APA 2026 Bhopal

Organised by

In association with

APA International Conference on

Polymers for Advanced Technology

16-18 November, 2026 | Pride Hotel, Bhopal, India

Day-1 | 16th Nov, 2026 | Programme

08:00-onwards | Registration

Inauguration (Main Hall)
Time: 09:00 - 10:00

Welcome & Bouquet Presentation
Time: 09:00-09:05

Lamp Lighting
Time: 09:05-09:10

APA Address
Bhuvanesh Gupta *(APA President)*
Time: 09:10-09:15

Theme Address
Virendra K. Gupta *(Conference Chair, Reliance Industries Ltd.)*
Time: 09:15-09:25

Presidential Address
Raghuvir Singh Tomar *(Director In-charge, IISER Bhopal)*
Time: 09:25-09:35

Special Address
Pedro Fardim *(Guest of Honor, KU Leuven, Belgium)*
Time: 09:35-09:50

Inaugural Address
Rajeev Ahuja *(Chief Guest, Director, IIT Ropar)*
Time: 09:50-10:20

Vote of Thanks
Susheel Kalia *(Conference Secretary, IMA, Dehradun)*
Time: 10:20-10:25

Time: 10:25 - 11:00 | Inaugural Tea

Session 1 | Venue: Main Hall

Plenary Talks

Chairs: Manohar Badiger, NCL, Pune, India &
Sanjay K Nayak, Former DG, CIPET, India

Time: 11:00-11:30
What does Softness Mean for Soft Polymer Colloids
Walter Richtering, *RWTH Aachen University, Aachen, Germany*

Time: 11:30-12:00
TBA
Stefan Barot, *MD, Balrampur Chini Mills Limited, Kolkata, India*

Session 2 | Venue: Main Hall

Industry & Innovation Plenary

Chairs: Anup Ghosh, IIP, New Delhi, India &
Sudhir Jain, CIPET, Bhopal, India

Time: 12:00-12:30
TBA
Vineet Kumar Gupta, *HPCL-Mittal Energy Limited, Noida, India*

Time: 12:30-13:00
Strategic Evolution of Fluoropolymers within the Framework of Global Materials Innovation
Kapil Malhotra, *Gujarat Fluorochemicals Limited, Noida, India*

13:00-14:00 | Lunch Break

Session 3 | Poster Session

Time: 14:00-15:00

Chairs: Susheel Kalia, IMA, Dehradun, India &
Chetna Verma, IIT Delhi, New Delhi, India

Session 4 : Microsymposium on Bioengineering

Chairs: Aasheesh Srivastava, IISER Bhopal, India — Venue: Main Hall

Time	Lecture	Title/Author
15:00-15:20	IL	Hybrid Dressings for Superior Management of Complex Wounds **Atharva Poundarik** *Indian Institute of Technology Ropar, India*
15:20-15:40	IL	Jute Bast Fiber-Derived Nanocellulose: A Potential Biomaterial for Drug Delivery and Tissue Regeneration **Bodhisatwa Das** *IIT Ropar, India*
15:40-16:00	IL	Advanced Biomaterials for Additive Manufacturing of Orthopaedic Implants **Sumit Murab** *IIT Mandi, India*

Session 5 : Microsymposium on Sustainability

Chairs: Kapil Malhotra, GFL, Noida, India Venue: Hall-1

Time	Lecture	Title/Author
15:00-15:20	IL	The Role of Polymers in Environmental Sustainability **Ravi Kant Pathak** *University of Gothenburg, Sweden*
15:20-15:40	IL	Upcycling Polyolefin Waste into High-Value Materials via Adaptive Vinomer and Vitrilomer Networks **Suryasarathi Bose** *Indian Institute of Science Bangalore (IISc Bangalore), India*
15:40-16:00	IL	Evaluation of Algae-Derived Material as Sustainable Additives for Elastomers **Suchismita Sahoo** *Reliance Industries Limited, Navi Mumbai, India*

Session 6 : Microsymposium on Smart Packaging

Chairs: Tanweer Alam, IIP, New Delhi, India Venue: Hall-2

Time	Lecture	Title/Author
15:00-15:20	IL	Future Of Smart Flexible And Shrink Sleeve Packaging **Chetan Jain** *Taurus Packaging Pvt Ltd, Greater Noida, India*
15:20-15:40	IL	**NS Sundaram** *Paharpur 3P, Ghaziabad, India*
15:40-16:00	IL	Flexible Packaging - Challenges & Opportunities **Kaushik Nag** *Jupiter Laminators Pvt. Ltd, Gurugram, India*

