

**CSIR-North East Institute of Science & Technology, Jorhat**  
*Connecting Science & Technology for a Brighter Tomorrow*

**CSIR-NEIST Observed Vigilance Awareness Week 2019**



(from top) Ms. Roshni Aparanji Korati, IAS, Deputy Commissioner of Jorhat, addressing CSIR-NEIST staff at the valedictory function of Vigilance Awareness Week organized by the Institute. CSIR-NEIST staff attending the function.

CSIR-NEIST observed Vigilance Awareness Week during 28 October, 2019 to 2 November 2019 at its premise under the theme "Integrity- A Way of Life". The week-long programme was inaugurated with pledge taking ceremony on 28 October 2019 wherein Dr G Narahari Sastry, Director, CSIR-NEIST administered Integrity Pledge to all the staff members and students. Banners/posters were displayed at various conspicuous places of the institute highlighting the importance of a corruption free system. Various competitions such as intra institutional quiz, debate and slogan competitions were held during the week. For the first time, Gram Sabha was organized on 30 October 2019 wherein a team comprising of Administrative Officer, Senior Technical Officer, Section Officer, Sr. Hindi Officer and other officials of the institute visited a village (



Gram Sabha organized by CSIR-NEIST on the occasion of vigilance awareness week to sensitize people and encourage all to collectively prevent and fight against all kinds of corruption.

No. 31 Madhya Charigaon Gaon Panchayat) and conducted interactive awareness session with around 80 citizens of nearby rural area of diverse background and age group. The programme concluded with valedictory function held on 4 November 2019 wherein Deputy Commissioner of Jorhat, Ms. Roshni Aparanji Korati, IAS graced the occasion as Chief Guest. In her address to the staff, Ms. Korati stressed on the importance of vigilance in our daily life with various anecdotes. On the occasion, prizes were distributed to the winners of various competitions. The function concluded with vote of thanks offered by Mr Rahul Saikia, Assistant, recruitment & vigilance section, CSIR-NEIST.

**Socio-Economic, Health & Agriculture Survey conducted by CSIR-NEIST**

Under CSIR-800 programme, a team of 12 PhD Research Scholars, along with 2 medical staffs from CSIR- North East Institute of Science and Technology, Jorhat visited Holalbari Gohain Gaon, Lahdoigarh during 28-30 November, 2019 for Socio-Economic, Health & Agriculture Survey along with training and dissemination of information of suitable rural technologies developed by CSIR-NEIST for Socio-Economic upliftment rural people. CSIR-800 aims to create and nurture a sense of social consciousness and responsibility by participation in Science and Technology activity relevant to the nation. Based on the theme of the survey, the scholars visited the Meleng Gohain Gaon High School, Holalbari and interacted with students,

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Members of the survey team demonstrating scientific experiments to school students and interacting with village people during the survey.

teachers including the staff members about quality of education and physical fitness in terms of school performance, academic activities and services. The fitness survey regarding their health was done and documented. Three experiments were conducted in the classroom itself wherein the importance of science in our daily life was explained. The team also exhibited some scientific experiments and popular science videos to dissipate scientific awareness among the students. The purpose of the survey also included the physical examination of the villagers and analyzing their economic status, livelihood and day-to-day problems. Certain herbal products developed at CSIR-NEIST, stationeries and laboratory glass wares, pen, pencil, duster, eraser, chocolates and charts of periodic



The survey team with Dr G Narahari Sastry, Director, CSIR-NEIST.

table were distributed among the students and villagers during this survey. The team also visited various house hold and conducted survey. As a part of the medical survey, the team collected the data of each member of the family like BMI, BP, Pallor test, hearing test etc and details about their regular diet. Considering the growing need for awareness on women health and hygiene, the team also interacted with the women populate and shared experiences and information about menstrual hygiene and birth control. On the economical survey data of income generation, expenditure, and awareness about government schemes for rural upliftment were collected and documented. Water samples from various sources were collected for water-quality analysis at CSIR-NEIST. The entire programme was a modest attempt to get into the insights of the villagers well-being, education, social, cultural, economic and environmental aspects. It is worth mentioning that the survey was first of its kind conducted by the Institute under the leadership of Dr G Narahari Sastry, Director, CSIR-NEIST.

