

Fourth Symposium on Advances in Sustainable Polymers (January 8 -11, 2018)

Day 0: January 07, 2018			
Welcome Party (19:00 Hrs-22:00 Hrs)			
Day 1: January 08, 2018			
Registration of ASP-17 (08:00 Hrs-09:00 Hrs)		Venue: Conference Center; IIT Guwahati	
Inauguration of ASP-17 (09:00 Hrs-10:00 Hrs)		Venue: Dr. Bhupen Hazarika Auditorium; IIT Guwahati	
Talk	Time	Title of Expert Lecture	Speaker
PL-01	10:00-10:50 Hrs	Recent advances in the synthesis of biobased chemicals and polymers: From aliphatics to aromatics	Yoshiharu Kimura, Kyoto Institute of Technology, Japan
10:50-11:10 Hrs High Tea/Group Photo Session			
PL-02	11:10-12:00 Hrs	Circular Economy: A Sustainable path forward for Bioplastics and Biocomposites Innovation	Amar K. Mohanty, University of Guelph; ON, Canada
PL-03	12:00-12:50 Hrs	Sustainable Polymers : Challenges and Opportunities	S. Sivaram , INSA Senior Scientist, IISER, Pune, India
KL-01	12:50 -13:20 Hrs	Sustainability of Polymers : A Reality Check in India	Vijay G. Habbu, Senior Vice President, Reliance Industries Ltd., India
13:20-14:15 Hrs Lunch			
Indo-Taiwan Bilateral Symposium Session I [Conference Hall 2]			
Inaugural Ceremony	14:15-14:25 Hrs	Opening Speech	Professor Gautam Biswas (President)
	14:25-14:35 Hrs	Opening Speech	Official representative from Taiwan
	14:35-14:50 Hrs	Progress of Indo-Taiwan cooperative project (Taiwan)	Ching Tsang Wang
	14:50-15:05 Hrs	Progress of Indo-Taiwan cooperative project (India)	Amaresh Dalal
	15:05-15:15 Hrs	Ceremony of signing MOU	
15:15-15:30 Hrs		Break	
KL-02	15:30-15:50 Hrs	Effect of calcination of Fe ₂ O ₃ on degradation performance of organic wastewater in a novel Bio-electro-Fenton Microbial Fuel Cell	Chen-Hao Wang, National Taiwan University of Science and Technology, Taipei, Taiwan
KL-03	15:50-16:10 Hrs	Experimental study on the emission of diesel engine with hydrogen syngas	Jer-Huan Jang, Ming Chi University of Technology, Taiwan
KL-04	16:10-16:30 Hrs	Potential study of electricity generation in an anodic anaerobic bacteria and cathodic microalgal microbial fuel cell	Chyi-How Lay, Feng Chia University, Taichung, Taiwan
KL-05	16:30-16:50 Hrs	Continuous Flow Process: A New Paradigm in Materials Syntheses	Anil Kumar, IIT Bombay, India
Polymer Composites [Conference Hall 1]			
KL-06	14:15-14:45 Hrs	Application based development of Poly Lactic acid Technologies	Ian K.W. Toh, Director, Natureworks, USA.

IL-01	14:45- 15:10 Hrs	Polyurethanes and their nanocomposites from Biobased Polyols: Efficient and environment friendly alternative	Anupama Kaushik Sharma, Panjab University, India
IL-02	15:10-15:35 Hrs	Anisotropic designer particles	Sampa Saha, IIT, Delhi, India
IL-03	15:35-16:00 Hrs	Properties Enhancement of Biocomposites	Utai Meekum, Suranaree University of Technology, Thailand
16:00-16:20 Hrs Tea & Networking Break Polymer Characterization I [Conference Hall 1]			
KL-07	16.20-16.50 Hrs	Design of Sustainable Packaging: some thoughts	Debkumar Chakrabarti, IIT Guwahati, India
KL-08	16.50-17.20 Hrs	Leading the Blueprint for Improved Sustainability in Plastics Through Industry Collaboration	Han Zhang, Dow Chemical International Pvt Ltd., Singapore.
KL-09	17.20-17.50 Hrs	EnviroESCA™ – The beginning of a new era	Felix Leyssner, SPECS, Germany
IL-04	17.50-18.15Hrs	Twin Drive RheoMicroscopy	Dharmesh Gala, Anton Paar, Austria.
IL-05	18.15-18.40 Hrs	Sustainable Polymer Processing Techniques	Manoj Bansal, Thermo Fisher, USA
Indo-Japan Bilateral Symposium Session I: Synthetic Biodegradable Polymers [Conference Hall 3]			
16:20-16:40 Hrs	INAUGURATION Address by- Professor Gautam Biswas and Prof. Ashok Misra		
KL-10	16:40-17:10 Hrs	Sustainable Materials in the Polymer Industry	Anil K. Bhowmick, IIT Kharagpur, India
KL-11	17:10-17:40 Hrs	DSC and WAXS Studies on the Effects of Silk Nanocrystals on Crystallization of Poly(L-Lactic Acid)	Shinichi Sakurai, KIT Japan
IL-06	17:40-18:05 Hrs	Poly(lactide) Suprastructures: Structural Reorganization of Stereocomplex Nanoparticles	Susheela B. Idage, NCL Pune, India.
IL-07	18:05-18:30 Hrs	Stereocomplexation of the segmented PLLA/PDLA blend melt-spun fibers	Masaki Yamamoto, KIT Japan
Polymers for Biomedical Applications I [Conference Hall 4]			
KL-12	16:20-16.50 Hrs	Sustainable Development of Controlled Drug Delivery and Implants using Biodegradable Polymers	Pralay Maiti, IIT BHU, India
IL-08	16.50-17.15 Hrs	Biomedical devices and implants at Biomedical Devices Lab in IIT Guwahati	S Kanagaraj, IIT Guwahati, India
IL-09	17.15-17.40 Hrs	Polysaccharide induced hybrid polymers for drug delivery application	Sarat K Swain, Veer Surendra Sai University of Technology, India
IL-10	17.40-18.05 Hrs	Biocompatible electrospun nanofiber scaffolds for antibacterial and sustained drug release	T. Umasankar Patro, Defence Institute of Advanced Technology, Pune, India
Student Presentations for Oral Awards I [Conference Hall 2]			
OP-01	16:50-17:05 Hrs	Recyclable Polylactic Acid grafted Cellulose Nanocrystal Films through Reactive Extrusion Approach	Prodyut Dhar, IIT Guwahati, India
OP-02	17:05-17:20 Hrs	Shape memory polymer nanocomposites for biomedical application	Arpan Biswas, IIT BHU, India

