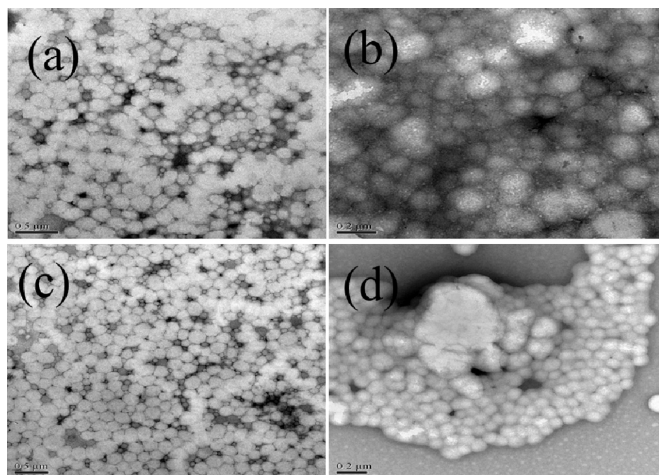


CSIR-NEIST research article on 'Synthesis of hybrid alkyd-acrylate latexes' receives Editor's interest

CSIR-NEIST synthesized *Ricinodendron heudelotii* oil based hybrid alkyd-acrylate latexes via mini-emulsion polymerization. The process uses an alkyd resin based on *R. heudelotii* oil with variation of phthalic anhydride and maleic anhydride to synthesize hybrid alkyd-acrylic waterborne binder suitable for coating application. The work carried out by E F Assanvo and S D Baruah was recently published in the International Journal, *Progress in Organic Coatings*, Vol 86, Sept., 2015, p: 25-32. Editor-in-chief of the Journal, Dr Sonja Schulte quoted the article as, most interesting science and technology news of the week in her weekly update on 11 November, 2015. Quoting further from her review, the



TEM images of the hybrid alkyd-acrylate latex films: (a) R-1, (b) R-2, (c) R-3, (d) R-4.

results of the study suggest that the Rh oil-based alkyd-crylate hybrid latexes have potential improved properties for manufacture of waterborne coatings and are usable as an alternative to petroleum-based coating systems. The study showed an overall improved performance of the hybrid latex in terms of drying time at room temperature, mechanical properties after UV exposure, better thermal stability, shore A hardness and hydrophobic water repellency contact angle.

CSIR-NEIST observed Vigilance Awareness Week



Dr D Ramaiah, Director, CSIR-NEIST delivering his address in the Valedictory function. Shri Vikram Singh, Administrative Officer, CSIR-NEIST, is seen seated on the dais.

CSIR-NEIST observed vigilance awareness week during 26-31 October, 2015 at its premise. The week-long program concluded with a valedictory function held at Dr J N Baruah auditorium on 2 November, 2015. The week started with the pledge taking ceremony on 26.10.2015. Various activities such as displaying of banners/posters, an intra institutional quiz competition and a slogan competition were organised to create awareness about the vigilance related issues.

The valedictory function was held on 02.11.2015 which was presided over by the Director, CSIR-NEIST. Shri Vikram Singh, Administrative Officer, delivered welcome address wherein he mentioned the importance of vigilance awareness in India. He mentioned that 31st October was chosen as the date as it is the birthday of Sardar Vallabhbhai Patel, one of the great leaders of our country, who was an outstanding icon and role model for patriotism and political integrity.

Addressing the occasion, Dr D Ramaiah stressed the significance of maintaining transparency and accountability and appealed to all to imbibe these in their day-to-day works. He welcomed the suggestions from CSIR-NEIST family for improving the system in all aspects of CSIR activities. On the occasion, prizes were distributed to the winners of Quiz and Slogan competitions by the Director, Dr D

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

Ramaiah. The function was concluded with the vote of thanks offered by Shri J L Khongsai, Section Officer (Vigilance).

Air Marshal Rajan Chaudhry, Director General-Medical Services (Air) visits CSIR-NEIST

Air Mshl Rajan Chaudhry, AVSM, VSM, PHS, DG-MS (Air) visited CSIR-NEIST on 26 November, 2015 along with Air Commodore Hirdesh Sahni, 5 Air Force Hospital, Jorhat and other distinguished Air force officials. Air Mshl Rajan Chaudhry visited various divisions of the Institute accompanied by Dr D Ramaiah, Director, CSIR-NEIST. He showed keen interest in the bioformulations developed by the Institute for healthcare, soil enhancement and plant growth. He also visited the 100 KWp capacity Off-grid Solar PV Power Plant installed at the Institute.



Air Mshl Rajan Chaudhry (in black coat), visiting Biotechnology division accompanied by Dr D Ramaiah (2nd from right), Director, CSIR-NEIST and other officials from Air Force and CSIR-NEIST.

CSIR-NEIST organized training programme on Mushroom cultivation

A training programme on Mushroom cultivation was organized to create Master Trainers under the project "S&T interventions to combat malnutrition in women and children" at CSIR-NEIST on 13 November, 2015. Under the programme, 6 persons were trained to empower them as master trainers



who in turn will disseminate the same to other persons for creating new livelihood for themselves. The training programme covered various aspects of mushroom cultivation and its processing to set up mushroom production farm. The programme was coordinated by Dr S P Saikia, Nodal Scientist of the project.