### CSIR-NEIST organized interactive session on Proton Precession Magnetometer (PPM)

An interactive session on Proton Precession Magnetometer (PPM) was organized during 11-12 November 2019 by CSIR-NEIST wherein 45 students and faculties from Dibrugarh University, Kaziranga

*If you really look closely, most overnight successes took a long time.*

Steve Jobs

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University, Jorhat; J B College, Jorhat and Mariani College participated besides research scholars from Geosciences & Technology Division (CSIR-NEIST). Prof S K Pal, Dept. of Applied Geophysics, IIT (ISM) Dhanbad conducted technical session followed by field session on 12 November 2019 on the application of PPM wherein the participants collected, processed and analysed the data under the guidance of Prof S K Pal.



Participants of the interactive session with Dr M J Bordoloi, Sr Principal Scientist, CSIR-NEIST; Prof S K Pal, Dept. of Applied Geophysics, IIT (ISM) Dhanbad and other officials of the Institute.

**Training on Biomedical Instruments held at CSIR-NEIST**

A training programme on, “Operation, Repair, Maintenance and Calibration of Biomedical Instruments” for Armed Forces of NE region sponsored by DST, Govt. of India was held at CSIR-NEIST during 11-22 November 2019. The programme was organized by CSIR-CSIO, Chandigarh in association with CSIR-NEIST. Air Commodore, S Bhargava, AFS Jorhat, inaugurated the programme on 11 November 2019. Altogether 25 participants from Indian Air Force and Indian Army attended the programme. The valedictory function was presided over by Dr G Narahari Sastry, Director, CSIR-NEIST on 22 November 2019 wherein Prof. R K Sinha, Director, CSIR-CSIO and Air Cmde S. Bhargava, AFS, Jorhat attended.



Participants of the training programme along with Dr G Narahari Sastry, Director, CSIR-NEIST; Prof R K Sinha, Director, CSIR-CSIO; Air Cmde, S Bhargava, AFS Jorhat and other officials of CSIR-CSIO and CSIR-NEIST.

**Prof R K Sinha, Director, CSIR-CSIO visited CSIR-NEIST**



Dr G Narahari Sastry, director, CSIR-NEIST felicitating Prof R K Sinha, Director, CSIR-CSIO before inviting him to address the staff and students.

Prof. R K Sinha, Director, CSIR-CSIO, Chandigarh visited CSIR-NEIST during 21-22 November 2019 in connection with the training programme on Biomedical instruments held jointly with CSIR-NEIST. During his maiden visit, Prof Sinha addressed the staff and students and delivered a talk entitled, “CSIR-CSIO: improving the quality of life through instrumentation” on 22 November 2019 at Dr J N Baruah Auditorium besides visiting various labs and divisions.

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**Spice Board officials visited CSIR-NEIST Branch Lab, Itanagar**



Meeting of Spice Board team with CSIR-NEIST branch lab scientists.

A team from Spice Board, Itanagar comprising Dr A B Rema Shree, Director (R&D); Smt. A Shainamol, IAS, Director (Finance) and others visited CSIR-NEIST Branch Lab, Itanagar on 15 November 2019. The team discussed on various issues for strengthening spice farming & marketing in Arunachal Pradesh and NE region in collaboration with Branch Lab.

**CSIR-NEIST organized series of Jigyasa Programme for school students**



Students from Nowgong Polytechnic interacting with CSIR-NEIST staff during their visit to various divisions.

A series of CSIR Student-Scientist interactive programme "JIGYASA" was organized by CSIR-NEIST on 8, 13-14, 19, 21-22 & 25 November



Students of 5<sup>th</sup> semester, Department of Biotechnology, Pandu College during a scientific lecture session on 21 November 2019.

