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NEWS BULLETIN

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C-DOT and CSIR-National Physical laboratory sign agreement for 'Development of NavIC based IST traceable Primary Reference Time Clock for Telecom Sector'

CSIR-NPL

20th September , 2023

Centre for Development of Telematics (C-DOT), the premier Telecom R&D Centre of the Department of Telecommunications (DoT) and CSIR-National Physical laboratory (NPL) signed an agreement for 'Development of NavIC based IST traceable Primary Reference Time Clock (PRTC) for Telecom Sector'.

The agreement is signed under the Telecom Technology Development Fund (TTDF) scheme of the DoT for providing funding support to domestic companies and institutions involved in technology design, development, commercialization of telecommunication products and solutions to enable affordable broadband and mobile services in rural and remote areas.

The project focuses on the development of a device which shall provide direct Indian Standard Time (IST) traceability to all the Telecom Service Providers (TSPs) and Internet Service Providers (ISPs) within ± 20 ns. This shall benefit India in multiple ways starting from reducing the dependency on GPS, shifting to IRNSS/NavIC, digital forensic analysis of transactions, cyber secure networks, reduce call drops & further synchronise all the telecom services with one reference time source IST, developed by CSIR-NPL.

Time synchronization of the telecom networks will be foundation for a strong cyber secured nation, as every bank transaction, stock market transactions and exchange of information is through the TSPs and ISPs. Development of NavIC based IST traceable Primary Reference Time Clock (PRTC) is an initiative which aims towards achieving the objective of "One nation One time".

Speaking at the Agreement signing ceremony, Dr. Rajkumar Upadhyay, CEO, C-DOT underscored the tremendous potential of Indian R&D in developing futuristic innovative solutions for the benefit of our nation's prosperity and improving the quality of life. He

emphasized the need to collaborate in other areas of joint interest for realizing the vision of “Atmanirbhar Bharat”.

The event was attended by Dr. Ashish Agarwal & Dr. K. K. Maurya, Senior Principal Scientists along with other senior scientists of NPL. Dr. Pankaj Kumar Dalela, Ms. Shikha Srivastava- Directors of C-DOT were also present during the agreement signing ceremony.

Both C-DOT and CSIR-NPL expressed their enthusiasm and reiterated their firm commitments towards taking this engagement further with a resounding success.

NEERI team collects samples for new garbage plant project

CSIR-NEERI

19th September , 2023

Nagpur-based National Environmental Engineering Research (NEERI) team has started collecting samples from the Dadumajra dump site for the new garbage processing plant project. The team will submit details to the ministry of environment, forest and climate change of the central government.

Sources revealed that sampling of soil, air and water will be done for the project.

Testing has to be done as per specifications of NEERI scientists and a detailed report will be submitted for environmental clearances. Scientists will check technical parameters during this exercise. Since the project is located near a residential area, the tests are crucial.

A few days back, the NEERI team visited the city to conduct detailed documentation for environment impact assessment (EIA) of the new integrated garbage processing plant project in Daddumajra.

Since the civic body authority has hired the services of NEERI for EIA, which is a very crucial and time-consuming exercise, it needs quality expertise for assessment on all aspects related to the environment.

The assessment includes the process of identifying, predicting, evaluating and mitigating biophysical, social and other effects of development proposals before taking major decisions and making commitments. Sources said that since the project has been planned near the residential area of the city, all kinds of environmental permissions are important to assess its effect not only on human beings but also on environment, like soil, water and air.

We also published the following articles recently

NAAC peer team visits FM University for assessment A team from the National Assessment and Accreditation Council (NAAC) has arrived at Fakir Mohan University in Balasore for a three-day assessment. The university will receive an NAAC grade after the assessment is complete. The team will evaluate the qualitative metrics outlined in the Self Study Report (SSR) submitted by the university. The assessment will involve visiting various departments, inspecting facilities, and engaging with university officials, students, alumni, faculty members, and non-teaching staff. The team will assess curricular aspects, teaching, research, infrastructure, governance, and institutional values.103612460

Bio-CNG plant to help clear garbage piles at dump site Residents living near the garbage dump in Jamalpur, Ludhiana, face poor living conditions due to the stench and pollution caused by the unprocessed waste. Engineers India Limited (EIL) has offered to set up a bio CNG plant in the city, free of cost and for a 20-year maintenance period. The Ministry of Housing and Urban Affairs has partnered with EIL for such projects. The Ludhiana Municipal Corporation (MC) has agreed to provide land and transport segregated wet waste to the site. The MC will stop the ongoing tendering process for the project.103725518

