



# INFOWATCH

An In-house Monthly Bulletin (February, 2026)



## CSIR-NEIST hosted 53<sup>rd</sup> SSBMT Indoor Finals



From top: Hon'ble MP Kamakhya Prasad Tasa delivering his speech.  
Shri Joydip Das addressing the occasion.

CSIR-NEIST hosted the 53<sup>rd</sup> Shanti Swarup Bhatnagar Memorial Tournament (Indoor) Finals from 09-13 February 2026. The tournament was formally inaugurated by Dr N Kalaiselvi, Director General, CSIR & Secretary, DSIR with ceremonial torch lighting who graced the event virtually as the Chief Guest. In her address, she highlighted that a vibrant research culture requires mental strength, focus and perseverance qualities nurtured through sports. She digitally released the tournament Souvenir, Kridangan and conveyed her best wishes to all participants. Shri Kamakhya Prasad Tasa, Hon'ble Member of Parliament was present as Guest of Honour. Dr V M Tiwari, Director, CSIR-NEIST, welcomed the gathering and highlighted the importance of sports in strengthening unity, camaraderie and holistic excellence within CSIR. He emphasized that scientific achievement must be complemented by mental vitality, teamwork and a vibrant community spirit.

Dr Anil Kumar Singh, Organizing Secretary of 53<sup>rd</sup> SSBMT Indoor Finals 2026, presented a brief overview of the tournament, noting the wide national participation and the enthusiasm and sportsmanship of talented players.

Dr Lakshmi K, SPB Observer & Senior Principal Scientist, CSIR-SERC, encouraged participants to look beyond winning and losing, stressing enjoyment of the game, teamwork, leadership and the value of building meaningful professional connections.

Sh. Joydip Das, Former National Shooting Champion, inspired the athletes by sharing his sporting journey and motivating them to uphold discipline, dedication and leadership both on and off the field.

Sh. Kamakhya Prasad Tasa, Hon'ble Member of Parliament, expressed happiness at the national-level participation and appreciated NEIST's scientific atmosphere and warm hospitality in hosting young sportspersons from across India. The inaugural programme concluded with the Oath-Taking Ceremony, Vote of Thanks by Mr J L Khongsai, Controller of Administration, CSIR-NEIST, National Anthem, Group photograph and high tea, marking the beginning of a memorable multi-day sporting event that brings together the CSIR community in the true spirit of unity and sportsmanship. The 53<sup>rd</sup> Shanti Swarup Bhatnagar Memorial Tournament (SSBMT)-Indoor Finals brought together the nation's top-tier competitors to vie for excellence in Badminton, Chess, Table Tennis, Carrom and Bridge.

In the Valedictory Programme held on 13 February, 2026, The Organizing Secretary presented the tournament report, noting participation from 35 laboratories and over 200 sportspersons competing across multiple events. This was followed by prize distribution, felicitation of retiring participants, remarks by SPB observers and participant feedback, collectively reflecting unity, camaraderie and the spirit of playing together beyond competition. The event concluded with a formal vote of thanks, followed by the National Song and National Anthem, marking a memorable and dignified close to the tournament.

## CSIR-NEIST celebrated National Science Day

CSIR-NEIST celebrated National Science Day 2026 on 27 February with a special programme in tune with this year's theme i.e "Women in Science: Catalyzing Viksit



Dr V M Tiwari, Director, CSIR-NEIST delivering his welcome address

Bharat". The event was graced by Dr Anil Bharadwaz, Distinguished Professor and Director of the Physical Research Laboratory (PRL), Ahmedabad, as the Chief Guest, and Dr Binita Pathak, Associate Professor, Department of Physics, Dibrugarh University was present as a Special Guest. Faculty members and students from Kaziranga University, Jorhat, along with scientists, staff members, project associates, and research scholars of the institute, participated in large numbers. In his Welcome Address, Dr V M Tiwari, Director, CSIR-NEIST emphasized the growing importance of advanced computing technologies in bioinformatics. He emphasized women empowerment in science, the need for effective implementation and recognition of scientific research, and acknowledged the dedicated contributions of scientists across diverse research domains at CSIR-NEIST. Reflecting on the significance of National Science Day, Dr Tiwari elaborated on the Raman Effect and the pioneering contributions of C V Raman, noting how Raman's discovery was achieved despite limited experimental facilities. Dr Tiwari underlined that Raman's journey should serve as a motivation for young researchers.



