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NEWS BULLETIN

11 TO 15 NOVEMBER 2024



Marayur jaggery: new production and processing facilities to be set up under CSIR-NIIST, funded by Central government

CSIR-NIIST

15th November , 2024

In a move aimed at reducing production costs and enhancing quality, the jaggery hub of Marayur in Idukki will soon benefit from a centrally funded jaggery production project. Led by CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, the project is funded by the Department of Science and Technology, Government of India.



Under the project, a decentralised production facility will be established for the Marayur Hills Agricultural Development Society (MAHADS), a farmers' collective in Dhinducombu, Kanthalloor. With a planned production capacity of 5–7 tons of cane crushing per day, the project is designed to meet Food Safety and Standards Authority of India (FSSAI) regulations, while also achieving international standards.

A new processing unit will feature a controlled firing process with constant stirring to produce jaggery in both lump and powder forms. “The main objective is to create a modern facility that meets FSSAI standards and significantly lowers production costs. The project also aims to increase demand and unique labelling of GI-tagged Marayur jaggery,” explained sources with the science and technology department. Scientists from CSIR-NIIST, including Senior Principal Scientist R.S. Praveen Raj and Senior Scientist Dr. Venkatesh T., recently visited the sugarcane cultivation areas and the proposed project site. They held discussions with representatives from MAHADS and the Anchunadu Karumpu Ulphadhana Vipanana Sangam – both key players in rallying local farmers' support for the initiative.

Once operational, the facility will be handed over to MAHADS, which will manage production and processing, and procuring of sugarcane from farmers at a nominal fee. “This new system can cut production costs by half compared to traditional methods, which will be a gamechanger for our farmers,” said MAHADS secretary K. Indrajith. Presently, the average extraction cost per kilogram of jaggery is around ₹18, a significant financial burden on farmers.

Mr. Indrajith also highlighted the growing demand for pure jaggery powder. “The existing system cannot produce pure jaggery powder, but the new facility promises to meet this demand effectively,” he said.

Marayur jaggery, which earned its Geographical Indication (GI) status in 2019, has struggled with price stability due to competition from low-quality jaggery in the market. The low-quality jaggery producers also falsely claim that their product is from Marayur and GI protected. The advanced production system is expected to restore the premium reputation of Marayur jaggery by ensuring consistent quality and cost-efficiency.

The project is set for commissioning by April-May 2025.

Indian Red Cross Society, holds First-Aid Awareness Program

CSIR-IIIM

14th November , 2024

The Indian Red Cross Society, J&K today on the 14th of November, 2024 organized a comprehensive First-Aid Awareness Program at the CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu. The event, which aimed at enhancing safety knowledge and emergency response skills among IIIM staff, scholars and researchers, received an enthusiastic response from the participants.



The program began with underscoring the importance of first-aid training in workplaces and research environments. "Accidents and medical emergencies can happen at any time, even in well-regulated environments like research institutes. Having the right knowledge and confidence to respond quickly can save lives, and we are committed to making this vital skill accessible to all".

Dr. Manpreet Kaur, Medical Officer and Ms. Vironica Marwah, Field Officer from the Indian Red Cross Society, J&K conducted the session, covering essential first-aid techniques, including CPR (Cardiopulmonary Resuscitation), managing burns, handling fractures, controlling bleeding, and providing immediate care for common workplace injuries. The hands-on session included practical demonstrations and interactive discussions, where participants had the opportunity to practice key techniques under expert supervision.

The event was organized under the guidance of Sh. Rohit Khajuria, General Secretary, Indian Red Cross Society, J&K-UT and Dr. Zabeer Ahmed, Director, CSIR-IIIM, Jammu. Sh. Rohit Khajuria said, "First-aid is a critical skill, particularly in environments like research labs where

the risk of accidents is higher. It's important to act swiftly and correctly during emergencies, and this training aims to empower individuals to provide immediate help before professional medical assistance arrives.“

The program also featured detailed information on the proper use of first-aid kits, which were distributed to participants to ensure they are well-equipped to handle emergencies.

Dr. Zabeer Ahmed, Director of CSIR-IIIM, Jammu, expressed gratitude to the Indian Red Cross Society for organizing the program and highlighted the importance of such initiatives in fostering a culture of safety and preparedness within the scientific community. "We are proud to host this training, as it not only benefits our staff but will also enable our researchers to handle unforeseen situations in the field, ensuring their well-being and safety," Dr. Zabeer remarked.