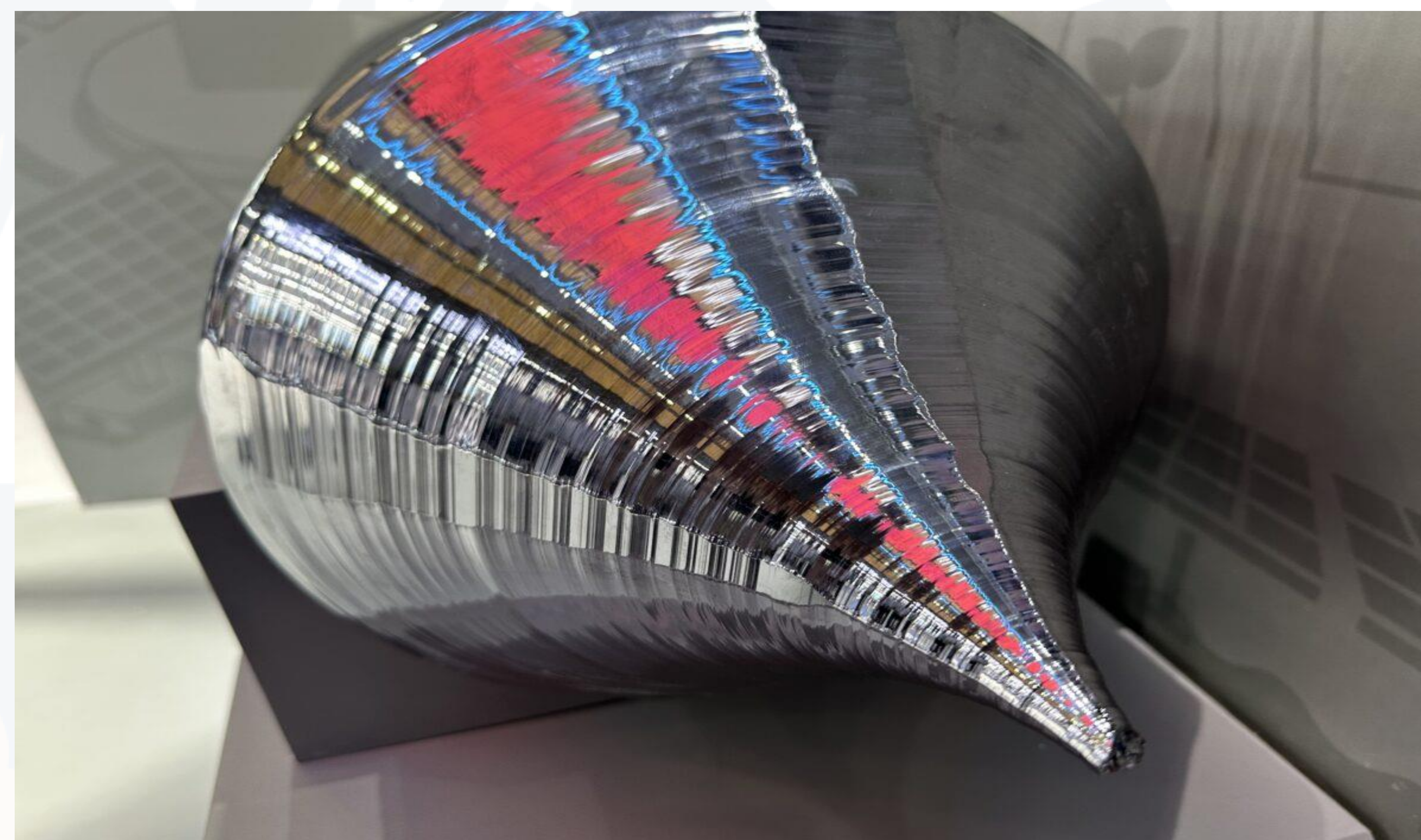
Jodhpur's riverfront project hanging in limbo since 2013 Residents of Jodhpur feel disappointed as a riverfront project, similar to the one inaugurated in Kota, has been awaiting funds since 2013. The 'Jojari River Front' project, inspired by the Sabarmati River Front in Ahmedabad, was proposed during the previous Gehlot-led government. The Centre's Jal Shakti ministry approved the project with a budget of Rs 400 crore, but it has been stalled due to lack of support from the state government. The project aims to address the issue of contaminated water discharge into the Jojari river.103620025

Indian scientists making high-purity polysilicon ingots from recycled PV cells

CSIR-NPL

19th September , 2023

Researchers at the Academy of Scientific and Innovative Research (AcSIR) and the CSIR-National Physical Laboratory, New Delhi, in India have used the SPS technique to produce polysilicon ingots from recycled solar cells in end-of-life PV modules. They claim to have produced small-sized ingots with purity levels of 98% to 99%.



These purity levels slightly exceed the 3N purity level, which the scientists say is greater than that of metallurgical-grade silicon. It is also “good enough” for applications other than solar cells, like battery materials.

“Currently, we are working towards the purification process of recovered silicon to grow ingot better than 5N, so that same can be used in the fabrication of new solar cells,” researcher Sushil Kumar told pv magazine. “This work is expected to be completed in the next few months.”

The scientists used a modified hot pressing technology known as SPS, involving the passage of pulsed direct current with millisecond pulse widths, high current, and low voltage through the pressing tool and sintered body. This approach enables rapid heating and short processing times, typically within a few minutes. The researchers specifically applied this technique to consolidate the silicon powder obtained from the recycled solar cells.

They conducted the experiment on a 98 cm × 164 cm solar module, weighing 17.18 kg. They used a mechanical treatment to remove the aluminum frame (0.62 kg) and the junction box.

They then cut down the remaining parts of the panel into small pieces of varying sizes, ranging from 9.5 cm × 11 cm to 12 cm × 16 cm.

The process involved thermally treating the recovered wafer pieces on a stainless steel plate at an optimized temperature of 480°C for 30 minutes in a muffle furnace, resulting in a total weight of 23.04 grams. Glass, silicon cell fragments, and connecting wires were recovered, while the EVA encapsulant and backsheet were removed. To eliminate residual ash adhering to the cell pieces, the cell fragments underwent ultrasonic cleaning with hot distilled water for one hour.