OP-03	17:20-17:35 Hrs	Lactic Acid Oligomer (OLLA) Grafted Gum Arabic Conjugates: A Bio-based Adhesive for Structural Applications	Neelima Tripathi, IIT Kanpur, India
OP-04	17:35-17:50 Hrs	Evaluation of silk fibroin/Xanthan biopolymeric blends using FTIR imaging and DTA analysis	Shailendra Singh Shera, IIT BHU, India
OP-05	17:50-18:05 Hrs	Aggregation behavior of non-ionic twinned amphiphiles and their application as biomedical nanocarriers	Abhishek K. Singh, University of Delhi, India
OP-06	18:05-18:20 Hrs	Rheological, Mechanical and Barrier Studies of Chitosan-graft-Lactic Acid Oligomer Reinforced Poly(Lactic Acid) Bionanocomposite Films	Akhilesh Kumar Pal, IIT Guwahati, India
OP-07	18:20-18:35 Hrs	Polymer brushes for tuning the spatial arrangement of nanoparticles in polymer nanocomposite films	Kishore Kumar Sriramoju, B.V. Raju Institute of Technology, Telangana, India
Poster Session (18:30 Hrs-19:30 Hrs)			
Cultural Program and Conference Dinner (19:30 Hrs-22:00 Hrs)			

Poster No: PPC 02, PPC 03, PPC 04, PPC 05, PPC 06A, BPS 07, BPS 08, BPS 09, BPS 10, BPS 11, BPS 12, BPS 12A, PNC 13, PNC 14, PNC 15, PNC 16, PNC 17, PNC 18, PNC 19, PNC 20, PNC 21, PNC 22, PNC 23, PNC 24, PNC 25, PNC 26, PNC 27A, SPT 30, SPT 31, SPT 32, SPT 34, SPT 37, SPT 37A, PHA 38, PHA 39, PHA 41, PHA 42, PHA 43, PHA 44, PHA 46, PHA 46A, PMS 47, PMS 48.

Day 2: January 09, 2018			
Talk	Time	Title of Expert Lecture	Speaker
PL-04	09:00-09:50 Hrs	What makes a polymer sustainable? Discussions around bioplastics, biobased, biodegradable-compostable, and the circularity model as metrics for sustainable polymers	Ramani Narayan, Michigan State University, USA
PL-05	09:50-10:40 Hrs	A bacterium that degrades and assimilates poly(ethylene terephthalate) and its enzymes involved in the degradation	Kohie Oda, KIT, Japan
10:40-11:00 Hrs	Tea Break Biopolymers [Conference Hall 2]		
KL-13	11:00-11:30 Hrs	Bacterial Cellulose based bioplastic hydrogel film : an exotic and competitive biomaterial for sustainable food packaging	Nabanita Saha, University Institute, Tomas Bata University in Zlin, Czech Republic
IL-11	11:30-11:55 Hrs	Characterization and Application of Cellulose Nano Crystal Incorporated Polylactic Acid Films for Low Temperature Preservation of Prawns (<i>Metapenaeus Dobsoni</i>)	Bindu J, ICAR- Central Institute of Fisheries Technology, Cochin, India
IL-12	11:55-12.20 Hrs	Amino Acid/Peptide Containing Alternating Copolymers	Priyadarsi De, Indian Institute of Science Education and Research Kolkata, India

IL-13	12:20-12.45 Hrs	Self-Healing and Durable Bio-mimicked Interfaces	Uttam Manna, IIT Guwahati, India
Polymers for Advanced Applications [Conference Hall 3]			
KL-14	11:00-11:30 Hrs	Sustainable polymeric nanocomposites for multifaceted advanced applications	Niranjan Karak, Tezpur University, India
IL-14	11:30-11:55 Hrs	Characterization of polymers -biopolymer using Small angle scattering techniques	Narayan Ch. Das, IIT Kharagpur, India
IL-15	11:55-12.20 Hrs	Depth-Resolved Structure Analysis of Polymer Thin Films by Grazing-Incidence Small Angle X-ray Scattering utilizing of Tender X-rays	Katsuhiko Yamamoto, Nagoya Institute of Technology Japan
IL-16	12:20-12.45 Hrs	Innovative Treatment Technology for Improving the Quality of Plastic Granules Produced from Recycled Waste Plastics	Deepali Jadia, Enviro Remediation & Research Laboratory (ERRL), Mumbai, India
Functional Polymers Interfaces [Conference Hall 4]			
KL-15	11:00-11:30 Hrs	Block Copolymers Functionalized Carbon Nanotubes and their Sensing Applications	Kailash C. Gupta, IIT Roorkee, India
IL-17	11:30-11:55 Hrs	Color Tolerances /Pass Fail Methodology and Appearance	Mr. Subhash Naik, Datacolor Solutions Pvt. Ltd. Mumbai, India
IL-18	11:55-12.20 Hrs	Glycopolymer Grafted Nanoparticles: A Step towards the Development of Vaccine	Tushar Jana, University of Hyderabad, India
IL-19	12:20-12.45 Hrs	Starch and cellulose based films for food packaging and drug delivery applications	R. Anandalakshmi, IIT Guwahati, Assam, India
13:00-14:15 Hrs Lunch			
Indo-Japan Bilateral Symposium Session II: [Conference Hall 2]			
KL-16	14:15-14:45 Hrs	Effect of water on the mechanical properties of DNA-derived films	Takashi Aoki, KIT Japan
KL-17	14:45- 15:15 Hrs	Sustainable Polyolefin Materials and its Technology: Directions for Designed Polyolefins for 3D Printing Technology	Virendra Kumar Gupta, Reliance Industries Limited, India.
KL-18	15:15-15:45 Hrs	CO ₂ Separation by Different Facilitated Transport Polymer Membranes from Binary and Ternary Gas Mixtures	Bishnupada Mandal, IIT Guwahati, India
IL-20	15:45-16:10 Hrs	Synthesis and characterization of functional polylactides consisting of L-lactyl and D-lactyl segment	Kazunari Masutani, KIT, Japan
Polymers for Biomedical Applications II [Conference Hall]			
KL-19	14:15-14:45 Hrs	Engineering of Biopolymers for Smart Healthcare	Bhuvanesh Gupta, IIT Delhi, India
KL-20	14:45- 15:15 Hrs	Polymer technologies for developing medical devices	Dr. Prashant Jha, Fellowship Director, Biodesign School, AIIMS, New Delhi, India

