



International Conference on Polymers for Advanced Technology

February 23-25, 2023 | Goa, India



22nd Feb 2023

17:00-19:00 | Registration

Day-1 | 23rd Feb, 2023 | Programme

Registration

Time: 08:00

Inauguration | Venue: Mandovi & Abolim Hall

Welcome Address

Manohar Badiger (Organising Chair)

Time: 09:00-09:05

APA Address

Bhuvanesh Gupta (APA, President)

Time: 09:05-09:10

Conference Address

Sanjay K Nayak, (Conference Chair)

Time: 09:10-09:15

Theme Address

Frédéric Guittard, University Côte d'Azur, France (Guest of Honor)

Time: 09:15- 09:25

Special Address

Puneet Kumar Goel, Chief Secretary, Govt. of Goa (Guest of Honor)

Time: 09:25-09:45

Inaugural Address

Arun Baroka, Secretary, DCPC, GOI, New Delhi (Chief Guest)

Time: 09:45-10:10

Vote of Thanks

Sunita Rattan (APA Secretary)

Time: 10:10-10:20

10:20-10:45 | Inaugural Tea Break

Session 1 | Venue: Mandovi & Abolim Hall

Plenary Session

Chairs: Anup Ghosh, IITD, India & Günther G Scherer, PSI, Switzerland

Plenary Talk-1

Frédéric Guittard, University Côte d'Azur, France (APA Distinguished Award Talk)

Biomimetic surfaces

Time: 10:45-11:20

Plenary Talk-2

Pedro Fardim, KU, Belgium

Topochemical Engineering of Polysaccharide-based Gels and Surfaces: Opening New Frontiers for Future Sustainable Materials

Time: 11:20-11:55

Plenary Talk-3

Daniel Grande, CNRS, France

Functional Polymers with Controlled Pore Morphology: From Design to Application

Time: 11:55-12:30

13:00 -14:00 -Lunch Break

Session 2 Polymer Synthesis & Modification

Chairs: *Pranee Phinyocheep, MU, Thailand & Anupama Sharma, PU, India* Venue: Mandovi Hall

Time	Lecture Title/Author
14:00-14:20	KN Radiation Grafting: A Versatile Technique for Development of Advanced Materials Sunita Rattan <i>Amity University, Noida, India</i>
14:20-14:35	IL Gamma Radiation & Plasma Engineered Advanced Functional Materials for Water Purification Virendra Kumar <i>Bhabha Atomic Research Centre, Mumbai, India</i>
14:35-14:45	OL Tailoring surface functionalized polymeric templates for healthcare applications using Plasma and Gamma irradiation techniques Nilanjali Misra <i>Bhabha Atomic Research Centre, Mumbai, India</i>
14:45-14:55	OL Subtle Features in Lactide Polymerization: Effect of Metal, Ligand(s) and Geometry of Catalyst in PLA Synthesis Debashis Chakraborty <i>Indian Institute of Technology Madras, India</i>
14:55-15:05	OL Preparation of Ultra-High Molecular Weight Poly- α -olefins using Ziegler-Natta Catalyst Monikangkana Talukdar <i>HPCL-R&D Devanagonthi, Bengaluru, India</i>
15:05-15:15	OL Radiation Grafted Functional Adsorbent for Remediation of Toxic Metal Ions Swarnima Rawat <i>Bhabha Atomic Research Centre, Mumbai, India</i>

Symposium on Packaging

Session 3 Polymers for Packaging

Chairs: *S Chattopadhyay, MoC&F, Govt of India, India & Satyendra Mishra, NMU, India* Venue: Zuari Hall

Time	Lecture Title/Author
14:00-14:20	KN Sustainable flexible packaging solutions Mohammed Nadeem <i>Paharpur 3P Pvt. Ltd., India</i>
14:20-14:40	KN Advancement in Polyolefin – to meet packaging need Alkesh Ghosh <i>HPCL- Mittal Energy Limited, India</i>
14:40-15:00	KN Biodegradable plastic packaging mitigate single use plastic packaging Vimal Katiyar <i>Indian Institute of Technology Guwahati, India</i>

APA Bio Forum Symposium

Session 4 Functional Biopolymers

Chairs: BS Kaith, NITJ, India & M S Alam, JH, India

Venue: Sal Hall

Time	Lecture Title/Author
14:00-14:20	KN Are Biomaterials Responsible for Global Warming ? Why Have We Been So Slow To Act ! Thomas Webster <i>Hebei University of Technology, USA</i>
14:20-14:35	IL Supramolecular Polymers towards Spatio-temporal, Precision Structure-Function Control for mimicking ECM Asish Pal <i>Institute of Nano Science & Technology, Mohali, India</i>
14:35-14:50	IL Biopolymers as versatile templates for directed synthesis of metal oxide nanostructures with regulated morphological and tuneable properties Dhiraj Sud <i>Sant Longowal Institute of Engineering & Technology, Longowal, India</i>
14:50-15:00	OL Modification of Wheat Gluten with Itaconic acid and its potential application as Superabsorbent in Female Sanitary Napkins Tapaswini Jena <i>CIPET, Bhubaneswar, India</i>
15:00-15:10	OL Modification of polysaccharides through the Grafting of vinyl monomers with Potassium Bromate/ Thiourea Redox System Arpit Sand <i>Manav Rachna University, Faridabad, India</i>
15:10-15:20	OL Exploration of supercritical CO ₂ as an eco-friendly blowing agent for preparation of microcellular natural rubber foam Wasan Tissanan <i>Mahidol University, Bangkok, Thailand</i>