Session 7 : Microsymposium on Biohydrogels

Chairs: Sravendra Rana, UPES, Dehradun, India Venue: Hall-3

Time	Lecture	Title/Author
15:00-15:20	IL	Sustainable Wastewater Remediation by Hydrogels and Agricultural Waste-Based Adsorbents **Samrat Mukhopadhyay** *Indian Institute of Technology Delhi, New Delhi, India*
15:20-15:40	IL	Biopolymer Based Hydrogels for Drug Delivery and Biomedical Applications **Vikas Vithhal Gite** *Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, Maharashtra, India*
15:40-16:00	IL	Encapsulation of Pomegranate peels polyphenols: A sustainable valorization approach using Pectin-Xanthan Gum Matrix **Anupama Kumar** *Visvesvaraya National Institute of Technology, Nagpur, India*

16:00-16:20 | Tea Break (Green Lawn)

Session 8 : Biomaterials & Bioengineering

Chairs: Bodhisatwa Das, IIT Ropar, India &
Deepak Pathania, CU, Jammu, India

Venue: Main Hall

Time	Lecture	Title/Author
16:20-16:40	IL	Designing Polymers for Efficient Intracellular Delivery of Therapeutic Nucleotides **Aasheesh Srivastava** *IISER Bhopal, India*
16:40-17:00	IL	Janus Microbead Biosensors for Rapid Pathogen Detection **Dhrubajyoti Das** *Vellore Institute of Technology, Vellore, India*
17:00-17:15	OL	Ultrasound-Assisted Green Grafting of Warfarin Sodium onto Chicory Inulin and its enhanced Antioxidant Activity **Himanshu Rani** *Sant Longowal Institute of Engineering and Technology, Longowal, Punjab, India*
17:15-17:30	OL	Next-Generation phyto-nanoengineered ceramic-polymeric bone substitutes for augmenting regeneration in Critical Defects **Sneha Singh** *Birla Institute of Technology, Mesra, Ranchi, India*

Session 9 : Fibrous & Textile Materials

Chairs: DS Bag, DMSRDE, Kanpur, India &
Samrat Mukhopadhyay, IIT Delhi, New Delhi, India

Venue: Hall-1

Time	Lecture	Title/Author
16:20-16:40	IL	Curing studies of Phthalonitrile-Carbon fabric prepregs for fabrication of High-Performance Composite via Dynamic Themo-mechanical Analyzer **Ajit Shankar Singh** *DMSRDE, Kanpur, India*
16:40-17:00	IL	Advanced Polymer Filament Production for 3D Printing Using Twin-Screw Extrusion and Melt Pump Technology **Manoj Bansal** *Thermo Fisher Scientific, Mumbai, India*
17:00-17:15	OL	Green Hydrothermal Synthesis of MXene and Its Synergistic Integration with Polypyrrole for Energy-Efficient Joule-Heating Textiles **Subhankar Maity** *Uttar Pradesh Textile Technology Institute, Kanpur, India*
17:15-17:30	OL	Textile Recycling: Fabrication of Recycled Polyethylene terephthalate (rPET) POY and DTY Yarn from Surat's Textile Waste Fabric **Bhabatosh Biswas** *The Man-Made Textiles Research Association (MANTRA), Surat, India*

Session 10 : Advanced Materials & Technology

Chairs: Atharva Poundarik, IIT Ropar, India &
Vibhore Rastogi, IIT Roorkee, India

Venue: Hall-2

Time	Lecture	Title/Author
16:20-16:40	IL	Redox-Active Porous Organic Materials for Sodium Ion Battery Electrodes: Crystalline Framework Vs. Amorphous Network **Abhijit Patra** *Indian Institute of Science Education and Research Bhopal, India*
16:40-17:00	IL	Design and Development of Reprocessable Carbon Fiber Composites Using Covalent Adaptable Networks **Sravendra Rana** *UPES, Dehradun, India*
17:00-17:15	OL	Effect of thermally conductive potting on heat dissipation in electronics components **Amol Tarachand Naikwadi** *Uno Minda Ltd, Pune, India*
17:15-17:30	OL	Development and Biodegradation Performance of PLA/PBS/Starch-Based Polymer Blends for Sustainable Packaging Applications **Asish Kumar Sahu** *AKC-PTARC, Noida, India*

Session 11 : Smart Polymers

Chairs: Suryasarathi Bose, IISc, Bangalore, India &
Garima Agrawal, IIT Mandi, India