IL-21	15:15-15:40 Hrs	Fabrication of nanostructures through self-assembly of non-ionic amphiphiles for biomedical applications	Sunil K. Sharma, University of Delhi, India
IL-22	15:40-16:05 Hrs	Nano-bio interactions dependent optimization of polymeric nanoparticle design for PLK1 siRNA delivery	Neetu Singh, IIT Delhi, India
16:05-16:20 Hrs Tea			
Indo-Japan Bilateral Symposium Session III: [Conference Hall 2]			
KL-21	16:20-16:50 Hrs	Effect of the block length on the physical and structural properties of the multi-stereoblock poly(lactic-acid)s	Hideki Yamane, KIT Japan
KL-22	16:50-17:20 Hrs	Electrical functions expressed via orientation control by mechanical processing of cellulose derivatives	Yoshikuni Teramoto, Gifu university, Japan
IL-23	17:20-17:45 Hrs	Conversion of Paper Industry Fibrous Waste to Value added Sustainable Polymers	Umesh Bhardwaj, Bank Note Paper Mill India Pvt. Ltd., India
IL-24	17:45-18:10 Hrs	Dyeing Fabrics by Using Extracts from Mulberry Branch/Trunk	Hidekazu Yasunaga, KIT Japan
IL-25	18:10-18:35 Hrs	New Generation Polymer Composites	Kuruvilla Joseph, IIST, Trivendram, India.
Indo-Taiwan Bilateral Symposium Session II [Conference Hall 3]			
KL-23	16:20-16:50 Hrs	A microcosm energy applied in microbial fuel cell systems: the synergy of energy power generating and wastewater treatment for energy-nutrient-water nexus	Ching-Tsang Wang, National Chung Hsing University, Taiwan
KL-24	16:50-17:20 Hrs	Using carbon dioxide (CO ₂) as the sole driver for low-energy desalination and decontamination of impaired water sources.	Arup SenGupta, Lehigh University, USA.
IL-26	17:20-17:45 Hrs	Polymeric Organic Framework as Potential Toxicant Remover from Drinking water	Raja Shunmugam, IISER Kolkata, India
IL-27	17:45-18:10 Hrs	Microfluidics based fuel cells for low power applications	Ravi Kumar Arun, CSIR-CMERI, Durgapur, India
IL-28	18:10-18:35 Hrs	Water and salt dynamics in multilayer graphene oxide (GO) membrane: role of lateral sheet dimensions	Anki Reddy Katha, IIT Guwahati, India
Poster Session: 18:30-19:30 Hrs			
Dinner (19:30 Hrs-21:00 Hrs)			

Poster No: PPC 01, PPC 06, PNC 27, SPT 29, SPT 35, SPT 36, PHA 40, PHA 45, PMS 49, PMS 49A, PDD 50, PDD 51, PDD 53, PDD 54, PDD 55, PDD 55A, PDD 56, PDD 57, PDD 58, ECA 59, ECA 60, ECA 61, ECA 61A, PDW 62, PDW 63, PDW 64, PDW 65, PDW 66, OT 68, OT 69, OT 70, OT 71, OT 72, OT 73, OT 74, OT 75, OT 76, OT 77, OT 78, OT 79, OT 80, OT 81.

Day 3: January 10, 2018			
Talk	Time	Title of Expert Lecture	Speaker
PL-06	09:00-09:50 Hrs	Control of Network Microdomain Morphology of Block Copolymer Systems	Prof. Hirokazu Hasegawa, Ex Professor, Kyoto University, Japan
PL-07	09:50-10:40 Hrs	Low Carbon Advanced Materials and Energy	Mohini Sain, University of Toronto, Canada
10:40-11:00 Hrs		Tea Break [Conference Hall 2]	
KL-25	11:00-11:30 Hrs	Ionic Liquids in Polymer Synthesis; A Sustainable Process	Nikhil K. Singha, IIT Kharagpur, India
IL-29	11:30-11:55 Hrs	Thermo responsive Imidazolium Compounds: Synthesis and Applications in catalysis	Debasis Samanta, CLRI, India
IL-30	11:55-12.20 Hrs	Aerobic Composting of Bioplastics- A Laboratory Scale Study	Harsh Jadia, Enviro Remediation & Research Laboratory (ERRL), Mumbai, India
IL-31	12:20-12.45 Hrs	Learning from Nature: Producing synthetic biomimetic membrane with water transporter protein from salt tolerant mangrove trees	Prakash P. Kumar, National University of Singapore, Singapore
Indo-Taiwan Bilateral Symposium Session III [Conference Hall 3]			
KL-26	11:00-11:30 Hrs	Graphene Nanocomposites: creating a sustainable polymer framework	Sandip Ghosh, Tata Steel, India
KL-27	11:30-12:00 Hrs	Performance evaluation of an up flow microbial electrolysis coupled anaerobic digestion (ME-AD) reactor	Thangavel Sangeetha, National Taipei University of Technology, Taipei, Taiwan
IL-32	12:00-12:25 Hrs	Simulation studies on Microbial Fuel Cells	Saksham Sharma, IIT Guwahati, India
[Conference Hall 4]			
KL-28	11:00-11:30 Hrs	Biodegradable Star Shaped Poly(lactide)s for Biomedical Applications	Bhaskar B. Idage, NCL pune, India
IL-33	11:30-11:55 Hrs	Rotary Drum Composting of Vegetable Waste Followed by Biodegradation of PLA	Ajay Kalamdhad, IIT Guwahati, India
IL-34	11:55-12.20 Hrs	Laser Surface Bio-Coating of Functionally Graded TiO ₂ -HAp on Textured Ti Alloy for Enhancing Bioactivity and Cell Proliferation	Mamilla Ravi Sankar, IIT Guwahati, India
IL-35	12:20-12.45 Hrs	Polymers in stimuli responsive membranes	M K Purkait, IIT Guwahati, India
13:00-14:15 Hrs Lunch Student Presentations for Oral Awards II [Conference Hall 2]			
OP -08	14.15-14.30 Hrs	Synthesis of Non-ionic Bolaamphiphile and Study of its Self-assembly and Transport Behaviour for Drug Delivery Applications	Rashmi, University of Delhi, India

