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NEWS BULLETIN

16 TO 20 JULY 2024



CSIR-NPL Hosts Workshop on Quality Assurance of Water and Bharatiya Nirdeshak Dravyas

CSIR-NPL

20th July , 2024

Council of Scientific and Industrial Research - National Physical Laboratory (NPL) organized a workshop under the 'One Week One Theme- Chemicals and Petrochemicals' initiative on 19th July 2024, focusing on the quality assurance of water and the dissemination of Bharatiya Nirdeshak Dravyas (BNDs). The keynote address was delivered by Dr.S.R. Dhakate, Senior most scientist of CSIR-NPL. The convenor of the workshop Dr. S.Swarupa Tripathy briefed about the theme of workshop and emphasized on how the quality assurance of water can be done using Bharatiya Nirdeshak Dravyas.



The Certified Reference Material (CRM) which is branded as 'Bhartiya Nirdeshak Dravya', supports the testing and calibration of laboratories, for assuring quality at par with international standards. Mr. Pradeep Singh, Director of Ministry of Jal Shakti, emphasized on the significance of water quality management in India. He explained and showed the mapping of water quality control program being carried out under Jal Jeevan mission.

Mr. Ajay Tiwari, Head, Laboratory Policy & Policy development BIS explained the role of BIS in packaged drinking water. He has explained how the testing laboratory under BIS is involved for the packaged drinking water testing. CSIR-NPL provided an overview of the Bharatiya Nirdeshak Dravyas (BND) activities, discussing their importance in ensuring the standardization and accuracy of measurements in various scientific and industrial applications.

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[Indiaeducationdiary](http://indiaeducationdiary.com)

Hazardous waste of unit at Cuncolim ind estate to be analysed: Sequeira

CSIR-NEERI

20th July , 2024

The Goa State Pollution Control Board (GSPCB) has appointed CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) to analyse the hazardous waste generated by a unit in the Cuncolim Industrial Estate.

The analysis will ascertain the percentage of hazard and explore the possibilities of putting the waste to other uses.

Repeatedly, residents near the industrial estate have raised concerns over the hazardous waste stored by M/s Sunrise Zinc Ltd. Over the past five years, GSPCB has incurred an expenditure of Rs 21.31 lakh to cover the hazardous waste dump with tarpaulin sheets to prevent water contamination during the monsoon.

“Based on these findings, the Board will take a call,” said environment minister Aleixo Sequeira, replying to Cuncolim MLA Yuri Alemão and Fatorda MLA Vijai Sardesai.

Innovate in energy fields to combat climate change, CSIR-NIO Chief Scientist urges IPE students in Visakhapatnam

CSIR-NIO

20th July , 2024

Council Of Scientific and Industrial Research–National Institute Of Oceanography (CSIR-NIO) Visakhapatnam Regional Centre Chief Scientist V.V.S.S. Sarma has urged the students of Indian Institute of Petroleum & Energy (IPE) to innovate in energy fields to combat climate change. Otherwise, he cautioned that it will have a cascading effect on the future generations. He participated as the chief guest at the fourth convocation of the IPE here on Saturday.

Delivering the convocation address, Prof. Sarma stressed on adopting ethical practices in the energy sector as it can impact millions of lives and have a long-lasting consequences on environment. He urged the graduates to drive the digital transformation of the energy industry. As part of the 'Make in India,' promotion, Prof. Sarma urged for creation of trust on the Indian products in the global market.

IPE Director Shalivahan and Registrar Ram Phal Dwivedi, faculty, staff, students and their parents, and guests participated in the event.

Prof. Shalivahan said that in the convocation, the institute conferred its first Ph.D. degree on Gouri Sankar Das who completed his research on the topic "Advanced Nano-carbons from Waste and Biomass for Renewable Energy Technologies, Green Hydrogen Production and Fabrication of Flexible Electronics" under the guidance of Kumud M. Tripathi & Prof. Somnath Ghosh. In addition, 58 B.Tech. students, of whom 26 from Petroleum Engineering and 32 students from Chemical Engineering, were awarded the degrees.