GSI to conduct one-year survey in Kolhapur

CSIR-NGRI

19th September , 2023

The Geological Survey of India (GSI) is going to carry out a year-long survey to explore new minerals in Kolhapur district which is part of National Baseline Geoscience Data Generation Programmes that will adopt deep penetration geophysical techniques.

A team comprising three geophysicists are going to arrive in Kolhapur by the end of September. The experts are associated with the Hyderabad-based National Geophysical Research Institute of India.

The district administration has appealed to the people to cooperate with the scientists. Several incidents have occurred in the past where the scientists of the GSI officials faced opposition from the locals mainly due to the misunderstandings.

The research will be carried out under senior geophysicist S K Bhattacharya, Niharika Das and scientist Shikha Josh. A similar exercise will be held in northern Belagavi and Sangli district. We also published the following articles recently

Over 1,100 villages in Kolhapur, India, are expected to celebrate the festival of Ganeshotsav in an eco-friendly manner. The zilla parishad CEO has instructed gram panchayats to prevent river pollution while respecting religious sentiments. The district has identified 1,122 old wells and quarries and constructed 977 alternative systems for immersion. Additionally, the CEO has called for the proper management of waste collection and transportation, with the help of ASHA and Anganwadi workers, schools, and public awareness campaigns. The Kolhapur Municipal Corporation plans to set up a war room and helpline for Ganesh immersion.

The cities of Kolhapur and Ichalkaranji in Maharashtra are experiencing water cuts due to

maintenance work carried out by the Maharashtra State Electricity Distribution Company (MSEDCL). Repair work on the electricity lines in Kolhapur resulted in a disruption of water supply to most parts of the city, while maintenance work on the Krishna Tap Water Supply Scheme in Ichalkaranji caused water supply disruption throughout the city. Kolhapur has been facing frequent water cuts, leading to inconvenience for its residents.

Kolhapur and Satara districts in Maharashtra, India, received light rain, with Kolhapur receiving 3.2mm and Satara receiving 7mm of rainfall. The Indian Meteorological Department issued a yellow alert for thunderstorms in the region. Water levels in dams, including Radhanagari, Tulshi, and Warna, are high. In Satara, the Koyna dam has reached 84.12% capacity. In Nashik, heavy rainfall has increased water stocks in 24 dams to 75% of their total capacity. The situation is sufficient to meet drinking water needs.

Two days Youth Conclave organized by IIIM Concluded

CSIR-IIIM

17th September , 2023

The two days Youth Conclave organized by CSIR-Indian Institute of Integrative Medicine, Jammu as a part of its endeavour to promote startup entrepreneurship ecosystem in the region concluded here today.



The two days mega event held at Police Auditorium, Gulshan Ground, Jammu was inaugurated yesterday by Dr. Jitendra Singh, Union Minister of State (Independent Charge) Science and Technology and Vice President, CSIR, attracted a huge crowd of young innovators, entrepreneurs, students, scholars and members of civil society.

On day 2 of the event as well, an overwhelming response of visitors was seen as more than 300 students, scholars and faculty of various academic and scientific institutions of Jammu region visited and witnessed the products and innovations put on display by the Startup.

The conclave was mainly focused to inspire the youth and provide them a nice platform to showcase their innovations and interact with the successful startup. A total of 25 startups participated from across the UT of Jammu and Kashmir.

Some of the prominent startups that took part in the Conclave were and showcased their innovations were Paradox Sonic Space Research Association (PSSR India), Himalayan Essential Oils Producer Company Ltd., JP Life Science, JK Aroma Ltd., Happy Hearts, Herbal Aura, Pi Jam. Stalls were also put up by Technology Business Incubator, BioNest Bio-Incubation Centre, AIC Atal Incubation Centre and Aroma Mission from CSIR-IIIM.

At the valedictory function of Youth Conclave held here, Dr. Zabeer Ahmed, Director, CSIR-IIIM said that institution has established facilities to provide all kinds of support to the budding innovators and startup and thus offered them to avail the benefit from the institutional incubators.

He further mentioned that CSIR-IIIM incubators would soon launch an interactive web-portal where readily available information would be available for the guidance of startup and entrepreneurs. The success of the Youth Conclave underscores the region's appetite for innovation and entrepreneurship, he added.

On the occasion, Director, CSIR-IIIM also felicitated the participating startup. The event was organised under the chief patronage of Dr. Zabeer Ahmed, Director CSIR-IIIM, Jammu and overall supervision of Er. Abdul Rahim, Chief Scientist.

Er Anil Katare and Dr. Saurabh Saran coordinated the event. Dr. Asha Chaubey, Dr. Dhiraj Vyas, Dr. Sumit Gandhi, Dr. Deepika Singh, Dr. Naveed Qazi, Vikram Singh, Ajay Kumar, Dr. Shashank Singh, Dr. Tasduq Abdullah, Rajinder Kumar, Rajesh Gupta, Bhupinder Singh, Daleep Gehlot, were the organizing committee members for the event.

Culmination of day-long Chintan Shivir on "CRTDH Empowering MSMEs" at CSIR-Institute of Minerals and Materials Technology, Bhubaneswar supported by Department of Scientific and Industrial Research, Ministry of Science and Technology

CSIR-IMMT

16th September , 2023



The fourth “Chintan Shivir on CRTDHs Empowering MSMEs” in a series of Chintan Shivirs under CRTDH program of Department of Scientific and Industrial Research, Ministry of Science and Technology culminated at DSIR-CRTDH at CSIR-Institute of Minerals and Materials Technology, Bhubaneswar.