OP -09	14.30-14.45 Hrs	Synthesis of nanocomposite hydrogel using modified carboxymethyl cellulose and AuNPs: A transdermal drug carrier	Barun Mandal, IIT (ISM) Dhanbad, India
OP -10	14.45-15.00 Hrs	Paper based biofuel cell with photosynthetic microbial anode and air breathing enzymatic cathode	Sharbani Kaushik, IIT Guwahati, India
OP -11	15.00-15.15 Hrs	Studies on Silk-based Bionanocomposites	Rahul Patwa, IIT Guwahati, India
OP -12	15.15-15.30 Hrs	Gelatin crosslinked nanoparticles for controlled release of silibinin and lipoic acid	Plabita Gogoi, Tezpur University, India
OP -13	15.30-15.45 Hrs	Synthesis and Characterization of Cardanol based Polybenzoxazine-Epoxy Copolymer for Anti-Corrosive Coating Application	Deepak Patil, Institute of Chemical Technology, Mumbai, India
OP -14	15.45-16.00 Hrs	Sustainable Tough Waterborne Hyperbranched Polyester Nanocomposite using Carbon dot and its Nanohybrid through a Greener Approach for Multifaceted Applications	Deepshikha Hazarika, Tezpur University, India
Indo-Nepal Bilateral Symposium Session I [Conference Hall 3]			
14:15-14:45 Hrs:		Inaugural Speech: By Prof. Gautam Biswas, Director, IIT Guwahati	
KL-29	14:45- 15:15 Hrs	Biomass Based and Biodegradable Polymer Composites: Structure, Properties and Applications	Rameshwar Adhikari, Tribhuvan University, Nepal
KL -30	15:15-15:45 Hrs	Economy and Conversion Potential of Plastic Wastes of Kathmandu Valley into Fuel through Pyrolysis Process for Waste Management and Fuel Complements	Rabindra Prasad Dhakal, Nepal Academy of Science and Technology, Nepal
IL-36	15:45-16:10 Hrs	Biodegradable Copolyester Composites Reinforced by Wheat Stalked Micro crystalline Cellulose	Jyoti Giri, Tribhuvan University, Kathmandu, Nepal
Student Presentations for Oral Awards III [Conference Hall 2]			
OP -15	16.20-16.35 Hrs	Plastic waste management based on blending of different (Waste Electrical and electronic equipments) WEEE's and their characterization	Jaidev K, CIPET, Bhubaneswar, India
OP -16	16.35-16.50 Hrs	Optimization of waste cooking oil lubricant base stock synthesis via epoxidation using homogeneous acidic catalyst	Atanu Kumar Paul, IIT Guwahati, India
OP -17	16.50-17.05 Hrs	Sustainable-resource-based tough hyperbranched polyurethane nanocomposites with different carbon based metal nanohybrids: Perspective as multifunctional smart materials	Rituparna Duarah, Tezpur University, India
OP -18	17.05-17.20 Hrs	Development of Wood Polymer Nanocomposites Based on Modified Soybean Oil and Rosin Derivative	Zakaria Halim, Tezpur University, India

OP -19	17.20-17.35 Hrs	Biopolymer from Oily Bilge Water using Mixed Bacterial Culture	V. Uma, NIT Trichy, India
OP -20	17.35-17.50 Hrs	A Novel Approach in Development of Bio Based Foam from Biomass Waste	Anil Kumar, Institute of Wood Science and Technology, India
OP -21	17.50-18.05 Hrs	Rheological behaviour of composite propellant suspension containing aluminium nanoparticles	Rohit Lade, VNIT, Nagpur
OP -22	18.05-18.20 Hrs	Poly Lactic acid/ nano Hydroxyapatite based resorbable composites: Device to fix Podiatry fixations	Arbind Prasad, IIT Guwahati, India
OP-23	18.20-18.35 Hrs	Kinetics of thermal degradation of plastic waste and their conversion into liquid fuel by slow pyrolysis	Pallab Das, IIT Guwahati, India
OP-24	18:35-18:50 Hrs	Multifunctional Nano-Hydroxyapatite promoted Toughened High Molecular Weight Stereocomplex Poly (lactic acid) based Bionanocomposite	Arvind Gupta, IIT Guwahati, India
Indo-Nepal Bilateral Symposium Session II [Conference Hall 3]			
KL-31	16.15-16.45 Hrs	Ultrasound-Assisted Synthesis and Characterization of Polymethyl Methacrylate/Reduced Graphene Oxide Nanocomposites	V. S. Moholkar, IIT Guwahati, India
IL-37	16:45-17:05 Hrs	Nano-finishing of Bio-Implants using Polymer Rheological Abrasive Complex Suspensions	Mamilla Ravi Sankar, IIT Guwahati, India
IL -38	17:05-17:25 Hrs	Compatibilizer Effect on Morphological Thermal, Mechanical and Water Absorption Behaviour of Natural Fiber Based Polymer Composites	Netra Lal Bhandari, Tribhuvan University, Kirtipur, Kathmandu, Nepal
IL-39	17:25-17:45 Hrs	Correlative Characterisation of Imidazole 2-Carboxaldehyde Thiosemicarbazone Chitosan, Thiophene 2-Carboxaldehyde Thiosemicarbazone Chitosan and their Copper(II) Complexes	Hari Sharan Adhikari, Tribhuvan University, Kirtipur, Kathmandu, Nepal.
IL -40	17:45-18:05 Hrs	Removal of lead (II) Ions from Aqueous Solution by Hydroxyapatite Biosorbent Prepared from Ostrich Bone Waste	Komal Prasad Malla, Tribhuvan University, Kirtipur, Kathmandu, Nepal
IL -41	18:05-18:25 Hrs	Tuning Morphology and Mechanical Properties in Styrenic Block Copolymer Modified Nanostructured Epoxy Resin	Rajesh Pandit, Tribhuvan University, Kathmandu, Nepal
IL-42	18:25-18:45 Hrs	Flexible Conducting Polymer Nanocomposites using Multiwalled Carbon Nanotubes in Biodegradable Polymer Matrix	Kedar Nath Dhakal , Tribhuvan University, Kirtipur, Kathmandu, Nepal
Dinner (19:30 Hrs-21:00 Hrs)			