Session 5 Biomaterials & Bioengineering

Chairs: Daniel Grande, CNRS, France & Biman B Mandal, IITG, India

Venue: Abolim Hall

Time	Lecture Title/Author
14:00-14:20	KN Mice model of wound healing for polymeric material Amlan Gupta <i>Sikkim Manipal Institute of Medical Sciences, Sikkim, India</i>
14:20-14:35	IL Functionalized β -Cyclodextrin for Various Biomedical Applications Sagar Pal <i>Indian Institute of Technology (ISM) Dhanbad, India</i>
14:35-14:45	OL Biobased Superabsorbent Foam for hygiene Application Sukanya Pradhan <i>CIPET, Bhubaneswar, India</i>
14:45-14:55	OL Development of Surface Functionionalised Carfilzomib Containing Protein Nanoarticles as Biotherapeutics for The Treatment of Ovarian Cancer Ashaben Mehulkumar Patel <i>Parul Institute of Pharmacy, Vadodara, India</i>
14:55-15:05	OL Biogenic Synthesis of Sulphur Nanoparticles Using Ocmum canum leaves for Antimicrobial Application towards Gram positive and Gram negative Pathogens Giriraj Tailor <i>Mewar University Chittorgarh, India</i>

Session 6 Polymers for Advanced Technology

Chairs: MM Nasef, UKM, Malaysia & Dhiraj Sud, SLIET, India

Venue: Mandovi Hall

Time	Lecture Title/Author
15:20-15:40	KN Two-step chemical modification of natural rubber for property improvement and its application Pranee Phinyocheep <i>Mahidol University, Bangkok, Thailand</i>
15:40-15:55	IL Conducting Polymer Nanocomposites as Highly Active Visible Light Photocatalysts Prem Felix Siril <i>Indian Institute of Technology Mandi, India</i>
15:55-16:05	OL Pervaporation of acetic acid water solution using ABPBI-based membranes Saroj Shivram Gawas <i>CSIR-NCL, Pune, India</i>
16:05-16:15	OL Morphology and Structural-Property Correlations of a Model Ionomeric Elastomer: Effect of Curing Systems Prakash Vislavath <i>Naval Materials Research Laboratory, Maharashtra, India</i>
16:15-16:25	OL Multifunctional Properties of PVDF/GO Nanocomposites film for Defence Application Shikha Chouhan <i>Indian Institute of Technology Delhi, India</i>
16:25-16:35	OL Ion-exchange membranes and a vanadium redox flow battery Rajaram Nagarale <i>CSIR-Central Salt and Marine Chemicals Research Institute Bhavnagar, India</i>

Symposium on Packaging

Session 7 Polymers for Packaging

Chairs: Tanweer Alam, IIP, India & Vimal Katiyar, IITG, India

Venue: Zuari Hall

Time	Lecture Title/Author
15:20-15:40	KN Prospects of PET packaging Abdul Jebbar P B <i>Hot Pack, UAE</i>
15:40-16:00	KN Concerns regarding proliferation of additive based Bio-degradable plastics for sustainable Packaging Nidhi R <i>Sealed Air Pvt.Ltd., India</i>
16:00-16:20	KN Equipment Innovations – Insights on New Machines and Manufacturing Capabilities in Packaging Machine Sharayu Sawant <i>IPMMAI, India</i>

APA Bio Forum Symposium

Session 8 Functional Biopolymers

Chairs: MS Alam, JH, India & Ishak Ahmed, UKM, Malaysia

Venue: Sal Hall

Time	Lecture Title/Author
15:20-15:40	KN Ecofriendly Materials – Fabrication and Prospective Applications Balbir Singh Kaith <i>Dr. B R Ambedkar National Institute of Technology Jalandhar, India</i>
15:40-15:55	IL Revolutionary Role of polymers in Water and Waste Water Treatment and Recycling Sujit Kumar <i>Grannus Water Pvt.Ltd., India</i>
15:55-16:05	OL Synthesis, characterization and swelling properties of Guggul gum based moisture retaining hydrogels for agricultural applications Shabnum Saleem <i>CT University, Punjab, India</i>
16:05-16:15	OL Molecularly imprinted adsorbents (MIA) for selective recovery of Ellagic acid from Pomegranate peels Anupama Kumar <i>Visvesvaraya National Institute of Technology, Nagpur, India</i>
16:15-16:25	OL Enhancing mechanical and thermal properties of melt processed starch formulations via temperature optimization Kshitij Madhu <i>Indian Institute of Technology Guwahati, India</i>