2019 at its premise. Altogether 314 students and 25 teachers from Nowgong Polytechnic, Nagaon, Assam; Teok Girls' HS School, Jorhat; Gurukul, Nazira, Assam; Safrai High School, Barpathar, Assam; Pandu College, Guwahati and Silakuti M.E. School, Sivasagar, Assam visited CSIR-NEIST and attended the programme. The programme comprised of scientific talks, fact-to-face interaction with scientists and visit to various facilities of the Institute.

**CSIR-NEIST organized Gyanjyoti programme for school students**



Gyanjyoti students viewing various products and exhibit materials at CSIR-NEIST exhibition hall during the visit.

A two-day exposure visit was organized by CSIR-NEIST during 15-16 November 2019 under the Chief Minister's Gyan Jyoti Scheme of Government

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of Assam. Altogether 811 students and 45 teachers from 10 districts of Assam viz Nalbari, Kokrajhar, Kamrup(M), Kamrup(R), Dhubri, Goalpara, Darrang, Morigaon, Barpeta and Bongaigaon visited the Institute wherein they visited different labs of the institute and interacted with scientists and research scholars.

### Participation in various Exhibitions

CSIR-NEIST participated in the National Start-up Conclave & Expo held under the aegis of India International Science Festival-2019 during 5-8 November 2019 at Kolkata. Held at Science City, the exhibition was attended by a galaxy of scientists, students, researchers, entrepreneurs, etc. from various parts of the country. The Institute displayed various technologies & products through posters and exhibit materials in the exhibition.



CSIR-NEIST exhibition stall at the National Start-up Conclave & Expo.

CSIR-NEIST participated in the exhibition held on the occasion of 30th Farmers' Day organized by Regional Agricultural Research Station, Titabor, Assam on 9 November 2019 at Titabor. Various rural technologies & products of the Institute were disseminated through posters and exhibit mate-



CSIR-NEIST exhibition stall at Farmers' Day programme.

rials in the exhibition. The programme was attended by a large number of farmers from various parts of Assam.

CSIR-NEIST participated in the Food Processing Exhibition cum Workshop organized by AS-SOCHAM, India and MOFPI on 13 November 2019 at New Delhi. Various technologies & products developed by the Institute in food and allied sectors were disseminated through posters and exhibit materials besides ongoing research programmes in the exhibition.



Dr Harsh Vardhan, Hon'ble Minister of Science & Technology, Health & Family Welfare and Earth Sciences, Govt. of India accompanied by other dignitaries visiting CSIR-NEIST stall at the Food Processing Exhibition cum Workshop.

### CSIR-NEIST signs MoU with J B College, Jorhat



Dr G NarahariSastry, Director, CSIR-NEIST and Dr Bimal Barah, Principal, J B College signed and exchanged the MoU in presence of officials from both the institutes.

CSIR-NEIST and J B College, Jorhat signed MoU on 21 November 2019 to explore, extend and strengthen functional relationship and promote scientific education and research.

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## CSIR-NEIST's technology on Liquid Deodorant Cleaner goes into commercial production



Dr H B Singh, Scientist-in-charge, CSIR-NEIST Branch Lab, Imphal presiding over the inaugural ceremony of the production unit of MIDC Enterprises.

M/s MIDC Enterprises, Imphal, Manipur and M/s Sayon Industries Pvt.Ltd., Imphal have started commercial production of CSIR-NEIST's Liquid Deodorant & Cleaner from November 2019. Dr H B Singh, Scientist-in-charge, CSIR-NEIST Branch Lab, Imphal attended the product launch ceremony of Sayon Industries on 3 November 2019 as Guest of Honour wherein Shri Y Khemchand Singh, Hon'ble Speaker, Manipur Legislative Assembly; Shri Th Biswajit Singh, Hon'ble Minister, Commerce & Industries, Govt. of Manipur and Dr M Nara Singh, Former Minister and other officials graced the function and launched the product including other products. Dr Singh also presided over



Product launch of Liquid deodorant Cleaner of Sayon Industries based on CSIR-NEIST technology.