Venue: Hall-3

Time	Lecture	Title/Author
16:20-16:40	IL	Synthesis of Azo–Chitosan Functional Biopolymers for Antimicrobial Applications **Swapnil Sonawane** *Netaji Subhas University of Technology (NSUT), Delhi, India*
16:40-17:00	IL	Next-Gen Smart Pack: Multifunctional Electrospun Films for Food Preservation and Monitoring **Ankit Tyagi** *IIT Jammu, India*
17:00-17:15	OL	Mucoadhesive microspheres of ferrous sulphate - a novel approach for oral iron delivery in treating anemia **Rosemary M J** *Corporate R & D Centre, Thiruvananthapuram, India*
17:15-17:30	OL	Amphiphilic Cellulose Nanofibrils in Thermoplastic Starch Nanocomposites for Food Packaging Applications **Dheeraj Ahuja** *Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India*

Session 12 | APA Distinguished Award Plenary (Venue: Main Hall)

Time: 17:30-18:15

Chairs: Pedro Fardim, KU Leuven, Belgium

From Macromolecular Engineering to Engineering of Functional Porous Polymers

Daniel Grande
CNRS - Institut Charles Sadron, Strasbourg, France

18:15-18:30 | Group Photo

Time: 19:00-22:00

Cultural Programme, APA Award presentation & Conference Dinner (Green Lawn)

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Session 13 : Plenary Session

Chairs: Daniel Grande, University of Strasbourg, France &
Ravi Kant Pathak, Gothenburg University, Sweden

Venue: Main Hall

Time	Lecture	Title/Author
09:00-09:30	PL	Biofabrication and Functionalization of Pullulan to Advanced Materials **Pedro Fardim** *KU Leuven, Belgium*
09:30-10:00	PL	Next-Generation Polymer Technologies: Innovations Driving a Sustainable Future **Sandip Patil** *E-Spin Nanotech Pvt Ltd, Kanpur, India*

Session 14 : Functional Hydrogels

Chairs: Abhimanew Dhir, IIT Mandi, India &
Manju Saraswathy, SCTIMST, Trivandrum, India

Venue: Main Hall

Time	Lecture	Title/Author
10:00-10:20	IL	Scalable Sustainable Chemistry Strategies for Advanced Functional Biopolymer Materials **Kalpana Chauhan** *Central University of Haryana, Mahendergarh, India*
10:20-10:40	IL	Design of self-healing injectable hydrogels from functionalized natural gums for biomedical applications **Roli Purwar** *Delhi Technological University, India*
10:40-11:00	IL	Metal ion Cross-Linked Hierarchically Oriented Anisotropic Polymer Hydrogels for Sensing and Energy Storage Applications **Rajat Kumar Das** *Indian Institute of Technology, Kharagpur, India*

Session 15 : Biopolymers

Chairs: Amit Jaiswal, VIT, Vellore, India &
Manohar Badiger, NCL, Pune, India

Venue: Hall-1

Time	Lecture	Title/Author
10:00-10:20	IL	Beyond Conventional Bone Grafts: Printable Composites for 3D and 4D Biomanufacturing **Himansu Sekhar Nanda** *IIITDM Jabalpur, Madhya Pradesh, India*
10:20-10:40	IL	Role of hard and soft components in functional PU for Advanced Engineering Applications **Rani Rohini** *Indian Institute of Technology, Jammu, India*
10:40-11:00	IL	TBA **Manoj Sharma** *Waters India Pvt. Ltd., India*

Session 16 : Smart Packaging Materials

Chairs: Chetan Jain, Taurus, Noida, India &
Paramita Das, IISER Bhopal, India

Venue: Hall-2

Time	Lecture	Title/Author
10:00-10:20	IL	From Wheat Straw to Sustainable Fiber-Based Products: Shaping the Future of the Circular Economy **Vibhore Kumar Rastogi** *Indian Institute of Technology Roorkee, Saharanpur, India*
10:20-10:40	IL	Polymeric Membranes for Sustainable Fruit Juice Concentration: Bridging Materials Engineering, Beverage Quality, and Packaging Innovation **Aaditya Pandey** *Indian Institute of Technology Ropar, India*
10:40-11:00	IL	Active Zinc-based Metal Organic Framework /Polyvinyl Alcohol Films for Shelf-Life Extension of Rohu Fish **Susmita Dey Sadhu** *Bhaskaracharya College of Applied Sciences, DU, Delhi, India*

11:00-11:20 | Tea Break

Session 17 : Biomaterials & Bioengineering

Chairs: Satyendra Mishra, NMU, Jalgaon, India &
Giriraj Tailor, Mewar Univ., Chittorgarh, India