Session 9 Tissue engineering

Chairs: Amlan Gupta, SMIMS, India & MV Badiger, NCL, India

Venue: Abolim Hall

Time	Lecture Title/Author
15:20-15:40	KN Bioengineered Human Tissues & Organs: The way forward Biman B. Mandal <i>Indian Institute of Technology Guwahati, India</i>
15:40-15:55	IL Injectable, Self-healing Hydrogels for Cartilage Tissue Engineering Deepa Ghosh <i>Institute of Nano Science and Technology, Mohali, India</i>
15:55-16:05	OL Development of Plasticizer Free Acrylic Denture Softliners using Nanogel Additives Manju Saraswathy <i>Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India</i>
16:05-16:15	OL Platelet rich plasma-based tissue engineered construct for articular cartilage defect reconstruction: An in-vitro & in-vivo study to evaluate clinical potential for chondral tissue construct for osteoarthritic knee repair Bhisham Narayan Singh <i>Manipal Academy of Higher Education, Manipal, India</i>
16:15-16:25	OL Novel treatment strategy utilizing bi-layered scaffold design incorporating bioactive factors for wound healing Mamatha M Pillai <i>Indian Institute of Technology Bombay, India</i>

16:30-17:00 | Tea Break

18:00 - 18:15 | Assembling at ICG Porch area for Cruise Dinner Departure

19:00 - Onwards | Conference Cruise Dinner & APA Award Ceremony



International Conference on Polymers for Advanced Technology



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Day-2 | 24th Feb, 2023 | Programme

Session 10 | Venue: Mandovi & Abolim Hall

Plenary Session: APA Sustainability Forum Symposium

Chairs: VK Gupta, RIL, India & Pedro Fardim, KU, Belgium

Plenary Talk-1

Santanu Dasgupta, RIL India

Sustainable production of food, feed, advance biomaterials and energy through Green Synthetic Biology

Time: 09:00-09:35

Plenary Talk-2

Niall Dunne, Polymateria, UK

Time: 09:35-10:10

10:10-10:20 | Tea Break

APA Sustainability Forum Symposium

Session 11 Sustainable Plastic Materials

Chairs: Harshid Patil, RIL, India & Ishak Ahmed, UKM, Malaysia

Venue: Mandovi Hall

Time **Lecture Title/Author**

10:20-10:40 KN Sustainability Challenges in Elastomers Industry
V K Rathod
GRP Ltd., India

10:40-11:00 KN Biodegradable and compostable packaging materials from oil palm agricultural wastes
Mohammad Jawaid
INTROP, Universiti Putra Malaysia, Malaysia

11:00-11:15 IL High-Performance Waste-Sourced Polymers: Conventional to Unconventional Applications
Bimlesh Lochab
Shiv Nadar Institution of Eminence, Greater Noida, India

11:15-11:25 OL Enzyme-embedded aliphatic polyesters for accelerated bio(degradation)
Naba Kumar
KTH University, Sweden

11:25-11:35 OL Sustainable Solution Processable Benzoxazine-Sulfur Copolymer: Scope for Waste Utilization and Transparent Optics Application
Sangeeta Sahu
Shiv Nadar Institution of Eminence, Uttar Pradesh, India

APA Nano Forum Symposium

Session 12 Nanomaterials & Nanoengineering

Chairs: Smita Mohanty, CIPET, India & Ashwini Agrawal, IITD, India

Venue: Zuari Hall

Time	Lecture Title/Author
10:20-10:40	KN Hemicellulose and cellulose derived from waste lignocellulosic biomass as versatile and inexpensive substrate for wastewater remediation Anupama Sharma <i>Panjab University, Chandigarh, India</i>
10:40-10:55	IL Multi-layered Polymer Nanocomposites: A New Class of Materials for Screening Electromagnetic Radiation Suryasarathi Bose <i>Indian Institute of Science, Bengaluru, India</i>
10:55-11:05	OL Wastewater Treatment by Clay-Polymer Nanocomposites and Clay-Gemini Hybrid Materials Ajmal Koya Pulikkal <i>National Institute of Technology Mizoram, India</i>
11:05-11:15	OL Thermal properties of hexagonal Boron nitride based thermoplastic polyurethane nanocomposites Rishabh Tiwari <i>Indian Institute of Technology Delhi, India</i>
11:15-11:25	OL Preparation of Solution blown PVDF for energy Harvesting Srishti Bajpai <i>Indian Institute of Technology Delhi, India</i>