The session concluded with a pledge from all participants to be proactive in promoting first-aid awareness in their communities and workplaces, encouraging others to acquire these life-saving skills.

The Indian Red Cross Society plans to continue offering such awareness programs across various institutions, promoting widespread knowledge and confidence in emergency medical response.

The proceedings of the event were conducted by Dr. Amit Sharma, CMO & Dr. Anuj Sharma, MO, IIIM. Among others were also present Vikram Singh, Senior Controller of Administration and Heads of various divisions.

Dr. Jitendra Singh to Inaugurate CSIR HealthCare Theme Conclave tomorrow at Srinagar

CSIR-IIIM, CCMB, IICT, IICB

14th November , 2024

Dr. Jitendra Singh, Hon'ble Union Minister of State (Independent Charge) for Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy, and Space, Vice President of CSIR and Chief Guest of the function, will Inaugurate the CSIR HealthCare Theme Conclave at Sher-e-Kashmir International Convention Centre (SKICC), Srinagar, tomorrow. The Inaugural



function of this two-day conclave from 16-17 November, 2024, will be held from 11:00 am to 1:00 pm on 16-November-2024. Sh. Satish Sharma, Hon'ble Cabinet Minister, J&K Govt. Minister for Food, Civil Supplies & Consumer Affairs, Transport, Science & Technology, Information Technology, Youth Services & Sports and ARI & Trainings Departments of J&K will be present as Guest of Honour. Dr. N. Kalaiselvi Director General, CSIR & Secretary DSIR would also grace the function along with Sh. G.N. Singh, Advisor to Hon'ble Chief Minister, UP & Ex Drug Controller General, Dr. Vinay K. Nandicoori, Director, CSIR-CCMB, Dr. D. Srinivasa Reddy, Director, CSIR-IICT, Dr Vibha Tandon, Director, CSIR-IICB and Dr. Zabeer Ahmed, Director, CSIR-IIIM.

The conclave is being organised under the One Week One Theme (OWOT) Campaign, with the prime focus on fostering innovation and startup ecosystem in the HealthCare Sector. Thirty six startups and eight CSIR Institutes will be displaying their innovations, technologies and products, in HealthCare sector, ranging from areas such as Herbal Food Supplements, Functional Foods for Cancer and Women Health, Biostimulants and Biopesticides, Natural Cosmetics, Agri-products such as Pheranone traps, etc.

The Conclave is set to see huge participation by Academicians, Scientists, Technocrats, Startups, Industrialists and more than 300 students from various Universities, Colleges and Schools.

The event is organized with the patronage of Council of Scientific and Industrial Research, under overall supervision of Dr. Zabeer Ahmed, Director, CSIR-Indian Institute of Integrative Medicine, Jammu, assisted by his team of Scientists.

On Children's Day specially abled kids visit CSIR-CFTRI

CSIR-CFTRI

14th November , 2024

Ranga Rao Memorial School for Differently Abled (RMSD), a special school in Mysuru run by the NR Foundation on Thursday organised a visit for its students to the Mysuru-based CSIR-Central Food Technological Research Institute (CFTRI), a premier food technology research institute on the occasion of Children's Day.



A total of 35 students from class 8 to 10 were given this opportunity to expand their learning boundaries by visiting and observing the findings of the CSIR-Central Food Technological Research Institute (CFTRI).

According to a press release from RMSD, the CFTRI, a constituent laboratory of the Council of Scientific and Industrial Research (CSIR), New Delhi, comprises inspiring and dedicated scientists who are pursuing in-depth research and development in the areas of food science and technology. Parigi Ramesh Kumar, Senior Principal Scientist explained and facilitated the entire visit to the students on the occasion of Children's Day.

Speaking about the visit, R. Guru, chairman, NR Group said, "We think that a child learns better when they have real-world experiences, thereby we make sure that at Ranga Rao Memorial School for Differently Abled they get the chance to actually go through the experiential learning process. The visit to CFTRI gives the students an insight into the real world and happenings that prepares them for a better tomorrow."

Varshini C.S., a class 10 student, shared her experience on the visit and said, "It was an

exciting visit to the CFTRI where we got to learn about the R&D in the areas of food science and technology. I never knew that so much science goes into our food. From making it last longer to tasting better, it's all pretty fascinating.”

