboratory (CSIR-NCL) in the city is hosting the “One Week One Lab” programme, a six-day theme-based event from May 22 to May 27 that will highlight the laboratory’s cutting-edge research, expertise, and facilities to stakeholders.

According to a press release, the focus of this programme will be an exhibition gallery displaying NCL technologies and their social impact.

Thematic presentations, panel discussions, a symposium, a start-up expo, an open day for the public, skill development programmes, a science outreach programme for school pupils, and a fun-filled event ‘Avekshan’ by a group of research students will be part of the week-long campaign.

Jitendra Singh, Minister of Science and Technology, launched the initiative to highlight technical discoveries and developments in Council of Scientific & Industrial Research (CSIR) labs. CSIR-NCL’s campaign will highlight its thematic roadmap, which includes clean energy, circular economy, sustainable chemical industry, bio-therapeutics, C1 chemistry, biomass, and agritech.

On May 22, the programme will be inaugurated by chief guest Pramod Choudhary, founder and chairman of Praj Industries.

The presentations will be given by prominent experts in their respective professions and will provide insights into the most recent research and advances in these domains.

“We cordially invite everyone to the CSIR-National Chemical Laboratory for a week-long celebration of our recent accomplishments as part of the CSIR’s One Week One Lab (OWOL)

initiative. We intend to highlight our contributions in creating new knowledge and translating science into the best-in-class process and product technologies for the benefit of society,” stated Ashish Lele, Director of CSIR- NCL.

The “One Week One Lab” programme will also comprise four skill development programmes that will give participants hands-on experience in a variety of scientific subjects.

CSIR lab in Gujarat develops technology to extract potash fertilisers from spent-wash ash

CSIR-CSMCRI

10th May , 2023

The Central Salt and Marine Chemicals Research Institute (CSMCRI) in Bhavnagar, Gujarat, has made a ground-breaking discovery that could revolutionise India's potash fertiliser industry. The CSMCRI, one of the premier national laboratories under the Council of Scientific and Industrial Research (CSIR), has successfully developed a process to extract sulphate of potash (SOP) and muriate of potash (MOP) from the spent-wash ash produced by sugarcane molasses-based distilleries, The Indian Express reported.

The technology developed by CSMCRI has been licensed to DCM Shriram Bio Enchem Limited, which is in the process of constructing a plant in the Hardoi district, Uttar Pradesh. The plant, with an investment of Rs 57 crore, will utilise the spent wash ash from a distillery attached to a sugar mill. Expected to be operational by August, this facility holds the potential to significantly impact India's potassium fertiliser imports, the report added.

Spent-wash, a by-product of the alcohol production process, poses environmental challenges due to its high organic load and salt content. Currently, distilleries manage spent wash through two main methods. The first involves mixing it with press mud from sugar mills to create composted manure. The second method concentrates the spent wash and feeds it into an incineration boiler, resulting in ash that contains potash, among other substances. However, the ash granules produced in this process may contain harmful substances and have limitations in terms of soil application.

The newly developed process by CSMCRI addresses these issues by separating SOP, MOP, and mixed salts from the ash. Both SOP and MOP are completely water-soluble, allowing for their use as liquid fertilisers through foliar application or drip/micro-irrigation systems. The mixed salt, which contains MOP and low levels of sodium chloride, is even edible. This innovative approach ensures that no undesirable materials are introduced into the soil.

The CSMCRI's process can recover up to 90 percent of potash from distillery boiler ash, with an average composition of approximately 55 percent SOP, 10-20 percent MOP, and 10-30 percent edible mixed salt. Additionally, the technology involves separating non-salt solids from the spent-wash ash, which can be converted into bricks for masonry work.

The report further added that according to Pratyush Maiti, the chief scientist at CSMCRI and the lead developer of the technology, this waste-to-wealth approach has the potential to transform the potash fertiliser industry.

India currently relies heavily on potassium fertiliser imports from countries such as Canada, Belarus, Israel, Jordan, Lithuania, and Russia, amounting to billions of dollars annually.

Hyderabad: Gene-Health Connect, a mobile science exhibition launched

CSIR-CCMB, HRDG

09th May , 2023

Hyderabad: 'Genetics is not just a subject of research; it has become a part of our culture'. This statement has become a reality, with the launch of a mobile science exhibition – Gene-Health Connect by CSIR-Centre for Cellular and Molecular Biology (CCMB), in collaboration with NCSM-Visvesvaraya Industrial and Technological Museum (VITM) to mark the World Thalassaemia Day on Monday. Dr. N Kalaiselvi, Director-General, Council of Scientific and Industrial Research (CSIR), inaugurated it virtually.