Session 13 GFL Session on Hydrogen Storage & Energy Devices

Chairs: Yash Gupta, GFL, India & Jyoti Chauhan, GFL, India

Venue: Sal Hall

Time	Lecture Title/Author
10:20-10:40	KN The world of Membranes for fuel cell application J K Rathour <i>GFL, India</i>
10:40-10:55	IL Polypyrrole/MoS ₂ nanocomposites as flexible electrodes material for supercapacitors Surinder P. Singh <i>CSIR-NPL, New Delhi, India</i>
10:55-11:05	OL Polymer Membrane Fuel Cells: Ab Initio Quantum Chemical and Density Functional Theory Perspective Anant D. Kulkarni <i>S. K. Somaiya College, Mumbai, India</i>
11:05-11:15	OL Designing of PANI/VS ₂ Composite Materials for Higher Power Density and Energy Density Electrochemical Devices Saad Zafar <i>Shiv Nadar University, Delhi, India</i>
11:15-11:25	OL Crosslinked polyvinyl alcohol separator for harnessing power from wastewater using Microbial Fuel Cells Bhanupriya Das <i>Indian Institute of Technology Guwahati, India</i>

Session 14 Advanced Textile Materials

Chairs: RS Rengasamy, IITD, India & Satyendra Mishra, NMU, India

Venue: Abolim Hall

Time	Lecture Title/Author
10:20-10:40	KN Characteristicks of composites made from carbon/PP hybrid yarns using electrostatic spray coating Apurba Das <i>Indian Institute of Technology Delhi, India</i>
10:40-10:55	IL Development of Polypyrrole Coated Textile for Solar Evaporation Arun Kumar Patra <i>U P Textile Technology Institute, Kanpur, India</i>
10:55-11:05	OL Investigation of the effect of reflective fabric layer on radiative heat loss from human body in cold weather clothing Gourav Mishra <i>Indian Institute of Technology Delhi, India</i>
11:05-11:15	OL Response surface methodology and optimized synthesis of novel Hing gum-based hydrogel for the efficient removal of cationic dyes Samiksha Gautam <i>National Institute of Technology Srinagar, J&K</i>
11:15-11:25	OL Deciphering the three-dimensional (3D) porous structure of absorptive glass mat (AGM) separators Siddharth Shukla <i>Indian Institute of Technology Delhi, India</i>
11:25-11:35	OL Highly efficient photocatalytic degradation of Cationic dye over SrVO ₄ under natural solar irradiation for emerging contaminants Karthiga Rajendaran <i>CPA College, Tamil Nadu, India</i>

Session 15 Polymer & Nanocomposite

Chairs: Ashish Pal, INST, India & Sunita Rattan, Amity Univ., India

Venue: Mandovi Hall

Time	Lecture Title/Author
11:45-12:05	KN Bio-nanocomposite starch/polyaniline/cellulose nanocrystals (CNC) Film as Potential Intelligent Food Packaging with Colourimetric Ammonia Sensor Ishak Ahmed <i>Abdul Rahman University College, Kuala Lumpur, Malaysia</i>
12:05-12:20	IL Effect of Conducting Polymer on Enhancing the Supercapacitor Performance of Mxene and Graphene Oxide Amar Prasad Yadav <i>Tribhuvan University, Kathmandu, Nepal</i>
12:20-12:30	OL Investigation of dye-doped electrospun polyvinylidene fluoride fiber mats for random lasing application Nideesh P K <i>Mahatma Gandhi University, Kottayam, India</i>
12:30-12:40	OL Polyolefin/Natural Fibre Composite by High Energy Radiation Atanu Jha <i>Bhabha Atomic Research Centre, Navi Mumbai, India</i>
12:40-12:50	OL Bio-based Epoxy/Polyurethane/Silica nanocomposite Applicable as Automobile Sealer Debasmita Mohanty <i>CIPET, Bhubaneswar, India</i>

12:50-13:00 OL Studies on electroactive properties of PVDF/PEI blend films for energy harvesting
Sukumar Roy
Indian Institute of Technology Delhi, New Delhi, India

Session 16 Nanomaterials & Nanoengineering

Chairs: S Bose, IISc, India & SP Singh, NPL, India

Venue: Zuari Hall

Time	Lecture Title/Author
11:45-12:05	KN Nanomodification of textiles for enhanced functionality: Recent developments at IIT Delhi Ashwini Kumar Agrawal <i>Indian Institute of Technology Delhi, India</i>
12:05-12:20	IL Chitosan based Redox Responsive Nanoparticles for Dual Drug Delivery for Colorectal Cancer Garima Agrawal <i>Indian Institute of Technology Mandi, India</i>
12:20-12:30	OL Eco-friendly blowing agent based rigid polyurethane nanocomposite foams: Evaluation of Physico-mechanical Properties Sakti Ranjan Acharya <i>CIPET Bhubaneswar, India</i>
12:30-12:40	OL Anti-biofilm coatings for central venous catheters using Zinc Oxide Nanoparticles Akshit Malhotra <i>Tripura University, Tripura, India</i>
12:40-12:50	OL Electrically conductive composite fibers of nylon6 and nanostructures derived from intrinsically conducting polymers (ICP) for smart textiles Kiran Rana <i>Indian Institute of Technology Delhi, India</i>
12:50-13:00	OL All polymer based flexible and stretchable piezoelectric nanogenerators (S-PENG) for wearable energy harvesting Gurneet Kaur <i>Indian Institute of Technology Delhi, India</i>