Jhanavi H.K., a student of class 10 also shared her experience based on her visit. She said, “The school is a home for us and these kinds of activities help us learn with knowledge. I am very thankful to the school for taking us to the CFTRI on Children’s Day. This gives us inspiration to dream higher and achieve all our goals. Being able to learn more about food development and technology was a dream come true for me.”

The visit on the occasion of Children’s Day was a fruitful one and it helped the children experience a different learning process altogether, the school authorities said.

DSIR-CRTDH Conclave-2024 held at CSIR-Institute of Minerals & Materials Technology (CSIR-IMMT), Bhubaneswar Concluded: Empowering MSMEs through Innovation and Collaboration to Foster a Self-Reliant India

CSIR-IMMT

14th November , 2024

The Department of Scientific & Industrial Research (DSIR) under Ministry of Science & Technology, through its Programme 'Common Research and Technology Development Hub (CRTDH)', initiated in 2014-15, attempts to provide MSME clusters the much-needed supportive ecosystem, which encourages and facilitates innovation essential for MSMEs. This program recognizes the importance of MSMEs in the overall economy of India and therefore focuses on the creation of R&D infrastructure in driving scientific advancements, technological innovations and socio-economic development.



The CRTDHs established in publicly funded research institutions have not only achieved remarkable success but have also generated inspiring success stories from their stakeholders. These outstanding and continuous accomplishments should be shared with a broad audience, including those who are currently not connected to the CRTDH network. In view of this, DSIR has organized two days DSIR-CRTDH Conclave 2024 on 13th & 14th November 2024 at CSIR-Institute of Minerals & Materials Technology (CSIR-IMMT), Bhubaneswar wherein the supported CRTDHs had participated and showcased their achievements.

The DSIR-CRTDH Conclave 2024 was inaugurated on 13th November 2024 with welcome address by Dr. Ramanuj Narayan, Director of CSIR-IMMT Bhubaneswar, where Dr. Ramanuj Narayan emphasized on the need for collaboration between academia & industry for addressing the challenges faced by MSMEs in India. The inaugural session proceeded with the live video address by Guest of Honor, Dr. N. Kalaiselvi, Secretary, DSIR & Director

General, CSIR. Dr. N. Kalaiselvi, talked about the importance of CRTDH programme in making MSMEs more 'Atmanirbhar' with the handholding by academic institution. She further emphasized that by addressing the challenges, MSMEs can enhance economic growth, create job opportunities and exhibit India's capabilities on the global stage. DSIR-CRTDH Conclave 2024 saw the unveiling of report titled 'CRTDH-Catalyzing innovation through collaboration: CRTDH highlights' prepared by DSIR showcasing the output of CRTDHs.

Dr. Vipin C, Shukla, Scientist G & Head-CRTDH, DSIR in his inaugural address highlighted the need of innovation and stated that MSMEs being the pillar of the innovation ecosystem can do wonders in making India global R & D and manufacturing hub. In four technical sessions during two days' event saw the keynote address by Dr. Laxminarayan Padhi, Advisor, Department of Science & Technology, Govt. of Odisha, and by Shri P.K. Gupta, Director of the MSME Development Institute, Cuttack, Ministry of MSME, Government of India. Technical sessions had presentation by the coordinators of respective CRTDH and MSMEs beneficiaries.

Conclave also saw inauguration DSIR-CRTDH Exhibition, where posters, audio visual of the individual CRTDHs and products/prototypes developed by various CRTDHs along with its associated MSMEs / Start-ups incubated at the CRTDH were displayed. The exhibition gave an opportunity of networking with other CRTDHs and also let them know about varied accomplishments of other CRTDHs. Exhibition also gave an opportunity to different MSMEs/Start-ups to interact with other MSMEs/Start-ups supported / incubated at CRTDHs. The conclave was well attended by various MSMEs, Industry associations, Startups, students & researchers and it saw fruitful exchange of dialogues and meaningful networking for working together. The conclave saw the participation of Dr Suman Mazumdar, Scientist - E from DSIR, who facilitated the exchange of ideas among coordinators and with prospective MSMEs and Startups. The conclave ended with a take home message by Dr. Vipin C. Shukla Scientist G & Head-CRTDH, DSIR and vote of thanks by Dr. Suman Mazumdar, Scientist -E, DSIR. The conclave also paved the way for the next year conclave at NIPER, Mohali.