Venue: Main Hall

Time	Lecture	Title/Author
11:20-11:40	IL	Air-Assisted Electrospinning of Starch/PVA/Curcumin Nanofibers: A Scalable Route to Intelligent, Antimicrobial Food Packaging **Alka Gupta** *University Institute of Engineering and Technology (UIET), CSJM University, Kanpur, India*
11:40-12:00	IL	Label-Free Optical Transmission-Based Liquid Crystal immunosensor for Sensitive Detection of Kidney Injury Molecule-1 (KIM-1) **Arun Kant Singh** *CSIR-National Physical Laboratory, New Delhi, India*
12:00-12:15	OL	Additive manufacturing in medical prosthetic applications: A comprehensive review on materials, processes, and functional outcomes **Swati Singh** *CIPET, Bhopal, India*

Session 18 : Functional Materials

Chairs: Sumit Murab, IIT Mandi, India &
Roli Purwar, DTU, New Delhi, India

Venue: Hall-1

Time	Lecture	Title/Author
11:20-11:40	IL	Label-Free Liquid Crystal Based Dielectric Genosensor for the quantitative detection of Infectious Bacterium **Rajesh** *CSIR-National Physical Laboratory, New Delhi, India*
11:40-12:00	IL	From Bench to Market: Scalable Manufacturing of Microneedle Arrays for Next-Generation Healthcare Applications **Shiny Velayudhan** *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India*
12:00-12:15	OL	Carrageenan: A next-generation biopolymer for sustainable applications in safe food packaging. **Naureen Khan** *CIPET, Bhopal, India*

Session 19 : Advanced Materials & Technology

Chairs: Sunil Kumar, HP University, Shimla, India &
Ram Singh, FlyOla Aviation, India

Venue: Hall-2

Time	Lecture	Title/Author
11:20-11:40	IL	Circular Materials for a Sustainable Future: Nanofiller-Reinforced Compostable Bioplastics **Vineet Aniya** *CSIR - Indian Institute of Chemical Technology, Hyderabad, India*
11:40-12:00	IL	Comparative Study: Single-Deck Pellet Cleaner vs Multi-Deck Pellet Cleaner **Rounak Kulkarni** *Indpro Engineering Systems Pvt Ltd, Pune, India*
12:00-12:15	OL	Development of Sustainable Bio-composite Mulch Film for Sustainable Agricultural Applications **Rajshree Vijayvargiya** *Central Institute of Petrochemicals Engineering and Technology (CIPET), Raipur, India*

Session 20 : Springer Student Oral Award Contest

Chairs: Jyoti Chaudhary, MLSU, Udaipur, India

Venue: Hall-3

Time	Lecture	Title/Author
11:20-11:30	OL	Synthesis, Characterization and Rheological behavior of epoxy resin derived from silk worm pupae oil **Sakshi Sahu** *Delhi Technological University, Delhi, India*
11:30-11:40	OL	Extracellular Matrix-Inspired Alginate/Magnesium Phosphate Nanofibers Coated 3D-Printed PLA Scaffolds for Enhanced Mineralization and Osteogenic Response **Kajal Goswami** *Indian Institute of Technology Mandi, Mandi, India*
11:40-11:50	OL	Bio-Based Antidegradant System for Natural Rubber Composites **Yogesh Jadhav** *Birla Institute of Technology and Science Pilani, K K Birla Goa Campus, Goa, India*
11:50-12:00	OL	Development of Fluorescent Chitosan for solid state multicolor emission and Environmental remediation **Keshav Kumar** *Netaji Subhas University of Technology, New Delhi, India*
12:00-12:10	OL	Sustainable Triboelectret Nanogenerator from Chemically Tailored Cellulose for Wearable Electronics **Sunidhi Mishra** *IIT Roorkee, Saharanpur Campus, India*
12:10-12:20	OL	Green Solvent-Assisted Upcycling of Crosslinked Industrial Solar-Grade EVA Trimmings into Value-Added EVOH-Based Material **Keshav Sharma** *CIPET: SARP-LARPM, Bhubaneswar, India*

Session 21 | Wisdom Contest

Time: 12:15-13:00

Chairs: Chetna Verma, IIT Delhi, India &
Rohini Verma, IIT Delhi, India

13:00-14:00 | Lunch Break

Session 22 : Biomaterials & Bioengineering

Chairs: Venkata Krishnan, IIT Mandi, India &
HS Nanda, IIITM, Jabalpur, India

Venue: Main Hall

Time	Lecture	Title/Author
14:00-14:20	IL	Biodegradable Radiopaque Microbeads for Transarterial Chemoembolization **Manju Saraswathy** *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, India*
14:20-14:40	IL	Natural polymer-based granular hydrogels for 3D bioprinting applications **Amit Kumar Jaiswal** *Vellore Institute of Technology, India*
14:40-15:00	IL	Environmentally Benign Smart Polymeric Microgels for Sustainable Future **Garima Agrawal** *IIT Mandi, India*
15:00-15:15	OL	Fabrication and Evaluation of Nanofiber reinforced multilayered scaffold with tissue adhesive and anti-adhesive properties for Dural Tissue Engineering Application **Bhisham Narayan Singh** *Manipal Academy of Higher Education, India*
15:15-15:30	OL	Engineering Biomaterials for Vascular Repair: From Milli- to Micro-Scale Regeneration **Prerak Gupta** *Maulana Azad National Institute of Technology Bhopal, India*