Session 17 Springer Student Oral Contest

Chairs: *Susheel Kalia, IMA, India & Jyoti Chaudhary, MSU, India*

Venue: Sal Hall

Time	Lecture Title/Author
11:45-11:55	OL Biomedical Waste-Based Thermoplastic Recycled Blends: Evaluation of Properties and Value-addition Ashish Raghavan <i>CIPET, Bhubaneswar, India</i>
11:55-12:05	OL Microencapsulation of Moringa oleifera Essential Oil for Antibacterial Properties on Cotton Rupali Kakaria <i>National Institute of Fashion Technology, New Delhi, India</i>
12:05-12:15	OL Copper-substituted polyoxometalate-in -situ decorated sequential interpenetrating polymeric network membranes for effective water decontamination Ria Sen Gupta <i>Indian Institute of Science, Bangalore, India</i>
12:15-12:25	OL Chitosan and poly-vinyl alcohol (PVA); hybrid backbone grafted with ionic liquid; a cationic hydrogel for toxic removal from wastewater Anoop Singh <i>Indian Institute of Technology Ropar, India</i>
12:25-12:35	OL Biopolymer nanocomposite film as a smart food packaging material Sazzadur Rahman <i>Institute of Advanced Study in Science and Technology, Guwahati, India</i>
12:35-12:45	OL Developing, Characterizing, and Efficiency Evaluation of Several insitu(nano)Ag/PVA Membranes for Pervaporative Separation of Benzene from Synthetic Pyrolysis Gasoline Monalisha Samanta <i>University of Calcutta, India</i>
12:45-12:55	OL Delivery of anticancer drugs to the local region of pancreatic tumor through chitosan-PVA composite polymeric implant Archana Kumari <i>Indian Institute of Technology Bombay, India</i>

Session 18 Advanced Textile Materials

Chairs: AK Patra, UPTTI, India & Apurba Das, IITD, India

Venue: Abolim Hall

Time	Lecture Title/Author
11:45-12:05	KN Biodegradable nonwoven sorbents from waste cotton and Kapok fibres to remove oil from oily waste water R S Rengasamy <i>Indian Institute of Technology Delhi, India</i>
12:05-12:20	IL Supersonic Nanoblowdown Nanofiber Texture for Thermal Management of Microelectronics Sumit Sinha Ray <i>Indian Institute of Technology Delhi, India</i>
12:20-12:30	OL Macro-mechanical analysis of unidirectional biocomposites under tensile stress Parna Nandi <i>Indian Institute of Technology Delhi, India</i>
12:30-12:40	OL Study On Thermal Insulation of Thermal Bonded High Bulk Hollow Fibre Nonwoven Under the Extreme Cold Weather Condition Vikrant Uday Dupade <i>Indian Institute of Technology Delhi, India</i>
12:40-12:50	OL Photocatalytic Degradation of Starch Polymer for Sustainable Textile Desizing Sanjay Kumar Bhikari Charan Panda <i>Indian Institute of Technology Delhi, India</i>
12:50-13:00	OL Silk Nanodisc: A Nano-biopolymeric Material for Edible Food Packaging Application Tabli Ghosh <i>Tezpur University, Assam, India</i>

13:00 -14:00 -Lunch Break

Session 19 Biomaterials & Bioengineering

Chairs: MV Badiger, NCL, India & Shamayita Patra, SVVV, India

Venue: Mandovi Hall

Time	Lecture Title/Author
14:00-14:15	IL In-situ Mineralized Decellularized Matrix-Alginate Bioink System for Injectable Bone graft/ 3D Printing Applications Sumit Murab <i>Indian Institute of Technology Mandi, India</i>
14:15-14:25	OL Coating of HPMC & Cu-doped ZnO Nanoparticles composite against biofilms formed by clinically relevant bacteria on hernia mesh Sangita Jana <i>Tripura University, Tripura, India</i>
14:25-14:35	OL Experimental investigations on micro-hole dental drilling of Perspex crown Nitin Kumar Lautre <i>Visvesvaraya National Institute of Technology (VNIT), Nagpur, India</i>
14:35-14:45	OL To evaluate the Anti-Microbial activity of Synthesized Drug Loaded Keratin Nanoparticles Himanshi Diwan <i>Dr. B.R. Ambedkar National Institute of Technology Jalandhar, India</i>
14:45-14:55	OL Antimicrobial activities, dyeing properties and corrosion inhibition studies of lanthanide(III) complexes of 2-amino-5[(3-carboxyethyl-4,5-dimethylthiophen-2-yl)azo]-4-phenylthiazoles of Athira Chempakam Janardhanan <i>MMNSS College, Kollam, India</i>