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Indian food scientists of CSIR-CFTRI meets NICCI President KC

CSIR-CFTRI

13th November , 2024

An Indian Delegation led by Dr Umesh Hangalore Hebbar, Chief Scientist & Head of Food Engineering Department CSIR to Nepal met NICCI President Sunil KC at NICCI Secretariat, Ace Apartments, Narayan Chaur, Naxal in Kathmandu on Wednesday. NICCI President KC welcomed the Indian delegation at NICCI Secretariat and briefed about the NICCI as it is the Non-profit Making



Binational Chamber of Commerce in Nepal which is particularly working on the area of enhancement of Nepal-India Bilateral Economic relation, Promotion of Indian Investment to bring in Nepal.

The three-member delegation was accompanied by Garima Nautiyal, Second Secretary (Political & Development Partnership) at Embassy of India, Kathmandu.

Dr Hebbar shared the purpose of visit to NICCI was to apprise about CSIR-CFTRI's expertise and contributions in the area of Food Science and Technology focusing on the areas of development of food processing technologies, products and machineries for processing; capabilities and Human Resource Development, Skill development and Training, especially for farmers, FPOs and MSMEs, reads a statement issued by NICCI.

Additionally, to understand the requirements of Nepal in the areas of food science and technology industry and explore probable areas of future collaboration between various enterprises of Nepal and CSIR-CFTRI. As the CSIR is the Government Entity of India, the technology advancement is the key area of their engagement and wish to collaborate with

Nepalese industries and association for the advancement of food industries in Nepal providing their knowledge, workings and also to collaborate exclusively with the industries in Nepal as per the specific requirements of the industries.

NICCI and CSIR both have agreed for future collaboration organizing interactions with the members and other stakeholders in Nepal.

Ravi Kumar Rayavaram, Vice President of NICCI, Mukesh Upadhyay, President, NICCI Biratnagar Chapter, Ganesh Shah, Former Minister of Science and Technology, Ram Saran Timalsina, Deputy General Manager of Muktinath Krishi Company, Samikshya Rai, Founder of Pack My Lunch, Mingma Tamang, Director, Makusse Nepal, Prof. Dr. ML Sharma of TU, Prof. Rameshwor Adhikari of RECAST, TU, Mohan Thapa, Head of Admin, Salt Trading Corporation, Niruta Dahal, Business Promotion Manager at Himalayan Vista Pvt. Ltd. and Marshal Rathour, Deputy Director of NICCI accompanied the NICCI team.

CSIR-IIIM, LAHDC to set up demonstration Farm for MAPs

CSIR-IIIM

13th November , 2024

To promote medicinal, aromatic and flowering plants cultivation in Ladakh, the CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), the Council of Scientific and Industrial Research (CSIR) signed a Memorandum of Understanding (MoU) with the Ladakh Autonomous Hill Development Council (LAHDC) to set up a demonstration Farm for MAPs cultivation at Palam in Leh. The MoU was signed by Dr. Zabeer Ahmed, Director from CSIR-IIIM side and Stanzin Chosphel, Executive Councillor (Agriculture) for and on behalf of LAHDC, Leh in the presence of Tashi Gyalson, Chairman/Chief Executive Councillor, LAHDC.



Speaking on the occasion, Gyalson emphasized that besides implementing the objectives of societal mission programmes of CSIR, the job-oriented training and skill development to the local farmers and unemployed youths should also be taken up on priority by CSIR-IIIM, which would have great bearing on the income generation and employment.

During the signing event, Dr. Zabeer Ahmed highlighted ongoing initiatives of CSIR-IIIM and the other labs of CSIR under Agri-Nutri Biotech theme to support the region's upliftment through scientific advancements in agriculture and cultivation of Medicinal, Aromatic and flowering crops.

Dr Ahmed also commended the efforts made in Ladakh to cultivate medicinal plants with the support of the local government.

He assured me that he would provide scientific and technological support to local farmers and entrepreneurs. This includes guidance on expanding crop varieties, processing, value addition, and marketing strategies to enhance economic self-sufficiency in the region.

Pertinently, CSIR-IIIM has initiated Research and Development activities to introduce economically more remunerative and industrially important Medicinal and Aromatic crops at the Palam Farm on an experimental basis.