Session 23 : Nanomaterials & Nanotechnology

Chairs: Arun K Patra, UPTTI, Kanpur, India &
Alekha K Suthar, NIT Raipur, India

Venue: Hall-1

Time	Lecture	Title/Author
14:00-14:20	IL	Development of sustainable nanosensors for environmental and health applications **Sunil Kumar** *Himachal Pradesh University, Shimla, India*
14:20-14:40	IL	Development of polyurethane composite films and foams through biobased resources **Rakesh K. Sharma** *The Maharaja Sayajirao University of Baroda, Vadodara, India*
14:40-15:00	IL	Sustainable Development with Hydrogels: Addressing Global Challenges **Vijay Kumar** *National Institute of Technology Srinagar, Hazratbal, India*
15:00-15:15	OL	Sustainable Production and phytochemical screening of Cobalt Nanoparticles via Moringa oleifera Extract: A Promising Approach for Antibacterial Applications **Giriraj Tailor** *Mewar University, Chittorgarh, India*
15:15-15:30	OL	Synthesis and characterization of Ni@Cu doped nanoparticles using Manilkara zapota seeds and their biological application **Saurabh Singh** *M.L.V. Government College, Bhilwara, India*

Session 24 : Advanced Materials & Technology

Chairs: Siddhartha Sirohi, Delhi Univ., New Delhi, India &
KK Choudhary, IMA, Dehradun, India

Venue: Hall-2

Time	Lecture	Title/Author
14:00-14:20	IL	Microplastics in the Chenab River Ecosystem **Deepak Pathania** *Central University of Jammu, Samba, India*
14:20-14:40	IL	Engineering Nanocolloids for the Rational Design of Functional Nanoporous Polymers via Click-Inspired Chemistry toward Sustainable Nuclear Energy **Subrata Chattopadhyay** *IIT Patna, India*
14:40-15:00	IL	Energy Storage Devices Using Conducting Polymers@Metal oxides **Tungabidya Maharana** *National Institute of Technology Raipur, India*
15:00-15:15	OL	Heterogeneous Polypropylene Catalysis: Effect of External Donors on Polymerization and Product Properties **Nem Singh** *Reliance Industries Limited, Navi Mumbai, India*
15:15-15:30	OL	Evaluating Next-Generation EPE-DC Polymeric Encapsulant against EPE and EVA in Solar Cell Laminates Under Harsh Moisture Exposure **Bhuwanesh Kumar Sharma** *Rayzon Solar Limited, Surat, India*

Session 25 : Wiley Student Oral Award Contest

Chairs: Susheel Kalia, IMA, Dehradun, India Venue: Hall-3

Time	Lecture	Title/Author
14:00-14:10	OL	Gamma Radiation Assisted Fabrication of Polyvinyl pyrrolidone Functionalized PES beads: Characterization and Iodine Capture Study **Anitta Thomas** *Homi Bhabha National Institute, Mumbai, India*
14:10-14:20	OL	Engineering Next-Generation Bio-Based Sustainable Formulations for High-Performance Absorbent Applications **Roshni Pattanayak** *CIPET: SARP-LARPM, Bhubaneswar, India*
14:20-14:30	OL	Citrus reticulata biomass derived biofilm for sustainable food packaging application **Amritanshu Pathak** *UPES, Dehradun, India*
14:30-14:40	OL	ABC Terpolymers Composed of Rationally Varied Modifiable Activated Ester Pendant Groups: Synthesis, Characterization and Cytotoxic evaluation **Dhanya M Shetty** *Yenepoya(deemed to be University), Mangalore, India*
14:40-14:50	OL	Biomimetic Citric Acid-Mediated Dual-Crosslinked Scaffold remodels the niche post Spinal Cord Injury by promoting functional recovery and reducing inflammation **Manini Bhatt** *Indian Institute of Technology Ropar, Rupnagar, India*
14:50-15:00	OL	Efficient Removal of Toxic Cr (VI) from Industrial Waste by Using PANI-CMC Composite **Praveen Kumar** *Indian Institute of Technology Kanpur, Kanpur, India*