Day 4: January 11, 2018			
Talk	Time	Title of Expert Lecture	Speaker
PL-08	09:15-10:05 Hrs	Development and Global Applications of Hybrid Ion Exchange Nanotechnology (HIX-Nano): From Decontamination to Desalination	Arup K. SenGupta, Lehigh University, Bethlehem, USA
KL-32	10:05-10:35 Hrs	Biodegradable Polymeric Nanomaterials for Commodity, Engineering and Biomedical Applications	Vimal Katiyar, IIT Guwahati, India
10:35-11:00 Hrs		Tea Break [Conference Hall 2]	
KL-33	11:00-11:45 Hrs	Making of a Complete Professional: Some ideas and useful tips	R. P. Chhabra, IIT Kanpur, India
IL-43	11:45-12:10 Hrs	Comparison of promising pretreatment technologies for lignocellulosic biomass	Vaibhav V Goud, IIT Guwahati, India
IL-44	12:10-12:35 Hrs	Framework for Designing Sustainable Polymers: An Environmental Perspective	Reddithota J. Krupadam, National Environmental Engineering Research Institute, Nagpur, India
IL-45	12:35-13:00 Hrs	Columnar self-assembly of shape-anisotropic molecules and their applications in organic electronics	A. S. Achalkumar, IIT Guwahati, India
IL-46	13:00-13:25 Hrs	Designing with Bio-composite for Sustainable Development	Amarendra Kumar Das, IIT Guwahati, India
11.00 AM-1.00 PM			
Indo-Taiwan Bilateral Symposium Session IV			
Panel Discussion on			
Challenges and Opportunities on Microbial Fuel Cell Technologies [Conference Hall 3]			
13:30-14:30 Hrs Lunch			
02.30-3.30 PM			
Panel Discussion on			
Development of Biodegradable Plastics under Make in India Policy: Challenges and Opportunities [Conference Hall 3]			
03.30-4.30 PM			
Valedictory Session			

PL: Plenary Lecture; KL: Keynote Lecture; IL: Invited Lecture; OP: Oral Presentation

Poster Presentation		
Poster No.	Title of paper	Pg.No
PPC 01	Role of Dicumyl Peroxide as Compatibilizer in Increasing the Thermal Stability and Thermal Degradation Kinetics of Poly (Lactic Acid)/ Coconut Oil Blends, Siddharth Mohan Bhasney, Rahul Patwa, Amit Kumar and Vimal Katiyar, IIT Guwahati, Assam, India.	236
PPC 02	Ionic Liquid as solvent for development of Sulfonated Polyimide-based Polymer Electrolyte Membranes (PEMs), Tushita Rohilla, Narinder Singh and Dhiraj K. Mahajan, Indian Institute of Technology Ropar, Punjab, India.	236
PPC 03	Synthesis, Characterization and Immobilization of DPP-based Click Polymers on ITO and Glass Surfaces, P.Ramar and Debasis Samanta, CSIR-CLRI, Tamil Nadu, India.	237
PPC 04	Sustained Release of Triclosan from Nano Fibrillated Cellulose and its Prolonged Antibacterial Activity, Srijita Purkayastha, Saikat Biswas and Sampa Saha, Indian Institute of Technology Delhi, Delhi, India.	238
PPC 05	Surface initiated self-healing polymers via Atom Transfer Radical Polymerization from the surface of Graphene oxide, Junali Handique and Swapan Kumar Dolui, Tezpur University, Assam, India.	238
PPC 06	Biodegradable Poly (lactic acid)/Modified Gum Arabic (MG) Based Microcellular Composite Foam: Effect of MG on Foam Properties and Thermal Behaviour, Shasanka Sekhar Borkotoky, Tabli Ghosh and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	239
PPC 06A	Morphology and crystallinity study of novel polypropylene hybrid composites, Rupam Gogoi, Gaurav Manik, Byravan Arun, Indian Institute of Technology Roorkee, Saharanpur, UP, India.	239
BPS 07	Synthesis of Ethylene Glycol Initiated Poly(ϵ -caprolactone) [PCL], Purabi Bhagabati and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	202
BPS 08	Biodegradable cellulose based superabsorbent hydrogels for water conservation in agricultural lands, Dipankar Das and Sachin Bhaladhare, Tripura University, Tripura, India.	202
BPS 09	Waste chicken feather as reinforcement fiber in chemically modified epoxidised soybean oil based composites, Gitashree Gogoi and Tarun K. Maji, Tezpur University, Assam, India.	203
BPS 10	Chitosan Starch Hybrid Biopolymer Reinforced with Banana Fibre, Nithin T James, Rijin Raju, Adarsh Sreekumar and Ambili S Nair, TKM College of Engineering, Kerala, India.	203
BPS 11	Trends in Green Composites - A perspective, Pritam Dey, Srimanta Ray, Chemical Engineering Department, National Institute of Technology, Agartala, India.	204
BPS 12	Renewable resource based smart hyperbranched polyurethane elastomer, Tuhin Ghosh and Niranjana Karak, Tezpur University, Assam, India.	204
BPS 12A	Influence of β -chitin on PVP-CMC and PVP-CMC-CaCO ₃ hydrogel scaffolds: the bioinspired biomaterials for biomedical applications Vida Čadež, Nabanita Saha, Maja Dutour Sikirić and Petr Šáha, Tomas Bata University, Czech Republic.	201
PNC 13	Development of Chitosan Film Reinforced with Anti-Oxidant Loaded Mesoporous Silica for Active Packaging, P.L. Alagammai, C.K. Bijosh, G. Pugazhenthii and V. Ravi Babu, CSIR – CECRI, Tamil Nadu, India.	228
PNC 14	Study on the properties of nanocomposite based on rice husk and polyvinylchloride, Nipu Dutta and T. K. Maji, Tezpur University, Assam, India.	229
PNC 15	All-Solid-State Flexible Supercapacitor Based on Self Assembled Polyaniline Nanotube/Reduced Graphene Oxide Aerogel, Anindita Bora and Swapan Kumar Dolui, Tezpur University, Assam, India.	229
PNC 16	A Study of Acid red 52 dye removal from an aqueous medium using PANI/PVP/Nd-ZnO polymeric nanocomposite, A. Gouthaman, Raja S. Azarudeen and M. Thirumarimurugan, Coimbatore Institute of Technology, Tamil Nadu, India.	230