This Chintan Shivir was organised to strengthen translational research and facilitate collaboration between industry and research institutions and in creating a conducive ecosystem to bridge the gap between scientific knowledge, ideas, and inventions and their practical application in the form of marketable products and services. The CRTDH is playing a significant role by facilitating the creation of state-of-the-art facilities & resources for strengthening the MSME sector and thereby contributing to technological advancement and economic growth of the Country.

The Chintan Shivir was inaugurated by Dr. Sujata Chaklanobis, Scientist-G & Head-CRTDH, DSIR, Dr. Ramanuj Narayan, Director, CSIR-IMMT, Bhubaneswar and Prof. Manoj K. Dhar, Director, AcSIR. In her recorded video address, Dr. N. Kalaiselvi, Secretary, DSIR & DG,

CSIR emphasized on the role of DSIR and CRTDHs in promoting entrepreneurship, showcasing local research and innovation, fostering skill development across diverse sectors, and more.

Dr. Sujata Chaklanobis in her inaugural address stated that, Chintan Shivirs were part of 'Azadi Ka Amrit Mahotsav' initiative and are the stepping stone towards fulfilling the initiatives of Hon'ble Prime Minister Shri Narendra Modi ji on Startup India, Make in India, and Skill India under the "Aatmanirbhar Bharat" strategy. She emphasized that these initiative aims to enhance economic growth, create job opportunities, and exhibit India's capabilities on the global stage. Dr. Sujata Chaklanobis 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. Dr. Ramanuj Narayan, Director, CSIR-IMMT, Bhubaneswar acknowledged & appreciated DSIR in supporting the CRTDH facility here for R&D endeavors of MSME, startups and individual innovators. Dr. Narayan envisioned that in years to come, the CRTDH would contribute significantly to the Indian economy, generating employment opportunities and driving innovation. Dr. Yatendra Chaudhary, project coordinator for CRTDH at CSIR-IMMT, Bhubaneswar started the thematic session by delivering an overview of CRTDH at CSIR-IMMT, Bhubaneswar, its broader objective, infrastructural facility available, technologies developed & transferred / licensed, MSME connect initiated, issues resolved for MSME, services offered and available opportunities for MSMEs. As part of MSME connect, a "Samvad" was coordinated by Dr Vipin C Shukla, Scientist-F, DSIR along with project coordinator for CRTDH at CSIR-IMMT, Bhubaneswar to further discuss the challenges faced by MSMEs/Start-ups/innovators and possible solutions. The 'Samvad' concluded with proposition that 5 grand challenges would be identified and it would be addressed appropriately by CRTDH at CSIR-IMMT, Bhubaneswar.

The other DSIR officials present at the event were Dr Ranjeet Bairwa and Dr Suman Mazumdar. CRTDH team from CSIR-IMMT, Bhubaneswar, delegates from the Chambers of Commerce, industry associations and representatives from Micro, Small and Medium Enterprises (MSMEs), start-ups, individual innovators, Self-help groups were also present at

the event. This Chintan Shivir harnessed the collective wisdom, knowledge, and expertise of the officials and stakeholders. It enabled comprehensive discussions and critical thinking for possible opportunities for MSMEs/Start-ups/innovators at CRTDH at CSIR-IMMT, Bhubaneswar.

The event concluded with the vote of thanks to Dignitaries, organizers, all stakeholders, press and media persons by Dr. R. Shaktivel, Chief Scientist, CSIR-IMMT, Bhubaneswar.

With Science Policy and Diplomacy Meet, One Week One Lab programme concludes at CSIR-NIScPR on September 16, 2023

CSIR-NIScPR

16th September , 2023



CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR) concluded its extremely successful “One Week One Lab (OWOL)” programme, which commenced on September 11, 2023. The valedictory function for this enriching week-long event took place today on September 16, 2023 in Vivekananda Hall of CSIR-NIScPR at New Delhi.

During One Week One Lab programme (OWOL), CSIR-NIScPR organised 9 major events namely India’s Startup Revolution: From Idea to Market, Grassroots Innovation & Skill development Conclave for Rural development, Science Communication Workshop, Student-Science Connect, Science Communication: Public Engagement with Science, Science Knowledge Convention, Science policy & Diplomacy Meet. During the OWOL programme, NIScPR invited its key stakeholders like science policy makers, diplomats, science communicators, scientists, industry, innovators, entrepreneurs, startups, farmers, teachers, students and science publishers, etc. and showcased them new initiatives and achievements of NIScPR.

In the fifth day's Science Knowledge Convention event, the Authors & Publishers Interaction Meet commenced with a talk by Mr. Rishab Bajaj from Wiley who talked about the existing collaboration between Wiley and NKRC. They highlighted the collaboration between ACS and NKRC and the features they have to offer. The Clarivate made important announcements with regards to the value addition in the form of content on their platform, Web of Science. During the event, a number of reputed science publishers participated and put their stalls. The prominent science publishers include Wiley, Clarivate, Elsevier, American Chemical Society (ACS), ACS International India, SciFinder, Grammarly, and Institute of Physics (IOP).