Dr Anil Bharadwaz, Distinguished Professor and Director of the Physical Research Laboratory (PRL), Ahmedabad delivering the Science Day Lecture.

In her address, Dr Binita Pathak thanked CSIR-NEIST for organizing such initiatives that provide meaningful platforms for academic interaction. She spoke about C V Raman's academic journey leading to the Nobel Prize, inspiring scholars to remain persistent in their scientific pursuits. Dr Pathak also appreciated the research contributions of CSIR-NEIST scientists, including Dr Binoy Saikia, Dr Lakhi Saikia, Dr Swapnali Hazarika, and several other prominent scientists. She highlighted the importance of recently installed cloud monitoring equipment in the region and offered valuable guidance to PhD scholars on planning a clear and focused research roadmap.

Delivering the Science Day Lecture, Dr Anil Bharadwaz spoke about the establishment of PRL and the visionary role of Dr Vikram Sarabhai in shaping the institution. He outlined PRL's significant contributions to nation building in science and technology, and discussed recent advancements in astrophysics and India's Chandrayaan missions to inspire students and young researchers. During the interactive session, Dr Bharadwaz addressed queries related to space missions and space debris management, including efforts to safely maneuver and retrieve satellites post-launch. The programme concluded with a Vote of Thanks by Dr Rinku Baishya, Scientist D followed by National Song and National Anthem.



Dr Binita Pathak, Associate Professor, Department of Physics, Dibrugarh University delivering her speech on the occasion.

### Machine Learning and Bioinformatics Conference held at CSIR-NEIST

CSIR-NEIST organized a one-day conference on "Machine Learning and Bioinformatics: Emerging Trends and Applications" on 26 February 2026 at its premise.



Group photo of the participants

Inaugurating the conference Dr V M Tiwari, Director, CSIR-NEIST Tiwari emphasized the increasing importance of artificial intelligence across all branches of natural sciences and highlighted its potential contribution toward achieving India's Vision of Viksit Bharat by 2047.

The plenary lecture was delivered by Prof G N Sastry, Senior Professor at IIT Hyderabad and former Director of CSIR-NEIST. His talk focused on the evolving applications of machine learning in scientific research and the opportunities it offers for advancing bioinformatics and computational studies.

The conference also featured expert talks by resource persons from leading institutions, including Jawaharlal Nehru University (JNU), Delhi; BITS Pilani Hyderabad Campus; Mahindra University, Hyderabad; CSIR-Indian Institute of Chemical Biology (IICB), Kolkata; and CSIR-Central Leather Research Institute (CLRI), Chennai.

Approximately 100 participants attended the programme, making it a productive platform for knowledge sharing, discussion, and collaboration in the emerging fields of machine learning and bioinformatics.

### **Invited Talk on Earth System Science: Charting a Human-Centric Path Forward**

Prof Shailesh Nayak, Director, National Institute of Advanced Studies (NIAS) and former Secretary, Ministry of Earth Sciences, Govt of India delivered an invited talk on "*Earth System Science for a Humanistic Future,*" on 11 February, 2026. Prof Naik presented a compelling vision of Earth System Science as a unifying framework that weaves together natural processes and human influences. He underscored that



Prof Shailesh Nayak, delivering his presentation

today's challenges, ranging from climate change and glacier retreat to extreme weather, rising sea levels, and intensifying cyclones, cannot be addressed in isolation. Instead, they demand integrated, systems-based thinking that captures the complex interactions within the Earth system, he said. Prof Naik also highlighted the critical role of advanced modelling and robust predictive tools in strengthening decision making, while calling for closer alignment between scientific inquiry and societal needs. The lecture concluded with an animated discussion among participants, reaffirming the importance of collaboration and a human centric approach in shaping the future of Earth system research.