During the inaugural launch of the bus, many schools and college students were seen with the exhibits placed on the bus. Expressing joy, a few students stated that with this mobile science exhibition, people are not aware of genes will get a vast impact of genes.

The bus with 20 exhibits that will go round science, medical, and pharmacy colleges and high schools in Telangana and Andhra Pradesh in the next seven months. The Telangana Social Welfare Residential Educational Institutions Society is one of the vital venue partners in the State for hosting the exhibition across all districts.

Explaining features of the mobile van, Dr. Somdatta Karak, science communication and public outreach officer, CCMB, said "the exhibition aims to educate young people on genetic diseases and how they can be managed and prevented. 7-9 crore Indians are estimated to suffer from genetic diseases. Earlier studies from CCMB had suggested that in-breeding in small communities propagates many of these diseases. We have made the exhibition for young

people to understand how genes function and look at genetic diseases more objectively,” she added.

Governor Dr. Tamilisai Soundararajan who was the chief guest at the event, said, “ It is a great opportunity for me see the mobile van, just to be part of the event, I have straight away come from Chennai. I personally feel that creating awareness on genetics is mandatory and it also is the need of hour. This mobile science exhibition vehicle will be visiting various educational institutions and students will know how genetics is important in human life. Gene health is very important. Slowly people are speaking about this. This mobile van will spread more awareness among people, especially youth.”

“We hope to remove the social stigma attached to genetic testing. Timely genetic testing can prevent many genetic diseases today, while research is underway to make such tests more effective. Young people of India have to start discussing these more openly,” said Dr Vinay K Nandicoori, director, CSIR-CCMB.

“VITM, Bengaluru, has been playing a key role in bringing science from research labs to the public through various interactive models and exhibits. The mobile science exhibition on gene-health connect brings people the knowledge of genes and genetic disorders through hands-on exhibits which all can easily understand,” said Sadhana Attavar, director, VITM.

“This is a great opportunity for research institutions, such as CCMB, to take research that is going on in labs to the public, especially youth. The coming together of CSIR and NCSM is a harbinger of more ambitious and exciting initiatives in this direction,” said Dr. Geetha Vani Rayasam, head, CSIR-Human Resource Development Group, and CSIR-Jigyasa initiative.

CSIR- CRRI And Npl Develop Tiles Using Waste Materials

CSIR-CRRI, NPL

08th May , 2023

Scientists at Council of Scientific and Industrial Research and Central Road Research Institute (CSIR-CRRI) and National Physical Laboratory (NPL) who developed the technology to convert multi-layered plastic and fly-ash into high quality-tiles for pavement, roofs and walls are now testing the high strength plastic tiles which could be used to construct roads.



Delhi Research Implementation and Innovation (DRIIV) which is the central government's principal scientific advisor has already conducted the lab and prototype tests of the tiles which have strength of the concrete. DRIIV has sought industrial support for more tests.

According to scientists the high-strength tiles not only address the issue of plastic waste but also the menace of red mud, which is a waste generated by the aluminium industry. However, the development of tiles, which could still handle the weight of up to the 20 tonnes, was to be strengthened further and made sturdier.

“The development of this technology came as a follow-up of our previous development where we designed the tiles for pavements, cycling tracks, roofs and walls. There was a need for the development of prefabricated materials made of polymer that could withstand high pressure created by the movement of vehicles”, said Dr Rajiv Kumar Singh, Principal Scientist, CSIR-NPL.

So, the research and development were done with Central Road Research Institute (CRRI) at

NPL and road tiles were made. So far, we have managed to get the tiles that have been tested in the lab, have high-density are almost as tough, as concrete and still flexible- the right thing suited for Indian roads, Singh said, adding that so far, only Scandinavian countries have started building the roads using such material.

He pointed out that the high-strength plastic tiles also offer a modular structure solution to the Indian roads. “We often see that the roads are dug to lay down pipes or wires and then remade- which requires money. In this case, the road will not have to be broken but a section of tiles could be removed and installed again. It will also fix the issues of potholes,” he explained. He added that DRIIV is currently helping them with a wider reach out to the financiers and industries.

The prototype tile weighs 900 grams and is about nine by six inches in dimensions. For field tests, scientists will need tiles with on sqm area which is expensive to mould, thus, they have sought support from industries.