Commercial product of Liquid Deodorant & Cleaner produced by MIDC Enterprises.

the inaugural function of the production unit of MIDC Enterprises on 11 November 2019 in which Dr R K Nimai Singh, retired IAS officer graced the function as Chief Guest and inaugurated the production unit. It may be mentioned that CSIR-NEIST transferred the technology to MIDC Enterprises in November 2018 and Sayon Industries in October 2019.

## CSIR-NEIST transferred technology on Herbal Mosquito Repellent Candle for commercialization



Dr G Narahari Sastry, Director, CSIR-NEIST exchanging the Technology Transfer Agreement with Mrs Alokandana Sengupta, Proprietor, Sewali Home Enterprise, Jorhat in presence of technology team members and Business Development team.

CSIR-NEIST transferred its technology on Herbal Mosquito repellent wax candle to M/s Sewali Home Enterprise, Jorhat on 4 November 2019 for commercialization.

## Awards/Accolades

### Dr B K Saikia, Sr Scientist receives Prof. (Dr) Mahendra Pratap Singh Memorial Coal Science Award 2018-19

Dr B K Saikia, Sr Scientist, Polymer Petroleum & Coal Chemistry Group, has been awarded the Prof. (Dr) Mahendra Pratap Singh Memorial Coal Science Award for the year 2018-19 by the Mining, Geological and Metallurgical Institute of India on 8 November 2019 in recognition of his significant work in the field of high quality research in coal sciences. The award comprised of a medal, cash prize of Rs.15,000.00 and a certificate.



Dr B K Saikia,  
Sr Scientist

### Ms. Monti Gogoi, Research Fellow receives Second Best Poster Presentation Award

Ms. Monti Gogoi, Research Fellow, was awarded the Second Best Poster Presentation Award for her poster entitled, "Functionalized Single-walled Carbon Nanotube imprinted Thin Film Nanocomposite Membranes for Chiral Separation of Tyrosine" presented at Young Scientists' Conclave, Chemical Sciences theme held under India International Science Festival-2019 Kolkata during 5-8 November 2019. Ms. Monti is working in Chemical Engg Group under Dr Swapnali Hazarika, Principal Scientist.



Ms. Monti Gogoi,  
Research Fellow

### Ms. Jijnasa Bordoloi, SRF receives Young Scientist Award

Ms. Jijnasa Bordoloi, DBT-Senior Research Fellow (SRF), has been awarded the Young Scientist Senior Award by Nutrition Society of India at its 51st Annual National Conference held during 8-9 November



Ms. Jijnasa Bor-  
doloi, SRF

2019 at Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala for her presentation entitled, "Beneficial Effect of vitamin K on lowering Hyperlipidemia in Experimental Nutrition category on 9 November 2019. Ms. Jijnasa is working in Biotechnology Group under the supervision of Dr Jatini Kalita, Pr Scientist.

### Mr Vishal Das, Project Fellow awarded Third Prize for Poster Presentation

Mr Vishal Das, Project Fellow, was awarded the Third Best Oral/Poster Presentation for his poster entitled, "In vitro evaluation of some Phenyl Isothiocyanates as anti-cancer agents in ovarian cancer cells" presented at the International Conference on Recent Advances in Animal Sciences (ICRAAS) held at Pachhunga University College, Aizawl, Mizoram during 6-8 November 2019. Mr Das is working in Biotechnology Group under the supervision of Dr Mintu Pal, Ramanujan Fellow.



Mr Vishal Das,  
Project Fellow

### Lectures Series held under NEIST Science Forum

- Speaker:** Prof. A Puratchikody, Anna University, Tamil Nadu  
**Topic:** Drug Discovery and Development.  
**Date:** 1 November 2019
- Speaker:** Dr Shrabani Dinda, DST-Women Scientist, CSIR-IICT, Hyderabad  
**Topic:** Catalyst design using Data-driven approach  
**Date:** 8 November 2019
- Speaker:** Dr H P Sarma, Rector, Gauhati University  
**Topic:** Solid waste management and Guwahati city  
**Date:** 15 November 2019
- Speaker:** Dr Thaneswar Borah, Medical Officer, CSIR-NEIST  
**Topic:** Non-communicable disease & preventive measures