Ms. Aayushi Jagat Gangwar of B.Tech (Petroleum Engineering course) received the President's gold medal based on her academic excellence and merit in extra-curricular activities. Two students from each branch have received gold and silver medals for their

academic excellence. The medal winners were Abdul Rahman S., (Institute's gold medal in Chemical Engineering); B. Abhinav Tryambakrao (gold medal in Petroleum Engineering); Ayush Ranjan (silver medal in Chemical Engineering) and Aayushi Jagat Gangwar (silver medal in Chemical Engineering).

Prof. Shalivahan stressed on the need to take the lead in solving industry problems in oil and energy sectors. He urged the students to be scientific in approach and less stressed in life. He said that the construction activities of the permanent campus of the institute were under progress. He hoped that the next annual convocation would be held in the permanent campus of the institute. He sought strong alumni support for the institute's development.

Chip manufacturing will commence soon: CM Patel

CSIR-CEERI

20th July , 2024

Gujarat has rolled out a dedicated policy for the semiconductor sector and chip manufacturing will commence soon in the state, Chief Minister Bhupendra Patel said on Friday, assuring that his government will provide necessary assistance to the industry.

Patel was speaking after inaugurating the daylong Gujarat SemiConnect Conference 2024, covering various avenues of the semiconductor sector, at the Mahatma Mandir convention centre. Micron Technology, Tata Electronics and CG Power, which are building their semiconductor plants in Gujarat, have collaborated with the state government as knowledge partners for the conference.

In his address, the chief minister assured those keen to invest in the sector that his government would provide all necessary assistance for chip manufacturing facilities in the state.

“Gujarat is the first Indian state to have implemented a dedicated policy for the semiconductor sector. Within a few months of its implementation in 2020, Micron Technology decided to set up a chip manufacturing plant in Gujarat. We allotted them land at Sanand in just one week,” he said.

“I am confident chip manufacturing will commence soon in Gujarat. We are also working on creating manpower for this sector,” the CM said. In their addresses, top leaders from Micron Technology, Tata Electronics and CG Power stressed the need for the development of infrastructure, rail and road connectivity and other such facilities near Dholera and Sanand where semiconductor units are coming.

Mona Khandhar, principal secretary in the state’s Department of Science and Technology,

informed the audience that the three chipmakers are on course to start their operations in the state. In his address, Gursharan Singh, senior vice president at Micron Technology, stressed the need for robust infrastructure and other facilities for the semiconductor sector. “While our primary facility in Sanand is under construction, I am pleased to share that technology transfer, line and product qualification at our mini facility in Sanand is progressing on schedule,” he said.

Singh also stressed that direct flights between Ahmedabad and semiconductor nations like Taiwan, South Korea and Japan are essential to facilitating new investments, knowledge sharing and collaboration with overseas partners.

Arun Murugappan, chairman of Tube Investments, also talked about the need for infrastructure and facilities similar to that of Taiwan.

Randhir Thakur, CEO and MD of Tata Electronics Private Limited, said the company has committed to invest \$11 billion towards its semiconductor fab project in Dholera, which he said will generate over 20,000 jobs.

Nirma inks MoU with CSIR-CEERI to boost semicon learning

In a bid to enhance the learning experience of students while pursuing research in semiconductors, city-based Nirma University signed a Memorandum of Understanding (MoU) with CSIR-Central Electronics Engineering Research Institute, Pilani on Friday. University officials said the MoU aims to enhance the learning experience by offering students from Gujarat access to world-class facilities and hands-on experience in cutting-edge semiconductor research.

Two days National Seminar on Innovation in Regimenal therapy organises in Srinagar

CSIR-IIIM

18th July , 2024

Two days National Seminar on Innovation in Regimenal therapy - Combining traditional methods with contemporary research was inaugurated today at, University of Kashmir, Srinagar. The seminar is being organized by Regional Research Institute of Unani Medicine, Srinagar a peripheral institute of Central Council for Research in Unani Medicine New Delhi, Ministry of Ayush, Government of India. During the inaugural session two MoUs were also signed by CCRUM with CSIR-IIIM, J&K and SKIMS, Srinagar. Both the Vice Chancellors and Director SKIMS expressed their willingness to collaborate with CCRUM in the area of research and development of Unani Medicine.