The introduction of economically essential crops among the farmer community will develop the agri-entrepreneurship ecosystem in Ladakh and lead to the socio-economic upliftment of the region's farmers.

Abdul Rahim, Head RMBD & IST division and Srinagar Branch Lab and Tashi Namgyal Yakzee, Executive Councillor (Animal/Sheep) were also present during the signing event.

International Conference on Communication and Dissemination of Traditional Knowledge begins

CSIR-NIScPR

13th November , 2024



The International Conference on Communication and Dissemination of Traditional Knowledge began at Gurugram University today. The conference was jointly inaugurated by the Council of Scientific and Industrial Research (CSIR)-National Institute of Science Communication and Policy Research (NIScPR) and Gurugram University.

Addressing the gathering at the conference, Director of CSIR-NIScPR, Professor Ranjana Aggarwal, provided an overview of SVASTIK (Scientifically Validated Traditional Knowledge), highlighting its significance in promoting scientifically validated Indian traditional knowledge. She added that NIScPR has disseminated socially engaging SVASTIK stories in 17 Indian languages through social media. The President of South Asian University, Professor K. K. Aggarwal, emphasized the need for interdisciplinary research and collaboration, where traditional knowledge is applied effectively. The inaugural session of the International Conference (CDTK-2024) also saw the release of the Souvenir and Abstract Book, along with two digital flipbooks: “Treasure of Indian Traditions: A Journey through Scientifically Validated Indian Traditional Knowledge” in Hindi and Punjabi languages.

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Gurugram University and CSIR-NIScPR Launch International Conference on Traditional Knowledge

CSIR-NIScPR

13th November , 2024

The CSIR-National Institute of Science Communication and Policy Research (NIScPR), in collaboration with Gurugram University, inaugurated the International Conference on Communication and Dissemination of Traditional Knowledge (CDTK-2024) on November 13, 2024, at Gurugram University. The event attracted researchers, students, and global dignitaries focused on leveraging India's rich cultural knowledge for modern scientific advancement.

In his welcoming remarks, Prof. Dinesh Kumar, Vice Chancellor of Gurugram University, acknowledged the importance of CDTK-2024 as a platform to highlight Indian cultural legacies and adapt them to meet contemporary global needs. The conference emphasizes integrating traditional wisdom with modern science to solve today's challenges.

Prof. Ranjana Aggarwal, Director of CSIR-NIScPR, presented an introduction to SVASTIK (Scientifically Validated Traditional Knowledge), a national initiative led by CSIR-NIScPR to communicate validated Indian traditional knowledge to the public. She emphasized how SVASTIK has published engaging traditional knowledge stories in 17 Indian languages across social media and in two curated SVASTIK publications, aiming to inspire young minds to explore scientific perspectives embedded in cultural heritage.

The keynote lecture was delivered by Dr. Shekhar C. Mande, Distinguished Professor at Savitribai Phule Pune University and former Director General of CSIR. Dr. Mande highlighted India's historical contributions to fields like metallurgy, mathematics, and medicine, showcasing how ancient Indian scientific principles remain relevant. He cited William Dalrymple's book, *The Golden Road*, as an example of how the world is increasingly recognizing India's scientific heritage. Prof. K. K. Aggarwal, President of South Asian University, served as the Chief Guest, urging the academic community to engage in

interdisciplinary research that combines traditional knowledge with scientific validation. Prof. Aggarwal emphasized that this knowledge should be actively shared worldwide, rather than neglected or forgotten.

A notable event during the session was the release of the Souvenir & Abstract book and two digital flipbooks titled "Treasure of Indian Traditions: A Journey through Scientifically Validated Indian Traditional Knowledge," available in Hindi and Punjabi. The flipbooks aim to provide authentic information on India's traditional knowledge systems to a broad audience, from scholars to young learners.

Dr. Charu Lata, Principal Scientist at CSIR-NIScPR and Coordinator of CDTK-2024, extended a vote of thanks to the event collaborators, dignitaries, and delegates, highlighting their support in making the conference a successful platform for showcasing traditional knowledge systems. The conference, with its wide range of international and national participants, stands as a significant milestone in promoting the integration of India's heritage with global scientific discourse.