The One Week One Lab programme of CSIR-NIScPR, aimed at fostering public engagement with sciences and science policy and showcasing the achievements of CSIR-NIScPR, has been a resounding success, thanks to the dedication and hardwork of the participants and the organizers. The valedictory function proved to be fitting culmination to the week filled with insightful presentations and discussions.

The Science Policy & Diplomacy Meet started today with a warm and welcoming address by Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, setting the stage for a captivating and fruitful program. Prof. Aggarwal expressed pride in hosting the "One Week One Lab" programme, underscoring its role in fostering connections and stimulating discussions on critical topics such as science communication, science policy, knowledge-sharing, and science diplomacy for sustainable development. She highlighted that this initiative embodies CSIR-NIScPR's unwavering commitment to advancing scientific knowledge and promoting global cooperation. Director NIScPR highlighted the core activities and achievements of the Institute including STI policy initiatives and science communication endeavours.

Following the welcome address, Dr. Rama Swami Bansal, Head of the International S&T Affairs Directorate at CSIR, delivered an illuminating presentation. Her comprehensive overview shed light on CSIR and its extensive global linkages, showcasing the institute's international collaborations and initiatives. The event's Guest of Honour, Dr. Bhaskar Balakrishnan, former Ambassador of India and Science Diplomacy Fellow at Research and

Information System (RIS), New Delhi, shared invaluable insights into the paramount significance of science diplomacy in the contemporary world. Dr. Balakrishnan emphasized the need for India to increase its research and development (R&D) intensity as a percentage of GDP by at least 2%. He stressed the importance of stimulating sector-specific R&D and called for a substantial increase in the number of researchers, accompanied by enhanced R&D infrastructure. He also underlined the necessity for India to actively participate in global science programs and emphasized the need for young researchers to acquire the tools necessary for crafting research proposals and managing funding.

The highlight of the event was the release of a special publication on Science Diplomacy, which was unveiled by the Chief Guest, Dr. Philipp Ackermann, the German Ambassador to India and Bhutan. This publication marks a significant milestone in the dissemination of knowledge in the field of science diplomacy.

In his keynote address on Science Diplomacy for Sustainable Development, Dr. Ackermann shared his deep admiration for India's scientific achievements and its robust relationship with Germany. He noted the substantial presence of Indian students in Germany, underlining the strong ties between the two nations. Dr. Ackermann commended CSIR's science communication programs and applauded India's swift and effective response to the global pandemic. He cautioned against promoting skepticism and stressed the vital role of policy research and effective communication in shaping responses to global challenges. Dr. Ackermann called for innovative approaches to engage and train the younger generation, emphasizing the importance of entertaining and engaging methods. He praised India's achievements in space exploration, exemplified by the Chandrayan-3 mission.

Dr. Ackermann highlighted the importance of international cooperation in scientific development and called for the firm implementation of G20 declarations. He also advocated for a stronger focus on climate science in India, recognizing its significance in addressing pressing global issues. In conclusion, the event served as a platform for robust discussions on science diplomacy, science policy, and international collaboration in advancing scientific

knowledge and achieving sustainable development goals. CSIR-NIScPR's commitment to these endeavors was evident throughout the event, making it a significant milestone in the pursuit of global cooperation and scientific progress. Top of Form This was followed by Vote of Thanks by Dr Kasturi Mandal, Head, GGSD and Principal Scientist, CSIR-NIScPR.

Following the formal proceedings, a panel discussion was held on "Science Diplomacy for Sustainable Development." This was chaired by Prof. Madhav Govind, Chairperson, Centre for Studies in Science Policy, Jawaharlal Nehru University. Distinguished speakers for this session included Prof. Nitin Seth, Director, Indo-French Centre for the Promotion of Advanced Research, New Delhi; Mr R. Madhan, Director, Indo-German Science & Technology Centre, New Delhi; Dr Purnima Rupal, Former Director, CEFIPRA; Former Science Counsellor, Embassy of India, Tokyo; Former Head, DGED, CSIR and Dr Dhoya Snijders, Innovation Counsellor for India, Embassy of the Kingdom of the Netherlands, New Delhi, who shared their perspectives and engaged in a thought-provoking dialogue on the topic.

To wrap up the event, Dr Yogesh Suman, Senior Principal Scientist & Chairperson, OWOL, CSIR-NIScPR provided a comprehensive summary of the One Week One Lab programme, highlighting key takeaways and insights gained throughout the week. The programme concluded with a vote of thanks by Dr Manish Mohan Gore, Scientist & Coordinator, OWOL, CSIR-NIScPR expressed appreciation for everyone's contributions while recognizing the collective effort that made the programme a great success.

CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR) is one of the constituent laboratories of CSIR under the Ministry of Science & Technology, Government of India. It specializes in the fields of science communication; STI focused evidence-based policy research and studies. It publishes various journals, books, magazines, newsletters, and reports on science and technology. It also conducts research on science communication, science policy, innovation systems, science-society interface, and science diplomacy.

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IJBB special issue on “Multiple facets of Protein Science”

CSIR-NIScPR

16th September , 2023

The Indian Journal of Biochemistry and Biophysics (IJBB), CSIR-National Institute of Science Communication and Policy Research (NIScPR), New Delhi, has brought out a special issue in association with the Department of Biochemistry, The Maharaja Sayajirao University of Baroda, Vadodara on the theme, “Multiple facets of Protein Science” in the Indian context. As a leading publicly funded Science publishing institute in India, CSIR-NIScPR publishes 16 indexed journals in various STM disciplines.