15:30-15:50 | Tea Break

Session 26 : Composite Materials

Chairs: Anupama Kumar, VNIT Nagpur, India &
Tungabidya Maharana, NIT Raipur, India

Venue: Main Hall

Time	Lecture	Title/Author
15:50-16:10	IL	Evaluation of $Mn_2P_2O_7$ Nanofibers for Enhanced Electrochemical Supercapacitor Performance **Sushama M. Giripunje** *Visvesvaraya National Institute of Technology, Nagpur, Maharashtra, India*
16:10-16:30	IL	Flexible and Efficient Ultraviolet Photodetectors Based on One- Dimensional MWCNT / Thermoplastic Polyurethane Nanocomposite **Sidhharth Sirohi** *Bhaskaracharya College of Applied Sciences (University of Delhi), New Delhi, India*
16:30-16:45	OL	PVDF/Zn-MOF Nanocomposite Thin Films with Enhanced Interfacial Polarization and Dielectric Behavior **Rohan Sagar** *NCHU, Taichung, Taiwan*
16:45-17:00	OL	Functionalization of Green Synthesis of Carbon Dots with Polymer Matrix for Detection and Removal of Toxic Heavy Metal **Prakash Chandra** *Bundelkhand University Jhansi, India*

Session 27 : Fibrous & Textile Materials

Chairs: Rakesh Sharma, MS Univ., Vadodara, India &
Akshay Modi, IISER Bhopal, India

Venue: Hall-1

Time	Lecture	Title/Author
15:50-16:10	IL	Smart and Ballistic Fibers and Their Technologies: Innovations and Challenges **Dibyendu Sekhar Bag** *Defence Materials and Stores Research and Development Establishment, Kanpur, India*
16:10-16:30	IL	Functionalized Textiles with antimicrobial properties using Copper Nanoparticles **Arun Kumar Patra** *UP Textile Technology Institute, Kanpur, India*
16:30-16:45	OL	Numerical Investigation of Fibre Diameter and Hollowness Effects on the Thermal Insulation of Ultra-Low-Density Hollow Polyester Nonwovens **Amit Kumar** *Indian Institute of Technology Delhi, New Delhi, India*
16:45-17:00	OL	Synthesis of Polyzirconocarbosilane as a Precursor Material for Next-Generation Silicon Carbide Fibers **Amit Agnihotri** *DRDO, Kanpur, India*

Session 28 : Advanced Materials & Technology

Chairs: Ajit S Singh, DMSRDE, Kanpur, India &
Swapnil Sonawane, NSUT, New Delhi, India

Venue: Hall-2

Time	Lecture	Title/Author
15:50-16:10	IL	Transition Metal Salen Complexes Catalyzed ROP of Lactide **Alekha Kumar Suthar** *National Institute of Technology Raipur, India*
16:10-16:30	IL	Enhancement of printing properties of water-based inks by the Addition of Aloe Vera gel for rotogravure/flexographic printing **Anurag Kulshreshtha** *Indian Institute of Technology Roorkee, Saharanpur, India*
16:30-16:45	OL	Effect of Modified Hexagonal Boron Nitride (m-hBN) Nanofiller on the Mechanical and Thermal properties of UV-cured Polyurethane acrylate (PUAP) Coatings **Debasmita Mohanty** *CIPET: SARP- LARPM, Bhubaneswar, Odisha, India*
16:45-17:00	OL	Seasonal distribution of microplastics in River Beas **Sarita Pathania** *SPU Mandi, India*

Session 29 : RSC Student Oral Award Contest

Chairs: Satyendra Mishra, NMU, Jalgaon, India Venue: Hall-3

Time	Lecture	Title/Author
15:40-15:50	OL	Evaluation of In Vitro Degradation Kinetics of Radiopaque Alginate Microbeads **Vidya U G** *Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, India*
15:50-16:00	OL	An Anti-Freezing, Self-Adhesive PAM/PVA/Ni@CNTs Double-Network Hydrogel for Wearable Strain Sensing at Sub-Zero Temperatures **Pooja Arulmurugan** *Vellore Institute of Technology, Chennai, India*
16:00-16:10	OL	Development and Functional Characterization of Oxidized Guar Gum-Based Films for Active Food Packaging **Vidya Sawant** *Institute of Chemical Technology, Mumbai, India*
16:10-16:20	OL	Cellulose-Chitosan Composite Hydrogels for Controlled Phosphorous Release and Smart Agricultural Application **Komal Pandey** *Indian Institute of Science Education and Research Bhopal, India*
16:20-16:30	OL	TfOH-Mediated Concurrent Nitrile Cyclotrimerization and Benzoxazine Ring-Opening towards Triazine-Rich Polybenzoxazine Thermosets **Jigyasa Tripathi** *Shiv Nadar Institution of Eminence, Delhi NCR, India*
16:30-16:40	OL	Taro peel derived-carbon dots incorporated biodegradable chitosan-based films for active food packaging: Waste-to-wealth approach **Umisha Kalia** *Indian Institute of Technology Mandi, Mandi, India*