Dr. N. Zaheer Ahmed, DG, CCRUM, New Delhi presided over the inaugural function. Prof. Nilofer Khan, Vice Chancellor, University of Kashmir was Special Guest of Honour, Prof. Shakeel Ahmed Ramshoo, Vice Chancellor, IUST Awantipora was distinguished guest of Honour, Prof. M. Ashraf Ganie, Director, SKIMS, Srinagar was Guest of Honour in the inaugural function. The seminar aims to enhance Regimenal therapy a core component of Unani Medicine that emphasizes life style modifications and physical therapies for Holistic health. With its rich heritage Unani Medicine has long utilized techniques such as massage, cupping, exercise and diet regulations which comes under Ilaj Bit Tadbeer to promote well being. In his presidential address Dr. N. Zaheer Ahmed highlighted the development of SOPs on Hijama, an important regimenal therapy of Unani medicine and emphasised the importance of organizing the seminar on regimenal therapy and highlighted the recent initiatives of CCRUM.

Eminent speakers and experts from CCRUM and other reputed Unani colleges delivered talks on important topics related to regimenal therapy. The special feature of the seminar is the hands on training on 3 important modalities - Natool (irrigation), Irsal-e- alaq (leech therapy) and Hijama (cupping). The aim is to encourage innovation in this area with the use of latest technologies.

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[Pib](#)

CSIR chief Kalaiselvi gets two-year extension

CSIR-CECRI

17th July , 2024

Nallathamby Kalaiselvi, the first woman Director General of the Council of Scientific and Industrial Research (CSIR), on Tuesday was granted a two-year extension in service. A government order said the Appointments Committee of the Cabinet had approved the extension of tenure of Ms. Kalaiselvi "for a period of two years beyond 07.08.2024, or until further orders, whichever is earlier."

She was appointed to the post in August 2022 following the superannuation of Shekhar Mande in April that year.

She will also hold the charge of Secretary, Department of Scientific and Industrial Research.

Ms. Kalaiselvi has risen through the ranks in CSIR and broke the proverbial glass ceiling by becoming the first woman scientist to head the Central Electrochemical Research Institute (CSIR-CECRI) in February 2019.

She had started her career in research as an entry-level scientist at the same institute.

Hailing from Ambasamudhram, a small town in Tirunelveli district of Tamil Nadu, Ms. Kalaiselvi did her schooling in Tamil medium, which, she said helped her grasp the concepts of science in college.

Ms. Kalaiselvi's research work of more than 25 years is primarily focused on electrochemical power systems and in particular, development of electrode materials, and electrochemical evaluation of in-house prepared electrode materials for their suitability in energy storage device assembly. Her research interests include lithium and beyond lithium batteries, supercapacitors and waste-to-wealth driven electrodes and electrolytes for energy storage and

electrocatalytic applications. She is currently involved in the development of practically viable sodium-ion/lithium-sulfur batteries and supercapacitors.

Ms. Kalaiselvi also made key contributions to the National Mission for Electric Mobility. She has more than 125 research papers and six patents to her credit.

Grand Inauguration of the celebration of One week - One theme held at CSIR-Central Leather Research Institute in Chennai

CSIR-CLRI

16th July , 2024

Dr Jitendra Singh, Hon'ble Minister of Science & Technology Govt. of India & Vice President, CSIR had announced the CSIR One Week One Theme (OWOT) Campaign to create a conglomeration of the efforts of all CSIR labs working on similar projects, enabling the showcase of technology packages, indigenous products, processes and devices to enhance public awareness. The



OWOT Campaign for the Chemicals (including Leather) and Petrochemicals (CLP) theme is to be celebrated at CSIR-CLRI on the 16th, 19th and 20th of July 2024. The Grand Inauguration of the campaign was held on 16th July 2024 at the Triple Helix Auditorium of CSIR-CLRI. The central theme of the Inaugural Session was “Trends in Specialty Chemicals for Leather by 2030” (Tanner-Researcher-Chemical House Interaction Meet). The welcome address was delivered by Dr K J Sreeram, CLP Theme Director and Director, CSIR-CLRI in which he explained about the significance of the OWOT campaign and its role in strengthening the Institute-Industry partnership. The inaugural address was delivered by Shri P Rajasekaran, Business Head – Finished Leather, Tata International Limited. Shri P Rajasekaran shared his insights on the technological advancements in the value chain of leather processing and threw light on affordable leather chemicals.