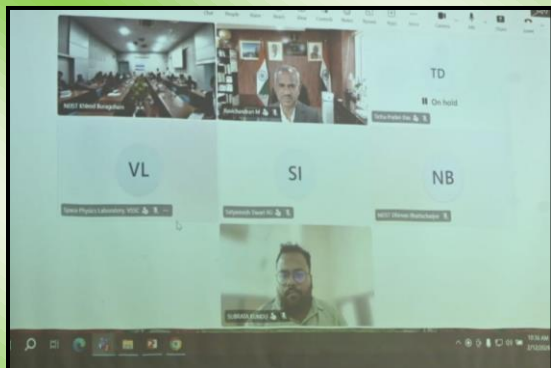
### **National Brainstorming Session explores Ionospheric Seismology through GNSS Advances**

On 12 February 2026, CSIR-NEIST jointly organised a national brainstorming session on Ionospheric Seismology with the Indian Institute of Geomagnetism (IIG), Mumbai. The meeting brought together leading scientists and institutions to discuss emerging approaches for understanding lithosphere-ionosphere interactions.



Group photo of the participants

The deliberations focused on the effective use of the Global Navigation Satellite System (GNSS) network to address current observational limitations and on the development of physics-based models to better characterise coupling processes between the Earth's interior and the ionosphere.



Delegates attending the session online

Dr M Ravichandran, Secretary, Ministry of Earth Sciences (MoES), Government of India, joined the session online as the Guest of Honour. Addressing the occasion as Chief Guest, Prof Shailesh Nayak, Director of the National Institute of Advanced Studies (NIAS) and former Secretary, MoES, emphasized the importance of interdisciplinary collaboration in advancing ionospheric research. Experts and directors from CSIR–Fourth Paradigm Institute (CSIR-4PI), Wadia Institute of Himalayan Geology (WIHG), CSIR-NEIST, Indian Space Research Organisation (ISRO), National Remote Sensing Centre (NRSC) and Space Applications Centre (SAC) participated in the discussions, reflecting a strong national commitment to strengthening observational capabilities and theoretical frameworks in ionospheric seismology.

### NEIST–NEXUS Weekly Lecture Series

The NEIST–NEXUS Weekly Lecture Series 2026, organized by CSIR-NEIST is serving as an important forum for interdisciplinary scientific discussions, bringing together researchers and scholars to deliberate on contemporary challenges and innovations across multiple domains of science and technology.

Maintaining the continuity, the third lecture series was held on 6 February, 2026 with a talk by Dr Pankaj Bharali, Scientist D, CSIR-NEIST, titled “*Naming Life,*

*Unlocking Value: Taxonomy and Bioprospecting Promises of Northeast India Towards One Health.*” The lecture highlighted the significance of Linnaean taxonomy as a universal framework for the identification and classification of living organisms. Emphasis was placed on the role of taxonomy in effective biodiversity management, sustainable utilization of biological resources, and its contribution to bioeconomy initiatives. The talk also underscored the relevance of the One Health approach in understanding human-animal-environment interactions to address emerging infectious diseases and reduce zoonotic and pandemic risks.



Dr Pankaj Bharali

The 4th lecture in the series was delivered on 13 February, 2026 by Dr Hemant Sankar Dutta, Scientist D, CSIR-NEIST, on the topic “*Reimagining Diagnostics on Paper: Rapid and Affordable Detection of Analytes.*” This lecture focused on paper-based diagnostic technologies as sustainable and accessible alternatives for analytical detection. Dr Dutta discussed how the inherent properties of cellulose enable rapid assays requiring minimal instrumentation, while remaining compatible with standard laboratory readers and imaging tools.



Dr H S Dutta

The fifth lecture was held on 20 February, 2026, featuring Dr Biswajit Saha, Scientist E, CSIR-NEIST, who spoke on “*One Can Do, Two Can Too: Perhaps Better.*” The lecture showcased advances in bimetallic photocatalysis, particularly focusing on Fe-Ir catalytic systems. Dr Saha elaborated on the synthesis and characterization of bimetallic photocatalysts and demonstrated their improved stability and performance compared to monometallic complexes.



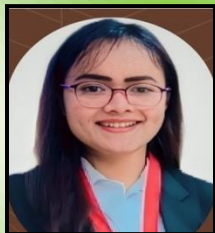
Dr Biswajit Saha

The enhanced activity of these catalysts in carbon-carbon and carbon-nitrogen bond formation, as well as

in water-splitting reactions, highlighted their potential for sustainable chemical applications.

### **Awards/Honour/Recognition:**

Dr Silvia Saikia, CSIR-RA under the mentorship of Dr Prasenjit Saikia in Coal and Energy Group, CEMSD, won the prestigious "National Competition for Research Excellence Award 2025" in the category of "Carbon Materials" organized by Indian National Young Academy of Science (INYAS) ON 03 February, 2026.