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Session 30 : Biosensors & Bioactive Materials

Chairs: Susmita Dey Sadhu, Delhi Univ., New Delhi, India &
Anjali Awasthi, HBTU, Kanpur, India

Venue: Main Hall

Time	Lecture	Title/Author
09:00-09:20	IL	Lipid Matrix Engineering for Controlled Drug Delivery: From Nanostructure Design to Drug Release **Paurnima Talele** *Shri Guru Gobind Singhji Institute of Engineering & Technology, Nanded, India*
09:20-09:40	IL	**TBA**
09:40-09:55	OL	Synthesis and Characterization of Biodegradable Biopolymeric Hydrogels and Films for Wound Healing Applications **Ashwini Wali** *Ramaiah Institute of Technology, Bengaluru, India*
09:55-10:10	OL	Sustainable Valorisation of Apple Peel Waste through Chitosan–Gum Arabic Biopolymeric Composite for Nutraceutical Applications **Sakshi Khushal Dange** *Visvesvaraya National Institute of Technology Nagpur, India*

Session 31 : Functional Materials

Chairs: Ankit Tyagi, IIT Jammu, India &
Vikas V. Gite, NMU, Jalgaon, India

Venue: Hall-1

Time	Lecture	Title/Author
09:00-09:20	IL	Green Chitosan-Based Adsorbents and Catalysts for Efficient CO_2 Capture and Transformation **Santosh Kumar** *Harcourt Butler Technical University Kanpur, India*
09:20-09:40	IL	Engineering Functional Polymeric Membranes and Materials for Separation Applications **Akshay Modi** *Indian Institute of Science Education and Research (IISER) Bhopal, India*
09:40-09:55	OL	Biomass-Derived Carbon-Polymer Composites for Solid-State Batteries: Materials, Interfaces and Future Perspectives **Gopal Carpenter** *ICAR- Central Institute of Agricultural Engineering Bhopal, India*
09:55-10:10	OL	Development and Performance Evaluation of Thermally Treated Biomass-Based Plaster with Partial Sand Replacement **Ankur Nagori** *ICAR-CIAE, Bhopal, India*

Session 32 : Miscellaneous Applications

Chairs: Savita Dixit, MANIT, Bhopal, India &
Sushma Giripunje, VNIT Nagpur, India

Venue: Hall-2

Time	Lecture	Title/Author
09:00-09:20	IL	Development of a Green Synthetic Strategy for New Conjugated Polymers and Their Application in OFET **Arunkumar Patel** *The Maharaja Sayajirao University of Baroda, Vadodara, India*
09:20-09:40	IL	Physics of Polymer Phase Separation **Gaurav Chauhan** *IIT Indore, India*
09:40-09:55	OL	Polymer Modelling – How Physics-based and Machine Learning Models Can Help? **Sudharsan Pandiyan** *Schrödinger India Private Limited, Bengaluru, India*
09:55-10:10	OL	Novel Heterogeneous Photocatalysts: A Strategic Route toward Enhanced Catalytic Activity for Energy and Environmental Applications **Sadanandam Gullapelli** *Indira Gandhi National Tribal University (A Central University), Amarkantak, India*

Session 33 : Advanced Materials & Technology

Chairs: Ashish Kapoor, HBTU, Kanpur, India &
Saurabh Singh, MLVGC, Bhilwara, India

Venue: Hall-3

Time	Lecture	Title/Author
09:00-09:20	IL	Non-Noble Metal based Sustainable Heterogeneous Catalysts for Chemical Recycling and Upcycling of Plastic Waste **Venkata Krishnan** *Indian Institute of Technology Mandi, India*
09:20-09:40	IL	Low-dielectric and low loss and high-temperature resistant polymeric system for high-performance aeronautical applications **Jeetendra Kumar Banshiwal** *DMSRDE, Kanpur, India*
09:40-09:55	OL	Sustainable Wax in Tyre Compounds: Chemical Characterisation and Performance Evaluation of Sorbitan Monostearate **Sudeep Dey** *Hari Shankar Singhania Elastomer and Tyre Research Institute, Metagalli, Mysuru, India*
09:55-10:10	OL	Gum Ghatti (Anogeissus latifolia) and Moringa Gum (Moringa oleifera) as Sustainable Biopolymer Matrices in 3D-Printed Multilayered Oral Disintegrating Films for Personalized Botanical Nutrient Supplementation **Jadala Shankaraswamy** *Sri Konda Laxman Telangana Horticultural University, Hyderabad, India*