The inaugural session was followed by an engaging and informative panel discussion on “Trends on Specialty Chemicals in Leather by 2030”. The Moderator of the panel discussion was Dr KJ Sreeram. The panellists were – Shri Nagarathinam Annamalai, Regional Segment Manager (Asia), Beam House – Stahl India Pvt. Ltd., Dr V Vijayabaskar, Vice-President and Head (R&D), Balmer Lawrie & Co. Ltd., Shri P Gopalakrishnan, Managing Director, Sellam

Chemicals Pvt. Ltd., Shri K N Manickham, Regional Manager (South India), Colourtex Industries Pvt. Ltd., Shri S Govardhanan, General Manager, ATC Chemicals India Pvt. Ltd. and Shri Sushanta Kumar Patnaik, Head of Sales – Finishing/ Sales (South), TFL Quinn India Pvt. Ltd.

Dr V Vijayabaskar spoke about the deployment of polycarboxylates for chrome reduction in tanning process and emphasized on the importance of collaboration for tackling challenges. Shri S Govardhanan shared his views on cleaner leather processing and the various eco-friendly options available in this regard. Shri K N Manickham shared the opportunities available for utilizing leather and leather waste and also alternative uses of leather chemicals in different industries. Shri P Gopalakrishnan focussed on possible avenues to address the current environmental challenges faced by the leather industry and also spoke about AI-based interventions for Quality Control and importance of market analysts. Shri Sushanta Kumar Patnaik explained the role of leather chemicals from the perspective of innovation, sustainability and collaboration. Shri Nagarathinam Annamalai gave insights on process optimization and its impact and accentuated the importance of adopting the new-age technologies. Shri P Rajasekaran brought out the importance of positioning leather products as premium goods integrating right price and right marketing. Dr K J Sreeram summarized the key takeaways from the panel discussion.

The event witnessed the presence of CSIR Directors, CSIR Business Teams, Scientists, Industry representatives, policy makers and students. The event served as Tanner-Researcher-Chemical House Interaction Meet leading to stimulation of powerful insights that would help in shaping the future direction of the leather industry by effective deployment of specialty chemicals.

‘Species migrating because of degrading ecosystems’

CSIR-NEERI

16th July , 2024

Expressing concerns over degrading ecosystems, Botany professor ML Khan said that species from lower altitudes are migrating to higher altitudes in the northeastern state of Arunachal Pradesh and called for urgent damage control measures. Khan, senior professor (HAG Grade), department of botany, Harisingh Gour Vishwavidyalaya, Sagar (MP), was the chief guest at the ‘Dr Ashok S Juwarkar memorial lecture’, on Monday. Atul Vaidya, director, CSIR-NEERI, was present on the dais.



On degraded ecosystems, Khan emphasised the need for long-term solutions through science and policy involving everyone. Citing personal observations on climate change, he said that species at lower altitudes are migrating to higher altitudes in Arunachal Pradesh and there is a change in the flowering season and overall snowfall pattern. He presented several management options for mitigating climate change and its impacts on biodiversity in Arunachal Pradesh.

Khan said that there has never been a more urgent need to revive damaged ecosystems than now. He briefed the audience about the mapping of bioresources in the Eastern Himalayas and Indo-Burma, as well as conservation strategies for rare and endangered tree species. Khan also discussed the inventory and mapping of biodiversity attributes in the sacred groves of Manipur, Arunachal Pradesh and Central India. He also spoke of the strategies adopted for the restoration of Rudraksh plants.

In his welcome address, Atul Vaidya, director of CSIR-Neeri, outlined the significant contributions of late Dr Ashok S. Juwarkar. He said that the research work done by Dr Juwarkar laid a new foundation in the area of agriculture and environment, and CSIR-NEERI is continuously progressing in this field.

Earlier, the book 'Trees and Tree Microhabitats of CSIR-NEERI Nagpur,' dedicated to late Dr Ashok S Juwarkar, was released, and his significant contributions were screened for the audience. The editor of the book, Dr Shalini Dhyani, principal scientist, CSIR-NEERI, was also present.

Dr Debishree Khan, senior scientist, CSIR-NEERI, conducted the proceedings. Prakash Kumbhare, senior principal scientist, CSIR-NEERI proposed the vote of thanks.

Fifty B.Sc. and M.Sc. (Environmental Science and Biotechnology) students from Kamla Nehru Mahavidyalaya, Nagpur, visited the laboratories of CSIR-NEERI and interacted with scientists.