IJBB, a monthly premier peer-reviewed research journal in the subject area of Biochemistry, Biophysics and Biotechnology, with the JIF score of 1.4, ranks first amongst the CSIR-NIScPR journals published across the disciplines. With the able guidance and active support of the recently re-constituted editorial board with reputed national/international experts, the journal has been receiving considerable attention from researchers and academicians across the globe. This special issue September 2023 IJBB Vol. 60 Issue no. 9 has 8 original research papers and 4 review articles broadly covering the emerging trends in structural biology contributed by reputed researchers in the subject area.

The articles cover (i) Design and development of mutant EGFR inhibitors from a structural perspective; (ii) Mechanistic insights into the oncogenic partnership of hADA3 and HPVE6 - paving ways for improved cervical cancer therapy; (iii) Protein Carbamylation in Neurodegeneration and other age-related disorders; (iv) Newly-discovered behaviour in the bacterial histone-like protein, HU; (v) Genotypic, phenotypic, and in silico analysis of carbapenem-resistant *Klebsiella pneumoniae*; (vi) Mitigation of pathological parameters under Jagged1 influence in DMD knockout zebrafish and patient-derived myoblast cultures; (vii) Isolation, purification and characterization of a protease from the seeds of *Artocarpus heterophyllus*; (viii) Polyphenol MHQP as an allosteric inhibitor of Kinesin-5: Cease the molecular catwalk of “Drunken Sailor”; (ix) Solution structures and thermodynamics of

cis-trans X-Pro conformers of a novel single disulfide conopeptide; (x) Synthesis, DFT and Molecular docking study of novel bis 1,2,3-triazole derivatives of 2-hydroxyquinoline-4-carboxylate as antimicrobial agents; (xi) Determination of neuroprotective effects of medium chain fatty acids and their derivatives on mutant huntingtin aggregates, oxidative stress and ATP levels in HD150Q cell line model of Huntington's disease; and (xii) The role of water molecules and its dynamics to the binding site of β -lactamase enzyme with respect to β -lactamase inhibitor.

The successful publication of this special issue would not have been possible without the unwavering support and encouragement extended by Prof. Ranjana Aggarwal, Director of CSIR-NIScPR, New Delhi. Her dedication to promoting research in the field has been instrumental in bringing this issue to fruition. The success of any scientific journal relies heavily on the collaborative efforts of various individuals and teams. In the case of the Indian Journal of Biochemistry and Biophysics (IJBB), the initiative taken by Prof DN Rao (Executive Editor, IJBB), and Dr. NK Prasanna, Sr Scientist & Scientific Editor, IJBB has played a crucial role in shaping this special issue. The necessary support and expertise from Prof Ranjana Aggarwal, Shri RS Jayasomu, Dr G Mahesh, Dr NK Prasanna, Dr Meher Wan, have made significant strides in promoting high-quality research in the field throughout the journal's journey. Contribution from authors, reviewers, and the technical support provided by the print production team of CSIR-NIScPR for successful, timely publication of this issue deserves special mention.

Published in:

[Pib](#)

Himachal Pradesh: Govt to join hands institutions to mitigate natural calamity

CSIR-CBRI

16th September , 2023

In the wake of the colossal damage Himachal Pradesh faced due to the recent monsoon fury, the state government has planned to associate with academic and research institutions to prepare a report on the landslides and assist in adopting scientific mitigation measures for landslide and land subsidence across the state.

These academic and research institutions are from within and outside the state, including Himachal Pradesh University, NIT-Hamirpur, Central University Himachal Pradesh, Information and Technology (IIT) Mandi, Geological Survey of India, Chandigarh, WIGH, Dehradun and CSIR-CBRI, Roorkee.

Chief Secretary Prabodh Saxena said that the state government had constituted a committee to carry out causative analysis of the landslide and land subsidence incidents causing widespread damage in the capital town.

The academic and research institutions will carry out preliminary geological investigations at 10-15 most vulnerable sites in the respective districts assigned to them and will submit a report to the state government along with some suggestive mitigations measures, he added.

These institutions based on the preliminary findings will also suggest some prominent and vulnerable locations which can be taken up for further detailed investigation taking geological, geotechnical and geophysical parameters into consideration for proper scientific management of the landslides in the state, said the Chief Secretary.

The institutions have been involved in the various districts and will submit the report to the state government within a time frame of 2-3 months along with suggestions for prominence, which can be taken up for further detailed investigations, he added.

The state of Himachal Pradesh is environmentally fragile and ecologically vulnerable to the occurrence of natural hazards emanating from the effects of climatological variations.

With the state experiencing the fury of nature in various forms, like cloudbursts, flash floods, landslides, earthquakes, snow avalanches, droughts every year and the recent monsoon season especially in the month of July and August having caused widespread damage across the state, has raised serious concerns.

Jamshedpur students get feel of research environment at CSIR-NML

CSIR-NML

16th September , 2023

CSIR-National Metallurgical Laboratory (NML), Jamshedpur organized a laboratory visit for school teachers and students on Friday, September 15 under the CSIR-Jigyasa Virtual Laboratory project. The main objective of the program was to establish connections with school teachers and senior students, to encourage students, and to make learning science interesting.