“We are generating a lot of waste. What are going to do with it? In the circular economy we use that waste. With a proper recipe we can make tiles suitable for road application with a sustainable solution to the problems,” said Prof Venugopal Achanta, Director CSIR-NPL. He added that they are also in talks with the Ladakh administration as the tile can withstand extremely low temperatures. Earlier, the CSIR-NPL developed tiles using single-use plastic for footpaths, cycle tracks etc. which are being produced by seven start-ups currently.

Palampur institute to work with ISRO centre

CSIR-IHBT

08th May , 2023

The CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur, is collaborating with the Space Application Centre (SAC) of the Indian Space Research Organisation (ISRO) to study the impact of climate change on pine forests in the state.

CSIR-IHBT Director Dr Prabodh Trivedi stated this here today. Under this national-level project, a PhenoMet station has been installed at the Baba Balak Nath Temple at Deotsidh in Hamirpur.

Dr Amit Kumar, Senior Principal Scientist and Head of the Environmental Technology Division of the institute, says, “The PhenoMet Station consists of a time-lapse camera and an automated weather station, which will record pictures of the surrounding pine forests every 30 minutes and record various weather parameters such as air temperature, relative humidity, rainfall, active photosynthetic radiations, etc throughout the year.”

He says the station installed in Hamirpur is eighth of 17 such stations to be installed at various locations across the country. He adds that the acquired data can assist the authorities concerned in taking suitable climate change mitigation actions in time.

MahaGenco marks Koradi ash bund for its proposed project

CSIR-NEERI

07th May , 2023

The pond, abandoned for a while now, is being considered despite a thick bamboo forest developed by CSIR-NEERI



Maharashtra State Power Generation Company Limited (MahaGenco) is planning to use its abandoned fly ash bund in Koradi to dump the ash from its proposed 2x660 MW coal-based Supercritical Thermal Power Plant at Koradi. A thick vegetation of bamboo plantation has been developed by CSIR-NEERI on this land successfully which may now be ruined due to MahaGenco's decision to use it for dumping of fly ash.

According to MahaGenco's Environment Impact Assessment and Environmental Management Plan (EIA/EMP) for the project, a detailed layout design and area calculation of the project, has been done and a total of 168.75 acre (68.28 Ha) land (excluding ash bund, railway siding) would be sufficient for this. Therefore, the existing Koradi ash bund will be used for the purpose. Going by the EIA statement, as the Khasala ash bund had been already active and had also witnessed a collapse during last monsoon, the only option that remains is the Koradi ash bund, which was abandoned by MahaGenco a while ago. The abandoned bund, meanwhile, was developed into a bamboo forest by CSIR-National Environmental Engineering Research Institute (CSIR-NEERI).

them," claimed Sudhir Paliwal, Convenor, Vidarbha Environmental Action Group. "According to MoEF&CC, the 100% utilisation of fly ash is mandatory and if it is the rule then how the new project is claiming to dump fly ash in their existing ash pond?" asked Paliwal.

It is clearly showing that the new plant will raise the environmental problem for the people of Nagpur in coming days, he claimed.

The EIA/EMP also claimed, “Total water requirement for proposed thermal power plant is 34.69 Million Cubic Meter (MCM) per annum. The source of water will be tertiary treated sewage water from Nagpur Municipal Corporation (NMC). Water would be conveyed through cross country pipeline at a distance of 11 km. 27 KLD water for domestic purposes from Pench dam water will be used.”

Currently, NMC is selling 150 MLD sewage treated water to Khaperkheda thermal power plant. As per some officials of MahaGenco, “The treated sewage water is damaging the equipment in the plant.”

If the treated water is damaging the equipment then how the new project is claiming to use the same treated water for their 2x660 MW project?

Leena Buddhe, Founder, Centre For Sustainable Development (CFSD) said, “Thermal power plants in Koradi and Khaperkheda are the major users of fresh water of Nagpur district. Additional plant will also use the same potable water and the claims they made for utilisation of treated sewage water is all just eye-wash.”

Buddhe said, “There are many loopholes in the EIA report prepared by MahaGenco and the project will not benefit the region. Instead of this, the project should be installed in Nashik area where the government is planning to shut the plants there and start this new one to spoil the environment of Nagpur.”

Please Follow/Subscribe CSIR Social Media Handles



[CSIR INDIA](#)



[CSIR_IND](#)



[CSIR India](#)



[CSIR India](#)



[csirindia](#)