Seminar/Conference/Workshop/Meeting attended

Dr D Ramaiah, Director, CSIR-NEIST

- National seminar on, "Emerging Trends in Chemical Sciences" held at Gauhati University, Guwahati on 5 November, 2015 and delivered a key-note address

Colloquium held

A series of colloquia/seminars were held during the month in which speakers from various Institutes were invited to deliver talks on different topics detailed as below.

- **Speaker:** Dr S V Mohan, CSIR-IICT, Hyderabad.
Topic: Waste to Energy; Sustainable Waste Remediation towards Circular Economy.
Date: 04.11.2015
- **Speaker:** Dr Jay Bordoloi, Rutgers University, School of Pharmacy, New Brunswick, NJ.
Topic: US Drug Regulation and Drug Development Overview

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

Visit

- A group of 19 students of B.Sc Biotechnology (5th Semester) from Pandu College, Pandu, Guwahati, visited CSIR-NEIST on 19-20 November, 2015
- **Visit under Gyan Yatra programme of RMSA:** Under Rashtriya Madhyamik Siksha Abhiyan (RMSA) educational tour programme (Gyan Yatra), around 6700 students of class IX along with their teacher escorts (198 nos.) from various schools of Jorhat district visited the Institute during 16-23 November, 2015

Papers published

International Journals

- Saikia Indranirekha, Hazarika Moushumi, Tamuly C: Synthesis, characterization of bio-derived ZnO nanoparticles and its catalytic activity, *Materials Letters*, 2015, 161(December), p: 29-32
- Ali A, Chetia M, Saikia B, Saikia P J, Sarma D: AgN(CN)₂/DIPEA/H₂O-EG: a highly efficient catalytic system for synthesis of 1,4-disubstituted-1,2,3 triazoles at room temperature, *Tetrahedron Letters*, 2015, 56(43), p: 5892-5895
- Darabdharma G, Das M R, Turcheniuk V, Turcheniuk K, Zaitsev V, Boukherroub R, Szunerits S: Reduced graphene oxide nanosheets decorated with AuPd bimetallic nanoparticles: a multifunctional material for photothermal therapy of cancer cells, *J Materials Chemistry B*, 2015, 3 p: 8366-8374
- Paul A K, Karunakaran S C, Joseph J, Ramaiah D: Amino Acid-Porphyrin Conjugates: Synthesis and Study of their Photophysical and Metal Ion Recognition Properties, *Photochemistry and Photobiology*, 2015, 91(6), p: 1348-1355
- Tyagi N, Viji M, Karunakaran S C, Varughese S, Ganesan S, Priya S, Saneesh Babu P S, Nair A S, Ramaiah D: Enhancement in intramolecular interactions and in vitro biological activity of a tripodal tetradentate system upon complexation, *Dalton Transactions*, 2015, 44(35), p: 15591-15601
- Saikia P, Dutta D, Kalita D, Bora J J, Goswami T: Improvement of mechano-chemical properties of

bamboo by bio-chemical treatment, *Construction and Building Materials*, 2015, 101, Part 1 (December), p: 1031-1036

- Prakash R, Shekarrao K, Gogoi S: Ruthenium(II)-Catalyzed Alkene C-H Bond Functionalization on Cinnamic Acids: A Facile Synthesis of Versatile α -Pyrones, *Organic Letter*, 2015, 17(21), p: 5264-5267
- Bihani M, Bora P P, Verma A K, Baruah R, Deka Boruah H P, Bez G: PPL catalyzed four-component PASE synthesis of 5-monosubstituted barbiturates: Structure and pharmacological properties, *Bioorganic Medicinal Chemistry Letters*, 2015, 25(24), p: 5732-5736
- Surineni N, Buragohain P, Saikia B, Barua N C: A metal free chlorothiolation strategy for synthesis of vinyl sulfides from internal alkynoates, *Tetrahedron Letters*, 2015, 56(50), p: 6965-6969

Indian Journals

- Tamuly C, Hazarika M, Bordoloi M J: Bio-derived Size/shape Controllable Gold Nanoparticles and Its Antimicrobial Activity, *J Bionanoscience*, 2015, 9(4), p: 296-300
- Tamuly C, Hazarika M, Bordoloi M J: Biosynthesis of size tunable CeO₂ nanoparticles and its scavenging activity, *J Bionanoscience*, 2015, 9(4), p: 318-323
- Barua C C, Haloi P, Patowary P, Bora M, Gohain Barua A, Bordoloi M J, Barua I C: Evaluation of anti-amnesic activity of few medicinal plants against scopolamine induced amnesia, *Indian J Traditional Knowledge*, 2015, 14(4), p: 581-589

Book Chapters

- Ghosh J, Sil P C: 8-Mechanism for Arsenic-Induced Toxic Effects, **In-** Handbook of Arsenic Toxicology, Academic Press, London, 2015 p: 203-231
- Goswami A: An Alternative Eco-Friendly Avenue for Castor Oil Biodiesel: Use of Solid Supported Acidic Salt Catalyst, **In-**"Biodiesel - Feedstocks and Processing Technologies", edited by Margarita Stoytcheva and Gisela Montero, INTECH, Croatia, 2015(Chapter 18), p: 379-386