Session 20 Nanomaterials & Nano engineering

Chairs: M Jawaid, UPM, Malaysia & SP Singh, NPL, India

Venue: Zuari Hall

Time	Lecture Title/Author
14:00-14:15	IL Optically responsive transparent cellulose composites Archana Samanta <i>Indian Institute of Technology Delhi, New Delhi, India</i>
14:15-14:25	OL Biosynthesis of multi metallic nanoconjugates using <i>Elaeocarpus granitrus</i> and their biomedical applications Milind Sagar <i>Shobhit Institute of Engineering & Technology, Meerut, India</i>
14:25-14:35	OL Efficient photocatalytic degradation of organic pollutants by nanocomposite of cellulose nanofiber with amino acid functionalized nanohybrid Aditi Saikia <i>Institute of Advanced Study in Science and Technology, Guwahati, India</i>
14:35-14:45	OL Dynamic rheological and dynamic mechanical properties of multiwalled carbon nanotubes reinforced polyamide-6 composites Sangita Tripathy <i>CSIR-NPL, New Delhi, India</i>
14:45-14:55	OL Assessment of Nano-Reinforced Epoxy Coatings for Enhanced Corrosion Inhibition in Reinforcing Bars in Concrete Structures Rajeev Mehta <i>Thapar Institute of Engineering and Technology, Patiala, India</i>
14:55-15:05	OL N95 filter media performance enhancement using fine coating of PVDF nanofibres Bhavesh Thakur <i>Indian Institute of Technology Delhi, India</i>

Session 21 Springer Student Oral Contest

Chairs: Deepak Pathania, CU, India & Jyoti Chaudhary, MSU, India

Venue: Sal Hall

Time	Lecture Title/Author
14:00-14:10	OL Self-assembled and self-healable polymers for the self-stratifying coating applications Diksha Sharma <i>Indian Institute of Technology Ropar, India</i>
14:10-14:20	OL Agar-based bilayer structure with antioxidant electrospun layer on antibacterial film as a potential wound dressing Kalpana Rathore <i>Indian Institute of Technology Kanpur, India</i>
14:20-14:30	OL Photocurable hydroxyethyl cellulose (HEC) hydrogels Doli Hazarika <i>KTH University, Sweden</i>
14:30-14:40	OL Melt processing of Sawdust reinforced Polylactic acid/Polycaprolactone biocomposites Manoj Kumar Dhal <i>Indian Institute of Technology Guwahati, India</i>
14:40-14:50	OL Avian eggshell derived hydroxyapatite-based hydrogels for tissue engineering and biomedical applications Saksham Handa <i>Dr. B R Ambedkar National Institute of Technology, Jalandhar, India</i>

14:50-15:00 OL Development of nanofibrous polymeric scaffolds for corneal tissue engineering by electrospinning method
Soumya Shuvra Smita
National Institute of Technology Rourkela, India

Session 22 Advanced Textile Materials

Chairs: Sumit S Ray, IITD, India & Satyendra Mishra, NMU, India

Venue: Abolim Hall

Time	Lecture Title/Author
14:00-14:15 IL	Imparting Multifunctional Properties in Cotton Fabric by In-Situ Deposition of Copper Oxide nanoparticles Anu Mishra <i>Indian Institute of Carpet Technology Bhadohi, India</i>
14:15-14:25 OL	Biodegradation and dye adsorption behavior of novel AG-g-poly(acrylamide) based hydrogels Kibrya Farooq <i>CT University, Punjab, India</i>
14:25-14:35 OL	Design and development of outer shell of extreme cold weather jacket Ranjna Kumari <i>Indian Institute of Technology Delhi, India</i>
14:35-14:45 OL	Investigating consolidation quality of Kevlar®/PP thermoplastic composites made through different towpregs techniques Ganesh Jogur <i>Indian Institute of Technology Delhi, India</i>
14:45-14:55 OL	Design and development of a fluoro-carbon coated acquisition cum barrier layer for incontinence application Rupali <i>NITRA, New Delhi, India</i>

Session 23 Biomaterials & Bioengineering

Chairs: MS Alam, JH, India & Sumit Murab, IIT Mandi, India

Venue: Mandovi Hall

Time	Lecture Title/Author
15:20-15:35	IL Carbene Cross-linked Adhesive Biomaterials for Tissue Fixation Himansu Sekhar Nanda <i>Indian Institute of Information Technology Design and Manufacturing, Jabalpur, India</i>
15:35-15:50	IL Biaxial Characterization of Novel Anisotropic Skin Simulants Arnab Chanda <i>Indian Institute of Technology Delhi, India</i>
15:50-16:00	OL MEH-PPV light emitting based polymer synthesis and characterization for bacteria detection applications Stephen Jose <i>CIPET, Chennai, India</i>
16:00-16:10	OL Dual technology Oral Fast Dissolving Films for Controlled Levodopa Therapy in Dysphagic Parkinson's Patients Anoop Narayanan <i>Nitte (Deemed to be University), Mangalore India</i>
16:10-16:20	OL Enzyme Responsive Hydrogel Formulation for Sustained Release of Selective MMP-13 Inhibitor to Prevent Cartilage Damage in Osteoarthritis Himadri Shekhar Roy <i>Institute of Nano Science and Technology, Mohali, India</i>

Session 24 Smart Polymeric Materials

Chairs: S Sindhu, BITS Pilani, India &
Rajeev Mehta, Thapar Institute of Engineering & Technology, Patiala, India