61 students from DAV Public School and 36 from Baldwin Farm Area High School were accompanied by teachers Nikesh Kumar Sharma, Mouli Giri, Uma Mahato and Supriya Kumari.

In his welcome address, the Senior Chief Scientist & Head, MTE Division, CSIR-NML, Dr Sandip Ghosh Chowdhury, spoke on the purpose of the CSIR-Jigyasa Programme. He also talked about the contribution of CSIR-NML in the field of Science, Technology and Innovation.

Byomkesh Dash, Chief Scientist and Head, KRIT Division, while providing an insight into learning ways stressed on the aspects of 'learning by knowing' and 'learning by doing' and encouraged students to take examples from daily life and think from a practical point of view.

Dr Animesh Jana, Senior Scientist, delivered the lecture on CSIR-NML Jigyasa Program and stated, "The program is designed to create a bridge between the academic and research communities by providing you (school students) an opportunity to interact with scientists,

visit research laboratories, and gain exposure to the world of scientific research.” The program included visits to some research laboratories like AAC, Creep, museum and Library.

Nikesh Kumar Sharma, a teacher from Baldwin Farm Area High School, Jamshedpur said “It is a wonderful laboratory and I am grateful to CSIR-NML authorities for providing this opportunity.”

DAV Public School teacher, Uma Mahato said, “I learned about various technical accomplishments of NML during the lab visit.”

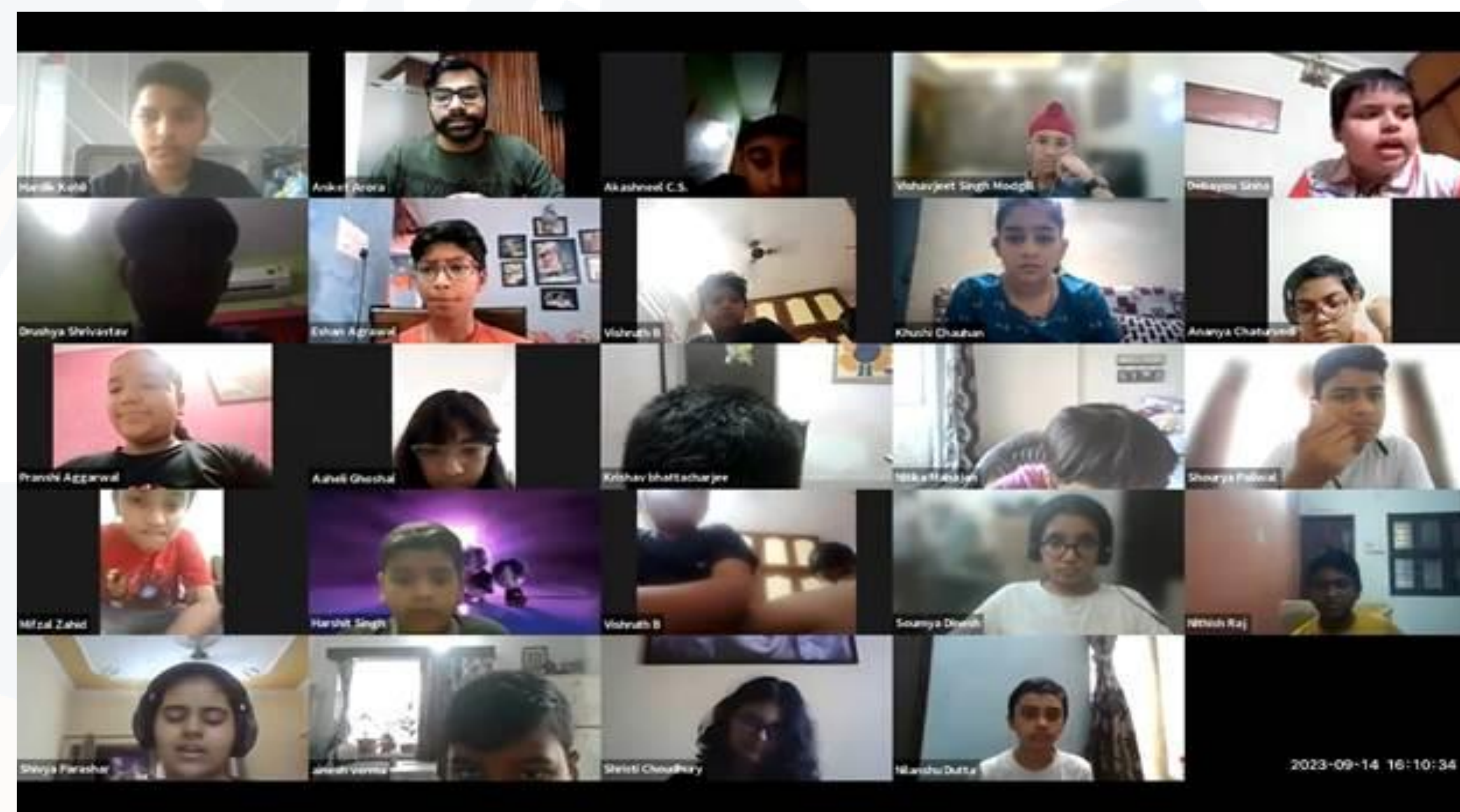
DAV Public School student Neha Kumari and her Baldwin High School counterpart, Riya Mahto, while sharing their experiences of the visit stated making science learning interesting through hands-on experiments and interactions with scientists would stand them in good stead as they moved ahead.