PNC 17	Physicochemical properties of wood nanocomposites based on behavior soybean oil, Moon Mandal and Tarun K Maji, Tezpur University, Assam, India.	230
PNC 18	Functionalized chitosan/AuNPs based composite: An efficient photocatalyst, Lipi Midya and Sagar Pal, Indian Institute of Technology Dhanbad (Indian School of Mines), Jharkhand, India.	231
PNC 19	Synthesis and Characterization of PA6/GO and PA6/GO/PANI Nanocomposites, Banalata Kaibarta, Shatrudhan Palsaniya and Ashok Kumar Dasmahapatra, Indian Institute of Technology Guwahati, Assam, India.	231
PNC 20	Fabrication of bio based hyperbranched epoxy and its nanocomposite, Aditi Saikia and Niranjana Karak, Tezpur University, Assam, India.	232
PNC 21	An efficient dye sensitized solar cell based on Polymethyl methacrylate/carbon black polymer gelelectrolyte, Kiran jyoti Mohan and Swapan Kumar Dolui, Tezpur University, Assam, India.	232
PNC 22	Bio-derived aliphatic hyperbranched polyurethane nanocomposites with high performance and smart features, Rajarshi Bayan and Niranjana Karak, Tezpur University, Assam, India.	233
PNC 23	Characteristic study of adding ZnO nanoparticles in PVDF and PVDF-TrFE films and their voltage responses, Rajesh Sahoo, Anantha kumar Ramadoss, Lakshmi Unnikrishnan, Smita Mohanty, Swapna Mahapatra and Sanjay Ku. Nayak, LARPM, CIPET, Orissa, India.	233
PNC 24	Ag@SiO ₂ modified PVDF Nanohybrid Membrane for Water Purification, Jnyana Ranjan Mishra, Malluru Abhilash, Sushanta Kumar Sama, Smita Mohanty and Sanjay Kumar Nayak, LARPM, CIPET, Orissa, India.	234
PNC 25	Synthesis of PI/AFG nanocomposite films end capped with diphenylethynyl phenoxy endcap for aerospace applications, Chandra Sekhar Patra, S Kurmvanshi, Sushanta Kumar Samal, Smita Mohanty and S. K. Nayak, LARPM, CIPET, Orissa, India.	234
PNC 26	Development of polystyrene-TiO ₂ nanocomposite photocatalyst for treatment of dye wastewaters, Suman Das and Hari Mahalingam, Department of Chemical Engineering, National Institute of Technology, Karnataka, India.	235
PNC 27	Hydrophilic and Antibacterial Polysulfone Ultrafiltration Membranes, Randeep Singh and Mihir Kumar Purkait, Indian Institute of Technology Guwahati, Assam, India.	235
PNC 27A	Bacterial cellulose/nanohydroxyapatite biocomposites: A novel approach of fabrication method, Julia Rogowska-Tylman, Nabanita Saha, Oyunchumeg Zaandra, Witold Łojkowski, Petr Saha, Tomas Bata University, Czech Republic.	201
SPT 29	Effect of Functionalized Chitosan on PLA/PBS Based Bio-nanocomposite for Morphological, Thermal and Mechanical Properties Analysis, Monika, Akhilesh Kumar Pal and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	240
SPT 30	Biodegradable Packaging Film from Renewable Resources, Bishwabhusana Palai, Manoranjan Biswal, Smita Mohanty and Sanjay kumar Nayak, LARPM, Orissa, India.	240
SPT 31	In situ development of bio-based polyurethane/epoxy hybrid materials via non-isocyanate route and its coating properties, Simanta Doley and Swapan Kumar Dolui, Tezpur University, Assam, India.	241
SPT 32	Sustainable Polymers: Emerging Material for Future, Pranabesh Sahu and Anil K. Bhowmick, Rubber Technology Centre, Indian Institute of Technology Kharagpur, West Bengal, India.	241
SPT 34	Utilization of an already used adsorbent based on Poly(Aac-AM-SH) superabsorbent hydrogels, Reena Singhal and Tripti Singh, Harcourt Butler Technological Institute, Uttar Pradesh, India.	242
SPT 35	Studies on the Properties of Polylactic acid/ Polyester Resin based Wood Composites, Prasanta Baishya and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	243