Venue: Zuari Hall

Time	Lecture Title/Author
15:20-15:35	IL Biobased Smart Self-healing Anticorrosive Polyurethane Coatings Made up of Non-edible Vegetable Oils Vikas Gite <i>Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, India</i>
15:35-15:50	IL Fabrication of Electrochromic Devices based on Electropolymerized PEDOT-Ions Enriched Graphene Film Sindhu S <i>Birla Institute of Technology and Science Pilani, Bangalore, India</i>
15:50-16:00	OL Thermosetting Poly(Urethane-Urea) With Simultaneous Self-Healing, Reprocessability and Multiple Shape-Memory Effect Srikanth Bhaskar Billa <i>Naval Materials Research laboratory, Bhiwandi, India</i>
16:00-16:10	OL Multiphase gradient self-stratified coating with multi-responsive self-healing polymer Debaprasad Mandal <i>Indian Institute of Technology Ropar, India</i>
16:10-16:20	OL Natural Polymer Based pH and Redox Responsive Microgels for Controlled Agrochemicals Delivery Ankita Dhiman <i>Indian Institute of Technology Mandi, India</i>

Session 25

Wisdom Contest

Session 26 Polymers for Advanced Technology

Chairs: PF Siril, IIT Mandi, India & Archana Samanta IITD, India

Venue: Abolim Hall

Time	Lecture Title/Author
15:20-15:35 IL	Self Healing Elastomers: A smart material for future Subhra Mohanty <i>RIL, India</i>
15:35-15:50 IL	Modern AFM methods for complex analysis of polymers Ivan Bykov <i>Forevision Instruments Pvt. Ltd., India</i>
15:50-16:00 OL	Photo-thermal Actuators Based on Polyaniline Incorporated Liquid Crystal Elastomers S Umadevi <i>Alagappa University, Karaikudi, India</i>
16:00-16:10 OL	Effect of Processing Conditions on Structure Development and Properties of PP-Nylon Blends with and without Compatibilizer Anagha Khare <i>MIT-WPU, Pune, India</i>
16:10-16:20 OL	In-situ atmospheric pressure plasma synthesis of nanodiamonds for functionalization of poly(ethylene)terephthalate fabrics Karan Chandrakar <i>Indian Institute of Technology Delhi, India</i>
16:20-16:30 OL	Insulation systems for keeping cold Karapet Armenovich Ter-Zakaryan <i>TEPOFOL LLC, Russia</i>

16:40-18:00 | Tea & Poster Session

Chairs: MS Alam, Jamia Hamdard, India

Panelists: S Mohanty, Susheel Kalia, D Pathania, Shamayita Patra, BS Kaith



International Conference on Polymers for Advanced Technology



February 23-25, 2023 | Goa, India

Day-3 | 25th Feb, 2023 | Programme

Session 27 | Venue: Mandovi & Abolim Hall

Plenary Session

Chairs: MV Badiger, NCL, India & Deepak Pathania, CU, India

Plenary Talk-1

MM Nasef, UTM, Malaysia

Towards development of new generations of functional copolymers for energy conversion and environmental remediation by radiation graft copolymerization

Time: 09:00-09:35

Plenary Talk-2

Sabu Thomas, MG Univ., India

Nanostructured Polysaccharides Materials for Water Purification

Time: 09:35-10:10

Session 28

10:10-11:30 | Tea & Poster Session

Chair: M S Alam, Jamia Hamdard, India

Panelists:

Anupama Sharma, Sunita Rattan, Satyendra Mishra, Garima Agrawal, Dhiraj Sud

Session 29 Advanced Materials

Chairs: Vikas Gite, NMU, India & Subita Bhagat, SLIET, India

Venue: Mandovi Hall

Time	Lecture Title/Author
11:30-11:45 IL	Nanostructured Metal Oxide/PANI-Biomass Composite as Supercapacitor Electrode Material Dipak Gupta <i>Tri-Chandra Multiple Campus, Kathmandu, Nepal</i>
11:45-11:55 OL	Design, Synthesis and Study of Mechanical Behavior of Strong, Stretchable and Self-healing Polymer Hydrogel Materials Rajat Kumar Das <i>Indian Institute of Technology Kharagpur, India</i>
11:55-12:05 OL	Synthesis and thermal evaluation of novel hydrazide-substituted phthalonitrile resins for high temperature applications Jeetendra Kumar Banshiwal <i>DMSRDE, Kanpur, India</i>
12:05-12:15 OL	ZIF-8 and ZIF-67 functionalized cotton Textiles for Air Purification applications Hardeep Singh <i>Indian Institute of Technology Delhi, India</i>
12:15-12:25 OL	Electrospun Membrane: A multifunctional and efficient platform in water remediation Jaspreet Kaur Randhawa <i>Indian Institute of Technology Mandi, India</i>
12:25-12:35 OL	Bio-inspired polyethylenimine based benzoxazine designs for their use as structural adhesive Pratibha Sharma <i>Amity Institute of Applied Sciences, Noida, India</i>