CSIR - NML and KAMP: Knowledge Sharing Session on AI and ML

CSIR-NML

16th September , 2023

Dr. Suman Tewary, Senior Scientist at the CSIR's National Metallurgical Laboratory, Jamshedpur, conducted a Knowledge Sharing Session for more than 800 students from classes 5th to 12th enrolled under the Knowledge and Awareness Mapping Platform (KAMP)- an initiative and Knowledge Alliance of CSIR-National Institute of Science Communication and Policy Research (NIScPR) and M/S NCPL.



Dr. Tewary explained that Artificial Intelligence (AI) and Machine Learning (ML) are two closely related fields that have gained significant attention and application in recent years. They are driving many technological advancements and are reshaping various aspects of our lives. In this exclusive CSIR-NML and KAMP's workshop we will delve into the realms of Artificial Intelligence and Machine Learning, unlock the mysteries behind AI and ML, and demystify these powerful technologies that are revolutionizing the way we work, live, and innovate."

About CSIR-NML and KAMP:

CSIR-National Metallurgical Laboratory (CSIR-NML) is a premier Indian research organization dedicated to various facets of Minerals, Metals and Materials – science, technology, industrial services and human resource development. Major Research Areas at CSIR-NML Jamshedpur; Materials Engineering, Metal Extraction & Recycling, Mineral Processing, Advanced Materials & Processes, Analytical & Applied Chemistry etc.

KAMP is an Initiative and Knowledge Alliance of the Council of Scientific & Industrial Research (CSIR) - National Institute of Science Communication and Policy Research (NIScPR) and industrial partner M/S Nysa Communications Pvt. Ltd. (NCPL), it intends to develop creativity, meaningful learning, critical reading and thinking skills that brings out the inherent abilities of the students.

J&K Requires Startup Fillip To Change 'Sarkari Naukri' Mindset: Dr Jitendra

CSIR-IIIM

16th September , 2023

Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said, Jammu & Kashmir requires a StartUp fillip to change "Sarkari Naukri" mindset. In the midst of a Start-up revolution across India, government job mind-set could prove to be an impediment , said Dr. Jitendra Singh while



inaugurating 'Youth Conclave' organized by CSIR-IIIM Jammu. Addressing the Youth Conclave, Dr Jitendra Singh said, this is the best times happening in India as the successful launch of Chandrayaan-3 and Aditya has sparked global aspirations among Indian students. With the unlocking of space technology by PM Narendra Modi, the doors of Sriharikota are open for public now to watch satellite/rocket launch which was a dream earlier, some ten thousand watched the Aditya-L1 launch and 1000 media persons were present during the launch of Chandrayaan-3, Dr. Jitendra Singh added.

Dr. Jitendra Singh said, India's Youth today is no longer the prisoner of aspiration as this generation has aspirations in abundance & avenues in tons, with numerous opportunities knocking at their doors in the form of Start-ups which are now the engines of economic growth. Praising NEP-2020 as one of the revolutionary steps taken by PM Narendra Modi, Dr. Jitendra Singh said, NEP-2020 supplements Start-Up ecosystem (Start-up India, Stand-up India clarion call given by PM Narendra Modi), promises new careers and entrepreneurship opportunities for students and youth in India. Dr Jitendra Singh further said, the provision of multiple entry/exit option is something to be cherished as this academic flexibility will have a positive impact on the students related to the availing of different career opportunities at

different times, depending upon their intrinsic learning and inherent aptitude. Saying that one of the objectives of NEP-2020 is de-linking degree from education, Dr. Jitendra Singh said that linking degrees with education has taken a heavy toll on our education system and society as well. One of the fall-outs has been an increasing number of educated unemployed.

Referring to the 9 years of Modi government, Dr. Jitendra Singh pointed out that apart from formal jobs, lakhs of opportunities and avenues have been created outside the government sector for the youth of the country, be it Start-up policy, Mudra Scheme, PM SVANidhi etc. Dr Jitendra Singh said, this is all evident now that with the unlocking of space sector by Prime Minister Shri Narendra Modi in June 2020, the number of Space Start-ups skyrocketed from merely 04 to 150 and most of them being led by science students, researchers and entrepreneurs.

Dr Jitendra Singh further said that there were just around 350 Start-ups before 2014, but after PM Modi gave the clarion call from the ramparts of the Red Fort in his Independence Day address and after rolling out special Start-up scheme in 2016, there has been a quantum jump with over 1.25 lakh Start-ups now with more than 110 Unicorns. Similarly, he added that in the Biotech sector, from 50 odd Start-ups in 2014, we now have 6,000 Biotech Start-ups. Appreciating CSIR-IIIM for being one of the oldest scientific research institutes in India, Dr. Jitendra Singh said, CSIR-IIIM is the oldest scientific research institute in India with the history of discovering mint way back in 1960s and the centre of purple revolution in India.

In the welcome address, Dr. Zabeer Ahmad, Director CSIR-IIIM Jammu said, CSIR-IIIM Jammu is endeavoured to promote start-up and entrepreneurship ecosystem in Jammu & Kashmir and this Youth Conclave today is part of this endeavour so that youth of today is informed of the tons of entrepreneurship opportunities provided by the government.

Mayor Jammu, Rajinder Sharma and DDC Chairman Jammu, Bharat Bhushan were present in the conclave.

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