Dr Silvia Saikia

Sarmistha Bora, Research Scholar working under the supervision of Dr Ashutosh Thakur received the Best Poster Award (RSC sponsored) at 36th CRSI National Symposium in Chemistry & CRSI-RSC Lectures held at Dibrugarh University, Assam, India during 5-7 February, 2026.



Sarmistha Bora

Mr Abhishek Hazarika, Research Scholar working under the supervision of Dr Binoy K Saikia, has been awarded the Best Poster Award at the 36th CRSI-National Symposium in Chemistry (NSC) conference, held at Dibrugarh University during 5-7 February, 2026.



Abhishek Hazarika

Ms Priyanka Gogoi, DST-INSPIRE JRF under supervision of Dr B K Saikia, received the Best Poster Presentation Award (3rd) at the Conference on Advanced Carbon Materials (CACM-2026) held from 18-20 February 2026, at BITS Pilani, Hyderabad Campus.



Ms Priyanka Gogoi

### **Visit:**

A group of 5-6 farmers from Nagaland visited CSIR-NEIST to gain insights into advanced scientific

practices supporting agriculture & rural development on 24 February 2026.

### **Papers Published**

1. Goswami, Subrata; Ingole, Pravin G: Next-generation polymeric membranes for CO<sub>2</sub> separation: Mechanistic frontiers, sustainable pathways, and intelligent design, *Separation and Purification Technology*, Vol.394, Issue: Part\_1, Pages: 137332" <https://www.sciencedirect.com/science/article/pii/S1383586626005988?via%3Dihub> (**Highest Impact Factor Publication, IF: 9**)
2. Agarwalla, Ruchi; Bezboruah, Rohan; Saikia, Lakshi: MXene quantum dots in catalysis and energy conversion: structure–activity insights and emerging prospects, *Nanoscale Advances*, <https://pubs.rsc.org/en/content/articlelanding/2026/na/d5na01185j> (**IF: 4.7**)
3. Baruah, Sudeepta; Gogoi, Monti; Duarah, Runjun; Goswami, Rajiv; Hazarika, Swapnali Next-generation thin-film sensors for detection of organic and inorganic contaminants: Design and mechanisms, *Journal of Environmental Chemical Engineering*, Vol. 14, Issue 2, April 2026, 121941. <https://www.sciencedirect.com/science/article/pii/S2213343726009152?via%3Dihub> (**IF: 7.2**)
4. Himangshu Pratim Saikia, Ankita Likson, Khyati Anand, Bidyut Das, Abinash Tiwari, Sandeep Kumar Dey, Beatriz Gil-Hernandezf, Prashurya Pritam Mudoi, Deciphering cation-driven structure–property correlations in 0D hybrid ruthenium halide perovskites, *Dalton Transactions*, 2026, 55, 4780-4791 <https://pubs.rsc.org/en/content/articlelanding/2026/dt/d5dt02797g> (**IF: 3.3**)
5. Bora, Prarthana; Bhuyan, Chinmoy; Hazarika, Swapnali Chitosan Carbon Dot Cross-linked Layered Double Hydroxide-Coated High-Performance Thin-Film Nanocomposite Membranes for Facile CO<sub>2</sub> Separation, *ACS Applied Engineering Materials*, 2026 <https://pubs.acs.org/doi/10.1021/acsaenm.5c01046> (**IF: 3.5**)