SPT 36	Reactive distillation for D-Lactic Acid Purification: A Process intensifying tool for Biorefineries, Kiran Kumar Gali, Senthilkumar, Sivaprakasam and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	243
SPT 37	Fabrication of UV Protective Sustainable Polymer Composites, P.L. Algammal, L. Sravanthi and V. Ravi Babu, CSIR-CECRI, Tamil Nadu, India.	244
SPT 37A	Development of blown films of Poly lactic acid and its biocomposites: Its influence on color and migration properties, Tabli Ghosh, Akhilesh Kumar Pal, Siddharth Mohan Bhasney, Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	244
PHA 38	Facilitated transport of CO ₂ in novel biopolymer blend membrane, Babul Prasad and Bishnupada Mandal, Indian Institute of Technology Guwahati, Assam, India.	220
PHA 39	Development of Polymer Composites for Enhanced Thermal Conductivity Characteristics, Subhranshu S Pradhan, Lakshmi Unnikrishnan, Smita Mohanty and Sanjay K Nayak, LARPM, CIPET, Orissa, India.	221
PHA 40	Effect of incorporation of Lignin on Green Polyurethane synthesized via Non-isocyanate route, Munmi Das, Bishnupada Mandal and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	221
PHA 41	Development of Polymer Nanocomposite for Modulation of Amyloids and Cross Blood Brain Barrier, Subrata Mondal, Sayan Roy howdhury and Parameswar Krishnan Iyer, Indian Institute of Technology Guwahati, Assam, India	222
PHA 42	Preparation and characterization of biocompatible hydrophilic Polyethersulfone porous membrane for blood purification, Athira V B, Lakshmi Unnikrishnan, Smita Mohanty and S. K Nayak, LARPM, CIPET, Orissa, India	222
PHA 43	Advances in pharmaceutical and therapeutic applications of functional cellulose-based membranes for diabetic wound healing, Veena Vijayakumar, Sushanta K Samal, Smita Mohanty and Sanjay K. Nayak, LARPM, CIPET, Orissa, India.	223
PHA 44	Self-Healing Crosslinked Polyionic Network, Anil Kumar Padhan and Debaprasad Mandal, Indian Institute of Technology Ropar, Punjab, India.	223
PHA 45	Development of Fe-Cellulose Nanocrystal (Fe-CNC) based thin polymeric film for ethanol sensing, Gourhari Chakraborty, Prodyut Dhar, G.Pugazenthi and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	224
PHA 46	Waste human hair derived porous carbon filled polymer composites for high performance structural applications, Ravindra Kumar, Suyash Varshney, Kamal K Kar and Kinshuk Dasgupta, Indian Institute of Technology Kanpur, Uttar Pradesh, India.	224
PHA 46A	Synthesis and characterization of cross-linked poly(vinyl alcohol)/piperazine glycinate/polyethersulfone composite membrane for CO ₂ /N ₂ gas separation, Mridusmita Barooah, Senkhula Lokesh, Bishnupada Mandal, Indian Institute of Technology Guwahati, Assam, India.	225
PMS 47	Modelling of emulsion polymerization of styrene in a semi-batch reactor, Reena Sharma and Ashwini Sood, Harcourt Butler Technical University, Uttar Pradesh, India.	226
PMS 48	Study of self-cleaning and blend compatibility of PDMS-PVAc blend using molecular dynamics simulations, Sushanta K. Sethi, Lokesh Soni, Rupam Gogoi and Gaurav Manik, IIT Roorkee, Uttarakhand, India.	226
PMS 49	Failure Analysis of Bubble Canopy: MiG-29 Aircraft, Praveer Verma, Krati Verma and Neelam Shukla, Defence Research and Development Organization, Uttar Pradesh, India.	227
PMS 49A	Molecular Dynamic Simulations of the Ternary system: Quinoline, Heptane and Phosphonium Based Deep Eutectic Solvent (DES), Papu Kumar Naik, Sandip Paul, and Tamal Banerjee, Indian Institute of Technology Guwahati, Assam, India.	227
PDD 50	Effect of Variation of Crosslinker on the Drug Release Behaviour of Polymeric Nanoparticles, Bably Khatun and T. K. Maji, Department of Chemical Sciences, Tezpur University, Assam, India.	214