Prof Manoranjan Parida Elected as President Indian Roads Congress (IRC)

CSIR-CRRI

12th November , 2024

Prof Manoranjan Parida, Director, Central Road Research Institute, New Delhi has been elected as the President of IRC on 11th Nov during the Annual Session of IRC held in Raipur. IRC is the largest professional body of Highway Engineers dealing with Highway infrastructure such as highways, bridges and tunnels etc.

Prof. Parida, an alumnus of UCE Burla currently known as VSSUT, is an academician of high repute. He was Deputy Director at IIT Roorkee before joining CSIR-CRRI. He has been MoRTH Chair Professor on Development of Highway System in India at IIT Roorkee during 2013-2017. Design and Development of Noise Barrier for Flyovers in Delhi is an innovative contribution by him. He has provided substantial inputs for third party quality audit of 1700 km. of State Highway in the State of Bihar (during 2007-2013) under the RSVY Project. He has supervised 35 Ph.D. Theses and published more than 450 papers in Journals/Conferences. He has provided consultancy for more than 350 urban road infrastructure projects, intercity corridors, rural roads, and expressways.

As a Director of CRRI he has played a crucial role in the development of Steel Slag Road Technology. AI based Road Safety Solutions for Nagpur (iRASTE), Third Party Quality Evaluation of Dwarka Expressway, Promotion of Usage of Industrial Waste in Road Construction and providing solutions to road infrastructure development in border areas. He received Pt. Jawaharlal Nehru Birth Centenary Award in the year 2004 from Indian Road Congress. He has received the Outstanding Teacher Award of IIT Roorkee. He is presently Convener of Urban Roads & Streets Committee (H-8) of Indian Roads Congress, New Delhi. He is convener of PCD6 (Bitumen, Tar & Other Products) Committee of Bureau of Indian Standards.

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Cultivating Potential: Ladakh's Blossoming Future with Medicinal Plants

CSIR-IIIM

12th November , 2024

In a significant move to boost the agricultural potential of Ladakh, the CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM) has partnered with the Ladakh Autonomous Hill Development Council (LAHDC) to cultivate medicinal, aromatic, and flowering plants.

Announced on Tuesday, the agreement, signed by CSIR-IIIM Director Dr. Zabeer Ahmed and LAHDC's Executive Councilor Stanzin Chosphe, will see the establishment of a demonstration farm to test these economically vital crops.

Emphasizing agri-entrepreneurship, the initiative aims to integrate these crops into Ladakh's farming system, promoting industrially-important agriculture for local farmers, thereby fostering the socio-economic growth of the region.

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CSIR-NIScPR organizes Curtain Raiser of India International Science Festival (IISF) 2024

CSIR-NIScPR

12th November , 2024

The India International Science Festival (IISF) 2024 Curtain Raiser organized by CSIR-National Institute of Science Communication and Policy Research (NIScPR) at Vivekanand Hall, Pusa Campus, marking the beginning of this mega science festival. Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, delivered the welcome address, setting the tone for the festival, "Welcome to



the 10th edition of the India International Science Festival. This curtain raiser program aims to inform all science students about this pivotal event. Notably, India's Constitution uniquely embodies scientific temper in Article 51A (h), fostering scientific temper, observation, and spirit of inquiry beyond scientific boundaries. We term it a festival because we celebrate science. IISF 2024 will showcase innovative exhibits, such as a moon replica at IISF that will be an attraction for all the participants especially students."

The Chief Guest, Prof. A.C. Pandey, Director, UGC-Inter University Accelerator Centre, New Delhi, addressed the gathering, emphasizing the importance of science and technology in nation-building.

Prof. Pandey said, "Celebrating festivals is deeply rooted in Indian culture. Science also has its compelling narrative. Bio-inspiration influences daily life and also Artificial Intelligence. Our ancient rishis, driven by natural curiosity, embodied scientific thinking. Notably, Schrödinger visited Allahabad University, finding India's intellectual environment conducive. IISF simplifies complex concepts, connects scientific dots, and makes learning enjoyable. Our diverse themes will spark students' curiosity."

The event featured a captivating IISF promo video presentation, showcasing the festival's objectives and highlights. A presentation about IISF provided insights into the festival's themes, events, and expected outcomes. IISF 2024 aims to promote science, technology, engineering, and mathematics (STEM) education, encourage innovation, and showcase India's scientific prowess.

A promotional video on the major events of IISF-2024 was also screened during the curtain raiser event.