**Date:** 22 November 2019

- **Speaker:** Dr Antara Sharma, Medical Officer, CSIR-NEIST

**Topic:** An approach to routine medical investigation and their importance

**Date:** 22 November 2019

- **Speaker:** Dr HP Deka Boruah, Sr Principal Scientist & Head, BSTD Division, CSIR-NEIST

**Topic:** Ecological restoration- A journey on revival recover of biodiversity in red ribbon type pollution

**Date:** 29 November 2019

## Papers published

- Saikia M, Baruah U, Borphukan S, Saikia P J, Gautam A, Baruah S D: RAFT mediated mini-emulsion copolymerization of ethylene and BMA and their non-isothermal model-free kinetic analysis, *Polymer Bulletin*, 2019, 76 p: 6437-6458.
- Borthakur S, Saikia L: ZnFe<sub>2</sub>O<sub>4</sub>@g-C<sub>3</sub>N<sub>4</sub> nanocomposites: An efficient catalyst for Fenton-like photodegradation of environmentally pollutant Rhodamine B, *Journal of Environmental Chemical Engineering*, 2019, 7 p: 103035.
- Pal M: Tumor metastasis suppressor functions of Ets transcription factor through integrin  $\beta$ 3-mediated signaling pathway, *Journal of Cellular Physiology*, 2019, 234 p: 20266-20274.
- Borphukan S, Saikia M, Baruah U, Gautam A, Baruah S D, Saikia P J: Synthesis of ethylene and butyl methacrylate-based copolymer by emulsion polymerization, *Journal of Applied Polymer Science*, 2019, 136(39), p: 47994 (1-7)
- Das P, Borthakur P, Boruah P K, Das M R: Peroxidase Mimic Activity of Au-Ag/L-Cys-rGO Nanozyme toward Detection of Cr(VI) Ion in Water: Role of 3,3',5,5'-Tetramethylbenzidine Adsorption, *Journal of Chemical and Engineering Data*, 2019, 64(11), p: 4977-4990.

- Lal M, Borah A, Pandey S K: Identification of a New High Geraniol Rich Variety "Jor Lab L-15" of Lemongrass [*Cymbopogon khasianus* (Hack) Stapf (ex Bor)], *Journal of Essential Oil-Bearing Plants*, 2019, 22(4), p: 972-978.

- Gohain M, Laskar K, Phukon H, Bora U, Kalita D, Deka D: Towards sustainable biodiesel and chemical production: Multifunctional use of heterogeneous catalyst from littered *Tectona grandis* leaves, *Waste Management*, 2020, 102 p: 212-221. **Highest Impact Factor paper (IF: 5.431).**

- Saikia M, Hower J C, Das T, Dutta T, Saikia B K: Feasibility study of preparation of carbon quantum dots from Pennsylvania anthracite and Kentucky bituminous coals, *Fuel*, 2019, 243 p: 433-440.

- Saikia P, Goswamee R L: Catalytic partial oxidation of CH<sub>4</sub> to syngas (H<sub>2</sub>/CO) in presence of N<sub>2</sub>O over periclase type SiO<sub>2</sub>@Ni(Mg,Al)O catalyst synthesized by non aqueous route, *Catalysis Communications*, 2019, 119 p: 1-5.

- Baruah D, Yadav R, Singh Narayan, Yadav A, Das A M: Alpinia nigra fruits mediated synthesis of silver nanoparticles and their antimicrobial and photocatalytic activities, *Journal of Photochemistry and Photobiology, B: Biology*, 2019, 201 p: 111649.

## Book Chapters published

- Krishnamoorthy G, Pugazhenthii G, Ramaiah D: Chapter 9 - Resorbable polymer matrices: chitosan-substituted collagen-based biomaterials, In: *Materials for Biomedical Engineering Absorbable Polymers*, 2019 p: 245-278.
- Boruah P K, Borthakur P, Das M R: Magnetic metal/metal oxide nanoparticles and nanocomposite materials for water purification, In: *Nano-scale Materials in Water Purification*, 2019 p: 473-503.