6. Gupta, Dipanneeta Das; Dhakal, Richa; Dutta, Prachurjya; Duarah, Rituparna; Kalita, Jatin Upcycling of spent *Samia ricini* (Donovan) pupal exoskeleton: Extraction, characterization and bioactivity assessment of insect chitosan for potential fruit preservation application, *International Journal of Biological Macromolecules* 2026, Vol. 347, Pages: 150725, <https://www.sciencedirect.com/science/article/pii/S0141813026006513> (IF: 8.5)
7. Diksha Maheswari, Madhurima Borah, Ankur Dip Boruah, Jyoti Lakshmi Hati Boruah, Dipankar Neog, Manash R Das & Hemant Sankar Dutta, Screen-printed biodegradable paper microtiter plate for multifunctional analysis of colorimetric assays. *Microfluidics and Nanofluidics*, 2026 Vol. 30, article number 27, (2026) <https://link.springer.com/article/10.1007/s10404-026-02882-3> (IF:2.5)
8. Ashique Ahmed, Saurav Kandpal, Ashish N. Sawarkar, Sachin Ramesh Rao Geed, Insights into pyrolysis of intermediate fuel oil sludge for energy recovery: Characterization, kinetics, reaction mechanism, and thermodynamic analysis, *Journal of Analytical and Applied Pyrolysis*, 2026, Vol.195, May 2026, 107689, <https://www.sciencedirect.com/science/article/abs/pii/S0165237026000963?via%3Dihub> (IF:6.2)
9. Bornali Bora , Pooja Talukdar, Sachin Ramesh Rao Geed, Performance evaluation of biosurfactant production by *Enterobacter asburiae* BR53 isolated from petroleum-contaminated sites in Northeast India and implications for polycyclic aromatic hydrocarbon degradation, *Journal of Environmental Chemical Engineering* 2026. Vol. 14, Issue 2, April 2026, 121642. <https://www.sciencedirect.com/science/article/abs/pii/S2213343726006160?via%3Dihub> (IF:7.2)
10. A Ibeyaima, Hiranmoy Barman, Prasenjit Manna, Antidiabetic Potential of Ligands from NEIST\_PMIB\_06, Bacterium Associated With Hawijar (Fermented Soy Food): Insight from in Vitro and in Silico Studies, *ChemFoodChem*, 2026. <https://chemistry-europe.onlinelibrary.wiley.com/journal/25109936>
11. A P Sahoo, A Nayak, S Sayantani, D Jena, D Das, L Saikia, and S K Varadwaj, Development of Mosaic like  $\delta$ -MnO<sub>2</sub>-MnOx Heterostructures with Arrested 2D Morphology for Oxygen Electrocatalysis, *ACS Applied Energy Materials*, 9, 2805–2815, <https://doi/pdf/10.1021/acsaem.5c04064>, (IF: 5.6)
12. Dutta, Riddhi, Dutta, Pranjal P, Saikia, Prakash J, Evaluation of Poly(Eicosyl Methacrylate-co-Vinyl Acetate) as a Potential Flow Modifier for Low Waxy Crude, *Journal of Vinyl & Additive Technology*, 2026, <https://doi.org/10.1002/vnl.70079>. (IF: 3.6)
13. Gori Sankar Borah, Amit Kalita, Debasish Saikia & Selvaraman Nagamani, Integrating Large Language Models and Explainable AI for the Efficient Drug-Drug Interactions Prediction, *Distributed Computing and Intelligent Technology*, 2026, LNCS, Vol. 16420, [https://doi.org/10.1007/978-3-032-16632-6\\_30](https://doi.org/10.1007/978-3-032-16632-6_30)
14. Meghana Arvind, Anshul Verma, Sreeshma Raj K, Satyartha Prakash, Vignesh S. Kumar, Mohammad Azhar Uddin, Ayushi Narayan, Mamta Rathore, Nancy Rawat, Ankita Sahu, Yogesh Kumar, Pulkit Hasmukhbhai Leuva, Monika Sharma, Rajesh S, Dwaipayan Saha, Ankita Mridha, Ishant Jyoti Nath, Ashique Hussain, Borsha Rajkumari, Mamta Thapa, Neha Kumari, Vishwapriya S, Shilpak Chatterjee, Dipyaman Ganguly, Ashish Awasthi, Vamsi K. Yenamandra, Ajay Pratap Singh, Aastha Mishra, Swasti Raychaudhuri, Karthik Bharadwaj Tallapaka, Giriraj Ratan Chandak, Mahesh J. Kulkarni, Mahesh S. Dharné, Romi Wahengbam, Umakanta Subudhi, Sagnik Biswas, Shalimar, Kumardeep Chaudhary, Shantanu Sengupta, Partha Chakrabarti, Viren Sardana, Burden of MASLD and liver fibrosis: Evidence from Phenome India cohort, *The Lancet Regional Health – Southeast Asia*, Vol.45, 100723. (IF: 6.2).

#### Farewell:

The following member(s) of the staff have retired from Council's service on superannuation from CSIR-NEIST w. e. f. 28 February, 2026:

- 1) Probin Kumar Phukan, SO, Finance & Account