The audience, comprising 59 students from Ahlcon International School, Delhi, students from Academy of Scientific and Innovative Research (AcSIR) and scientists of CSIR-NIScPR, engaged in an interactive session with experts, fostering discussions on science and innovation. Dr. Manish Mohan Gore, Scientist, CSIR-NIScPR compered the whole event and engaged the students in student expert dialoguesession. Dr. Meher Wan, Scientist, CSIR-NIScPR proposed the vote of thanks, expressing gratitude to the dignitaries, organizers, and participants.

Global experts convene in Goa for SOLAS-OSC 2024 to tackle climate change

CSIR-NIO

12th November , 2024

Scientists and experts from 20 countries have come together to address the crucial issue of climate change and the way ahead. During the ongoing 9th International Surface Ocean-Lower Atmosphere Study (SOLAS) Open Science Conference (SOLAS-OSC 2024), held in Goa, experts are likely to come up with an updated Science Plan for 20 years to combat climate change.



Held in India for the very first time, the Conference, presently underway at the National Institute of Oceanography (NIO) will focus on the critical interactions between the surface ocean and lower atmosphere, with a particular emphasis on climate change.

Prof. Sunil Kumar Singh, Director NIO expressed his gratitude for the opportunity to host the event, emphasizing the importance of SOLAS in addressing global climate challenges.

"SOLAS studies the interaction between the surface ocean and lower atmosphere, and in today's climate change context, these studies have become incredibly relevant," said Singh.

The conference will provide a platform for international collaboration, with discussions centred on mitigating climate change and promoting sustainable solutions. This year's focus is on SOLAS 3.0, the updated science plan aimed at addressing global challenges such as ocean deoxygenation.

Scientists are exploring how to influence policy through their findings, with a focus on ocean

deoxygenation, marine carbon dioxide removal (MCDR), and the impact of warming temperatures on marine ecosystems. SOLAS also strives to bridge the gap between science and policy by integrating social sciences, economics, and law into its research. While SOLAS does not create regulations, its recommendations aim to inform and influence marine policy, particularly in areas like marine pollution and climate change.

In addition to its scientific work, SOLAS supports early career scientists through programs like summer school and early career committees, fostering collaboration and building connections to strengthen the next generation of ocean-atmosphere researchers.

How to dispose post-tanning waste? Make less polluting leather

CSIR-CLRI

11th November , 2024

Nearly 5sqft of leather goes into making a pair of shoes and the process leaves more than 70 grams of chemical-laced solid leather waste. Every year, the Indian leather industry produces three billion sqft of leather and generates five lakh tonnes of solid waste, which includes 50,000 tonnes produced during the post-tanning process. And, don't forget, it takes 45litres of water to process one kg of hide.

Much of the waste is not disposed of properly. This makes the leather sector, including the tanneries in seven districts of Tamil Nadu, among the highly polluting in the country. The situation has forced researchers to look for a solution.

A few months ago, Tata International, global trading and distribution arm of the Tata Group, launched phoenix leather, which is high-quality reconstituted leather sheets made from waste generated during the post-tanning process. The product was a result of collaboration with CSIR-Central Leather Research Institute (CLRI), Chennai, to develop and patent a technology, which uses shaving waste, crust trimming, and buffing dust, generated in the post-tanning process, into 'regenerated' leather also called genocorium.

Experts say with the 50,000 tonnes of waste from post-tanning process generated every year, around two billion sqft of regenerated leather, valued at 80 billion a year, can be manufactured.

Phoenix leather is aimed at environment conscious youngsters who are willing to buy products that help reduce carbon footprint. "Phoenix leather can be used to produce shoes, bags, upholstery and garments. We are promoting this leather to accessory manufacturers and global brands who are conscious about recycling. We are sampling our product to some Indian and international brands to customise them to their requirement," says P Rajasekaran,

business head - finished leather, Tata International Limited. In 2023-24, India exported leather products and footwear worth\$ 3646.17 million.

Regenerated leather was made from pulverising the solid waste into fine powder, says P Saravanan, chief scientist at CLRI. It is then made into porridge form by partially hydrolysing, which involves a thermochemical process. Certain biopolymers and plasticisers are added to the waste, which is in a liquid form, to make a formulation. This is then poured over a sheet and dried by applying heat, and long sheets of leather-like material are obtained.