WBPCB to procure machine to convert domestic waste into RDF

CSIR-CMERI

16th July , 2024

The West Bengal Pollution Control Board (WBPCB) is procuring a machine capable of converting mixed domestic waste, including plastic waste, into Refuse Derived Fuel (RDF) which can be used to produce electricity by power plants. “We have plans to set up such plants in four places – two of which will be in Kolkata and Bidhannagar for undertaking a pilot project and research. If the pilot project is successful, it will be spread further. The respective urban local bodies will oversee the operation of these plants,” said Rajesh Kumar, member secretary of WBPCB on the sidelines of a conclave on “Sustainable Growth Opportunities for Plastics & Chemical Sectors in West Bengal” organised by Merchants’ Chamber of Commerce & Industry (MCCI) in association with Indian Chemical Council and Indian Plastics Federation. He added that WBPCB has encouraged the use of biodegradable plastics. The pollution panel has facilities for converting plastic waste into RDF in many of the 107 legacy dumpsites in the state WBPCB chairman Kalyan Rudra said that Bengal generates three lakh tonnes of plastic waste every year.

According to Rudra, CSIR-CMERI in Durgapur is successfully implementing a project to generate RDF from plastic waste. “Plastic should be used as a resource to make life sustainable,” Rudra said. Md. Ghulam Rabbani, state Environment minister, said that WBPCB has developed the most intensive air quality monitoring network in the country. Calling for collaboration between government, industry and civil society, he said that the state is already focusing on biodegradable and recyclable plastics. “Industries in West Bengal should ensure regulatory compliance and adopt green technology in production,” he added. The minister maintained that the state has huge opportunities for industries, especially in plastics and chemicals. He asserted that the state offers a conducive business environment with adequate infrastructure and skilled labour.

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NIO scientist gets prestigious Indo-German award for AI in oceanography

CSIR-NIO

16th July , 2024

Sadaf Ansari, Senior Scientist at the Marine Instrumentation Division (MID) of National Institute of Oceanography (NIO) Goa, has been awarded the prestigious Indo-German WISER Award 2024 by the Indo-German Science & Technology Centre to undertake research in use of Artificial Intelligence (AI) in oceanography, in Germany.

The project titled 'AI-Driven Advanced Plankton Analysis for Ocean Monitoring' will be conducted with Prof Rainer Kiko, Heisenberg, Professor and Group Leader of the Plankton Biogeochemistry and Dynamics Group at the GEOMAR Helmholtz Centre for Ocean Research in Kiel, Germany. Her project will span three years.

The award is designed to fund innovative research in the STEM fields (Science, Technology, Engineering, and Mathematics).

Reacting to the achievement, Ansarasi said, "Receiving such awards is very encouraging, as it shows that your research is being appreciated and funded. I am very passionate about Artificial Intelligence (AI). This award is a recognition of my hard work, dedication, and contributions to the field of AI in oceanography. It acknowledges my efforts and motivates me to break new ground in my research."

"Additionally, it provides opportunities for further research and collaboration with the research team in Germany, enabling me to contribute to significant advancements in AI-driven research in the Indian Ocean," the NIO Senior Scientist told O Herald. Under this award, Ansari will be undertaking a project on 'AI-driven Plankton Image Analysis for Ocean Monitoring'.

Elaborating on the project, she said, "Plankton are essential components of our oceans. Phytoplankton, the plant plankton, produce oxygen crucial for supporting life on Earth.

Zooplankton, the animal component, play a vital role in the biological carbon pump and fish production. Consequently, ocean and climate researchers seek to understand how climate change and global warming affect these organisms.”

However, identifying and counting them is challenging due to their complex morphological features and vast taxonomic diversity. Manual methods are time-consuming, requiring days of manpower and expertise, making them expensive. But AI helps in completing the task on real time basis.

“In 2019, as an AI researcher, I collaborated with Dr Dattesh V Desai, a Biological Oceanographer and Senior Principal Scientist at CSIR-National Institute of Oceanography, to address this challenge using AI. Our work has achieved significant success. With the Indo-German WISER Award, we will scale up our efforts,” she said.

Considering AI in oceanography is a recent introduction, what role does AI in ocean research at present and future, especially in India?

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