10:15-10:30 | Tea Break

Session 34 : Functional Materials

Chairs: Dhrubajyoti Das, VIT, Vellore, India &
Santosh Kumar, HBTU, Kanpur, India

Venue: Hall-1

Time	Lecture	Title/Author
10:30-10:50	IL	Porous Carbon - Based Polymer-Metal Oxide Composite Electrode for High Performance Supercapacitors **Dipak Gupta** *Tribhuvan University, Kathmandu, Nepal*
10:50-11:10	IL	Functionalized Cellulosic Platforms for Analytical Detection of Contaminants **Ashish Kapoor** *Harcourt Butler Technical University, Kanpur, India*
11:10-11:25	OL	Mechanical Recycling of Graphene-Coated Natural Fiber/Epoxy Composites for Sustainable Materials Applications **Khurshid Malik** *Linköping University, Linköping, Sweden*
11:25-11:40	OL	Design and Development of High Performance PVDF based Flexible Composite Energy Harvesting Device for Wearable Electronics **Deshraj Meena** *Delhi Technological University Delhi, India*

Session 35 : Miscellaneous Applications

Chairs: KK Choudhary, IMA, Dehradun, India &
Arun K Singh, NPL, New Delhi, India

Venue: Hall-2

Time	Lecture	Title/Author
10:30-10:50	IL	Fluorescent Nanoconjugates Derived by RAFT Polymer Functionalization **Sonu Kumar** *Mahindra University, Hyderabad, India*
10:50-11:10	IL	Hydrogel functionalized with Butea monosperma leaf extract: A sustainable approach toward high-barrier active food packaging **Kajal Mishra** *Maulana Azad National Institute of Technology Bhopal, India*
11:10-11:25	OL	Computational Simulations for Exploring Physicochemical Phenomena of Polymers **Anant D. Kulkarni** *Qbitnova Tech Pvt. Ltd, Solapur, India*
11:25-11:40	OL	Organometallic-Assisted Electrodeposition of NiFe Nanostructures for Efficient Oxygen Evolution under Ambient Conditions **Parul Aggarwal** *CSIR-AMPRI, Bhopal, India*
11:40-11:55	OL	Pyrolytic Conversion of Plastic Waste into Value-Added Fuels and Products. **Neeraj Agarwal** *CIPET, Bhopal, India*

Session 36 : Advanced Materials & Technology

Chairs: Kalpana Chauhan, CU, Mahendragarh, India &
Ashwini Wali, M S Ramaiah Institute of Technology, Bangalore, India

Venue: Hall-3

Time	Lecture	Title/Author
10:30-10:50	IL	Application of Polyaniline in Energy Storage Device in combination with Mxene **Amar Prasad Yadav** *Tribhuvan University, Kathmandu, Nepal*
10:50-11:10	IL	Hydrogel-Based Platforms for Onsite Food Safety Monitoring **Anjali Awasthi** *Harcourt Butler Technical University, Kanpur, India*
11:10-11:25	OL	Multifunctional selenium nanoparticle-loaded self-assembled peptide gel for enhanced wound healing **Saurav Kumar** *Indian Institute of Technology Mandi, Mandi, India*
11:25-11:40	OL	Harnessing Ionic Liquid–Biopolymer Interactions for Efficient biomass Dissolution and Enhanced Fermentable Sugar Production **Madhusmita Dash** *PDPM Indian Institute of Information Technology Design and Manufacturing, Jabalpur, Madhya Pradesh, India*
11:40-11:55	OL	Advanced Thermally Conductive and Anti-Corrosion Elastomeric Composite for High-Performance EMI/EMC Shielding in Automotive and Electric Vehicle Applications **Bhushan Patil** *Uno Minda Limited, Pune, India*

12:30-13:30 | Valedictory Session (Main Hall)

Time: 12:30-12:35
Bouquet Presentation

Time: 12:35-12:40
Welcome Address
Manohar Badiger, *Conference Co-Chair*

Time: 12:40-12:45
APA Address
Bhuvanesh Gupta, *APA President*

Time: 12:45-12:50
Theme Address
Satyendra Mishra, *APA ICON Awardee*

Time: 12:50-13:15
Valedictory Address
Mayank Dwivedi, *Chief Guest, Director General (HR), DRDO*

Time: 13:15-13:25
Award Ceremony

Time: 13:25-13:30
Vote of Thanks
Paramita Das, *Conference Convener*

13:30-14:30 | Lunch

14:30 | CONFERENCE ENDS