While the mechanical properties of the material were found to be 80% that of leather, Saravanan says, “When it comes to the texture and the surface character, even qualified leather technologists will not be able to distinguish between this material and leather.” The mechanical properties can also be enhanced further with the use of appropriate reinforcement materials such as synthetic fabric, cotton, or linen.

“The strategy behind this technology is repurposing the waste,” says Saravanan. “When we repurpose the waste for a different supply chain, the utilisation of the waste will be dependent on the demand-supply dynamics of that supply chain. But if we could repurpose the waste for the same supply chain, that problem will not arise. As long as we make leather, we produce waste. We use it to make leather again because there is demand,” he adds.

India International Science Festival held in Jamshedpur

CSIR-NML

11th November , 2024

It appeared to be a Curtain Raiser Event of IISF, 2024. Organised by CSIR-NML, Jamshedpur, Ministry of Science & Technology and the Ministry of Earth Sciences, in association with Vigyan Bharati (VIBHA) it is the 10th India International Science Festival (IISF-2024). As per the directions from Dr. Jitendra Singh, Minister of Science & Technology, a Curtain Raiser



Event of IISF 2024 was organised at CSIR-National Metallurgical Laboratory, Jamshedpur, as a part of 10th India International Science Festival (IISF-2024) Celebrations on November 11, 2024.

The thematic choice of this exhibition rests on 'Transforming India into a Science and Technology Driven Global Manufacturing Hub'.

The contributions of CSIR-NML in the context of Nation building were showcased in this exhibition under the broad headings of 'Mining, Minerals & Materials', 'Engineering & Infrastructure', 'Ecology & Environment'.

During this programme, CSIR-NML open their lab & facilities to students, public and local media. Dr. Sandip Ghosh Chowdhury, Director NML has welcomed the Chief Guest Shri Ranjot Singh, Chairman, CII Jharkhand State Council & Managing Director, Emdet Jamshedpur Pvt. Ltd., Prof. Ranjit Prasad, Former Professor, NIT Jamshedpur, Prof. Fr. Kuruvilla J. Pandikattu, XLRI Jamshedpur, Students, Teachers of local Schools and Colleges of Jamshedpur, Scientists and Team CSIR-NML.

Dr. Chowdhury has also briefed the ideas & objectives of the Curtain Raiser Event of IISF 2024. IISF provides best platform, especially to students & researchers. Shri Ranjot Singh as Chief Guest clearly elaborated the role of CII in the industrial growth with our own developed technology.

He emphasized the need to strengthen the local manufacturing industries of Jharkhand for overall growth to fulfill the target of developed country and Interacted with students with a lot of open question and invited students to take help of CII for skill training.

Prof. Ranjit Prasad, Former Professor, NIT Jamshedpur as Guest of Honour has delivered a talk on the importance of Indian technology and process, which will lead to self-reliant India. It was meant to encourage students to work with passion not for degree. He elaborated the role of VIBHA and IISF in shaping the Indian knowledge base for faster growth of our country.

Prof. Fr. Kuruvilla J. Pandikattu, XLRI Jamshedpur delivered a keynote lecture on the role of physics, metaphysics and management for industrial growth. He linked philosophy with ethics for the growth of manufacturing in India and Jharkhand.

Dr. Trilochan Mishra, Chief Scientist & Chairman of Curtain Raiser Event of IISF 2024 proposed the vote of thanks. He thanked all the students, teachers and NML Staff members for showing tremendous enthusiasm and participation in the programme.

Dr. Mishra expressed his appreciation to all the members of the organising committee for their untiring effort in making this programme a grand success.

Over 350 students from BPM 10+2 High School and Srinath University, participated in this Curtain Raiser programme of IISF 2024. After the inaugural session, the students from various schools, colleges & technical institutions visited Posters stalls, Exhibition stalls & various laboratory & facilities of CSIR-NML.

All the students expressed their happiness and showed the excitement of scientific and industrial development of CSIR-NML. The objective of this outreach programme is to disseminate the knowledge in terms of Achievements, Technologies developed, Products & Technological Services of CSIR-NML as a whole to attract Academia, Industries, R&D fraternity and common people of India to know the contributions of CSIR-NML since 74 years of it's journey towards the development of New & Digital India and also to get an insight into the work life of researchers.

The exhibition may provide an ample opportunity to know the latest development of CSIR-NML in the field of Science & Technology and also, it may encourage the industries in the long run.

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