Session 30 Nanomaterials & Nanocomposites

Chairs: Sabu Thomas, MG Univ., India & Satyendra Mishra, NMU, India

Venue: Zuari Hall

Time	Lecture Title/Author
11:30-11:45	IL Preparation of Porous Polycaprolactone Tubular Matrix by Salt Leaching Process: A tale of failure_ the mother of new invention Shamayita Patra SVITT, SVVV, Indore, M.P., India
11:45-11:55	OL Enhancement in optical properties of PVA films embedded with CdSe nanorods for packaging application Sangeeta Garg Dr. B.R. Ambedkar NIT Jalandhar, India
11:55-12:05	OL Biogenic Synthesis and Characterization of Zinc Oxide Nanoparticles Murtuza Zoebhai Channiwala Maharaja Sayajirao University Baroda, Surat, India
12:05-12:15	OL Tribological behaviour of GNP Reinforced Nr Composite Resmi B.P TKM Institute of Technology, Kollam, India
12:15-12:25	OL Square wave voltammetry analysis for detection of nitrate by using ZnO/PANI composite decorated Ni-foam sensor electrode Sarla Kashiram Pawar KBCNMU, Jalgaon, India
12:25-12:35	OL Fabrication of Zinc oxide nanomaterial coating using sputtering for orthopedic implants to enhance antiadhesive activity Jyoti Raghuvansh Pandey BML Munjal University, Haryana, India

Session 31 Miscellaneous Applications

Chairs: HS Nanda, IITDM, India & Bimlesh Lochab, SNU, India

Venue: Sal Hall

Time	Lecture Title/Author
11:30-11:40	OL Poly(aminoamide)s: A Class of Smart Functional Polymers for Diverse Applications Subrata Chattopadhyay Indian Institute of Technology Patna, India
11:40-11:50	OL To investigate Ordered Structure of Modified Rice Starch using spectroscopic tools: FTIR, XRD, and DSC Nirmal Mazumder Manipal Academy of Higher Education, India
11:50-12:00	OL Iron Carbide (Fe ₃ C) Encapsulated into Heteroatom Co-Doped Graphitic Carbon as a Non-precious Metal Catalyst for Electrocatalytic Oxygen Reduction Aniruddha Jaiswal Indian Institute of Technology (BHU), Varanasi, India
12:00-12:10	OL Polymer formation with comparative analysis of Metallocene catalyst at varying temperature Subita Bhagat SLIET LONGOWAL, Sangrur, India
12:10-12:20	OL Molecular Simulation of PLA/PBAT Blends: Mechanical and Barrier Properties Kumar Shanu Indian Institute of Technology Guwahati, India
12:20-12:30	OL Waste Plastics to bricks Vinoth Kumar Hindustan Petroleum Green R&D Centre, India
12:30-12:40	OL PCR Purification using Digital Microfluidics Neeti Kalyani Technical University of Denmark, Denmark

Session 32 Miscellaneous Applications

Chairs: Deepa Ghosh, INST, India & Rekha Lagarakha, BU, India

Venue: Abolim Hall

Time	Lecture Title/Author
11:30-11:40	OL Sustainable Biodegradable Polymeric Packaging Materials Vivek Verma <i>Indian Institute of Technology Kanpur, India</i>
11:40-11:50	OL Synergistic Effect of Graphene oxide and Graphite with Silica in Natural Rubber Nanocomposites Jibin K P <i>Mahatma Gandhi University, India</i>
11:50-12:00	OL Thermal, structural, and rheological modifications in Recycled Polyethylene Terephthalate for a sustainable alternative source for additive manufacturing Nikhil Ram Patra <i>Indian Institute of Technology Roorkee, India</i>
12:00-12:10	OL Epidermal inspired Flexible Sensor with Buckypaper/PDMS Interfaces Prakash Chandra <i>Bundelkhand University Jhansi, India</i>
12:10-12:20	OL Synthesis and Application of Nanoemulsion for the development of Multifunctional Textiles Prachity Shishupal Wankhade <i>Veer mata Jijabai Technological Institute, Mumbai, India</i>
12:20-12:30	OL VOC and Odor reduction in polymeric materials used in packaging and automotive applications Sampat Singh Bhati <i>Indian Institute of Technology Roorkee, India</i>
12:30-12:40	OL Development and characterization of agriculture waste fibre reinforced polymer biocomposite film for active packaging Vishal Srivastava <i>Indian Institute of Technology Delhi, India</i>

Valedictory Session | Venue: Mandovi & Abolim Hall)

Welcome Address

Manohar Badiger, Organising Chair
Time: 13:00-13:05

APA Address

Bhuvanesh Gupta, APA President
Time: 13:05-13:10

Conference Address

Virendra K Gupta, SVP, RIL, Mumbai
Time: 13:10-13:20

Valedictory Address

Mayank Dwivedi, Director, DMSRDE, India (Chief Guest)
Time: 13:20-13:45

Award Presentation

By Chief Guest
Time: 13:45-13:55

Vote of Thanks

Susheel Kalia, Conference Secretary
Time: 13:55-14:00

14:00 | Lunch Break

15:00 | CONFERENCE ENDS