PDD 51	Development of a chitosan conjugated 5-Fluorouracil prodrug as a nano-carrier for controlled delivery, Himali Horo, Lal Mohan Kundu and Bishnupada Mandal, Indian Institute of Technology Guwahati, Assam, India.	214
PDD 53	Synthesis, characterization and drug delivery applications of copolymer blend membranes: Kinetics and mechanism of drug release profile, E. Jaisankar, Raja S. Azarudeen and M. Thirumarimurugan, Coimbatore Institute of Technology, Tamil Nadu, India.	215
PDD 54	Injectable and pH-Responsive PEG Hydrogels for Sustained Intra-Tumoral Drug Delivery, Peeyush K Sharma and Yashveer Singh, Indian Institute of Technology Ropar, Punjab, India.	216
PDD 55	Nanobiocomposites - The New Interdisciplinary Field in Case of Drug Delivery, Jyotismita Kalita & Hemantajeet Medhi, Bineswar, Brahma Engineering College, Kokrajhar, Assam, India.	
PDD 55A	Environmental friendly Gold and Silver nano-composites bare positive effect on human health, Sarangapani Hazarika & Pranab Dutar Bineswar Brahma Engineering College, Kokrajhar, Assam, India.	
PDD 56	A Review on Thymol Encapsulation in Biodegradable Polymer Shells and its Controlled Release Mechanism, Y. P. Bhalariao, S. J. Wagh and Shroff S. R, Rotary Institute of Chemical Technology, Gujarat, India.	216
PDD 57	PLA/CNC Electrospun Nanocomposite Fiber as a Controlled Release Vehicle for Urea Fertilizer, Narendren S, Prodyut Dhar and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	217
PDD 58	Synergistic Effect of Curcumin Microcapsule Loaded Anticancer Hydrogel, Prasamsa Panta, Moon Suk Kim, Elina Maharjan, Kamala Panthi and Rameshwar Adhikari, Tribhuvan University, Kathmandu, Nepal.	217
ECA 59	Synthesis and characterization of low cost non-fluorinated aqua-repellent coating, Smruti R. Mohanty, Smita Mohanty and S. K. Nayak, LARPM, CIPET, Orissa, India.	205
ECA 60	Zwitterionic-polyurethane coatings for non-specific marine bacterial inhibition: A nontoxic approach for marine application, Anthony Yesudass S, Smita Mohanty, Sanjay K Nayak and Chandi C. Rath, LARPM, CIPET, Orissa, India.	205
ECA 61	Swelling behavior and surface switchable wettability of perfluorinated imidazolium amphiphilic ionic copolymer, Santosh N. Chavan and Debaprasad Mandal, Indian Institute of Technology Ropar, Punjab, India.	206
ECA 61A	Synthesis and characterization of Itaconic acid based Polyurethane acrylate resin for UV curable coating Application. Ganesh A. Phalak, Deepak M. Patil, S. T. Mhaske, Institute of chemical Technology, Mumbai, India	206
PDW 62	A Study on catalytic co-cracking of waste plastics polypropylene disposal cup and residual fuel oil, Pamreishang kasar and M. Ahmaruzzaman, National Institute of Technology Silchar, Assam, India.	218
PDW 63	Effect of moisture absorption on degradation of FRP composites laminate and durability of FRP laminates exposed with sea water environment, simulate the moisture absorption using FEA analysis, Pitambar Tripathy, Bishnu Panda, Smita Mohanty and Sanjay Kumar Nayak, LARPM, CIPET, Orissa, India.	218
PDW 64	Comparative study of recycled PVC [r-PVC] recovered from waste electrical and electronic equipments (WEEE), Omdeo K. Gohatre, Manoranjan Biswal, Smita Mohanty and Sanjay K Nayak, LARPM, CIPET, Orissa, India.	219
PDW 65	Aerobic biodegradation kinetic study of PLA based biocomposites under composting conditions, Naba Kumar Kalita, Anubhav Sarmah, Ajay Kalamdhad and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	219
PDW 66	Aerobic biodegradation study of PLA based biocomposites under composting conditions at thermophilic temperature, Naba Kumar Kalita, Ajay Kalamdhad and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	220
OT 68	Depressurization induced morphology control in microcellular batch foaming process, Indrajeet Singh, Abhishek Gandhi, Smita Mohanty, S. K. Nayak, LARPM, CIPET, Bhubaneswar, India.	207

OT 69	Imidazolium based ionic polymers for alkaline stable anion exchange membrane, Gaje Singh and Debaprasad Mandal, Indian Institute of Technology Ropar, Punjab, India.	207
OT 70	Synthesis and Characterization of Chitosan/ Multiwalled carbon nanotube mixed matrix membrane for CO ₂ Separation from flue gas, Rajashree Borgohain and Bishnupada Mandal, Indian Institute of Technology Guwahati, Assam, India.	208
OT 71	Photostability of acetylated wood coated with ZnO nanodispersion, B. N Giridhar, Sreeja Nair and Krishna K.Pandey, Institute of Wood Science and Technology, Karnataka, India	208
OT 72	Preparation and Physicochemical Characterization of Pyrolyzed Human Hair, Tika Ram Bhandari, BiditLamsal, Nilam Shrestha, TikaBahadur Katuwal, Marco Liebscher and Rameshwar Adhikari, Tribhuvan University, Kathmandu, Nepal.	209
OT 73	Processing and Characterization of Fly Ash Based Building Materials by Geopolymerization Technique, Dipankar Das and Prasant Kumar Rout, Tripura University, Tripura, India.	209
OT 74	Protein aggregation dependence on different stoichiometric ratio of Transition metal ions, Lalit pandey and Abhishek Roy, Indian Institute of Technology Guwahati, Assam, India.	210
OT 75	Modified Biopolymer as an Environmental Friendly Dispersant for Treatment of Oil Spills, Pankaj Boruah, Chethana Mudenur, Akhilesh Kumar Pal and Vimal Katiyar, Indian Institute of Technology Guwahati, Assam, India.	210
OT 76	Tuning 'de Vries-Like' Properties in Aroylhydrazone based Liquid Crystals, Hemant Kumar Singh and Ammathnadu S. Achalkumar, Indian Institute of Technology Guwahati, Assam, India.	211
OT 77	Room temperature columnar liquid crystalline self-assembly of acidochromic, luminescent, star-shaped molecules with cyanovinylene chromophores, Ravindra Kumar Gupta, Suraj Kumar Pathak, Ammathnadu and S. Achalkumar, Indian Institute of Technology Guwahati, Assam, India.	211
OT 78	Chitosan/Graphene Oxide based Nanocomposite Hydrogel with High Mechanical and Shape Memory Effect, Jayashree Nath and Swapan Kumar Dolui, Tezpur University, Assam, India.	212
OT 79	Chitosan based free standing electrode for super capacitors, Aswathy N R, Akshaya Palai, Smita Mohanty and Sanjay Kumar Nayak, LARPM, CIPET, Orissa, India.	212
OT 80	Effect of Surface Modified Graphene on Dynamic Mechanical and Thermal Stability of Epoxy Nanocomposite, Nabajyoti Talukdar and Sudipta Halder, Indian Institute of Technology Guwahati, Assam, India.	213
OT 81	Synthesis of chitosan/GO mixed-matrix membrane for CO ₂ separation, Pradip Das, Babul Prasad, Hemanta Kalita, Sasidhar Gumma and Bishnupada Mandal, , Indian Institute of Technology Guwahati, Assam, India.	213
PPC-Polymer Processing and Characterization, BPS- Biodegradable Polymer Synthesis, PNC- Polymer Nanocomposites, SPT- Sustainable Polymer Technologies, PHA-Polymers for High End Applications, PMS –Polymer for Drug Delivery, ECA- Eco-friendly Polymer Coating and Adhesives, PDW- Polymer Degradation and Waste Management, OT- Others		