APA 2026, Bhopal

Invited Talks

As on 08 November 2026

ABS ID	Abstract Title	Full Name	Institution / Affiliation	City
1	Comparative Study: Single-Deck Pellet Cleaner vs Multi-Deck Pellet Cleaner	Rounak Kulkarni	Indpro Engineering Systems Pvt Ltd	Pune
11	Sustainable Development with Hydrogels: Addressing Global Challenges	Vijay Kumar	National Institute of Technology Srinagar	Hazratbal
19	Upcycling Polyolefin Waste into High-Value Materials via Adaptive Vinomer and Vitrilomer Networks	Suryasarathi Bose	Indian Institute of Science Bangalore (IISc Bangalore)	Bangalore
26	Encapsulation of Pomegranate peels polyphenols: A sustainable valorization approach using Pectin-Xanthan Gum Matrix	Anupama Kumar	Visvesvaraya National Institute of Technology	Nagpur
40	Next-Gen Smart Pack: Multifunctional Electrospun Films for Food Preservation and Monitoring	Ankit Tyagi	IIT Jammu	Jammu
42	Development of sustainable nanosensors for environmental and health applications	Sunil Kumar	Himachal Pradesh University	Shimla
45	Next-Generation Polymer Technologies: Innovations Driving a Sustainable Future	Sandip Patil	E-Spin Nanotech Pvt Ltd	Kanpur
48	Metal ion Cross-Linked Hierarchically Oriented Anisotropic Polymer Hydrogels for Sensing and Energy Storage Applications	Rajat Kumar Das	Materials Science Centre/Associate Professor	Kharagpur
53	Biodegradable Radiopaque Microbeads for Transarterial Chemoembolization	Manju Saraswathy	sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum	Thiruvanantha puram
57	Natural polymer-based granular hydrogels for 3D bioprinting applications	Amit Kumar Jaiswal	Vellore Institute of Technology	Vellore
74	Design of self-healing injectable hydrogels from functionalized natural gums for biomedical applications	Roli Purwar	Delhi Technological University	Delhi
78	Scalable Sustainable Chemistry Strategies for Advanced Functional Biopolymer Materials	Kalpana Chauhan	Central University of Haryana, Mahendergarh	Mahendergarh
88	Functionalized Cellulosic Platforms for Analytical Detection of Contaminants	Ashish Kapoor	Harcourt Butler Technical University	Kanpur
89	Green Chitosan-Based Adsorbents and Catalysts for Efficient CO_2 Capture and Transformation	Santosh Kumar	Harcourt Butler Technical University Kanpur	Kanpur
90	Hydrogel-Based Platforms for Onsite Food Safety Monitoring	Anjali Awasthi	Harcourt Butler Technical University	Kanpur
92	Porous Carbon - Based Polymer-Metal Oxide Composite Electrode for High Performance Supercapacitors	Dipak Gupta	Central Department of chemistry, Tribhuvan University	Kathmandu
103	Energy Storage Devices Using Conducting Polymers@Metal oxides	Tungabidya Maharana	National Institute of Technology Raipur	Raipur
104	Transition Metal Salen Complexes Catalyzed ROP of Lactide	Alekha Kumar Suthar	NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR	Raipur
107	Development of polyurethane composite films and foams through biobased resources	Rakesh K. Sharma	The Maharaja Sayajirao University of Baroda	Vadodara

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120	Biopolymer Based Hydrogels for Drug Delivery and Biomedical Applications	Vikas Vithhal Gite	Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, Maharashtra, India	Maharashtra
131	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	Trivandrum
132	Synthesis of Azo–Chitosan Functional Biopolymers for Antimicrobial Applications	Swapnil Sonawane	Netaji Subhas University of Technology (NSUT)	Delhi
138	Circular Materials for a Sustainable Future: Nanofiller-Reinforced Compostable Bioplastics	Vineet Aniya	CSIR - Indian Institute of Chemical Technology	Hyderabad
142	Low-dielectric and low loss and high-temperature resistant polymeric system for high-performance aeronautical applications	Jeetendra Kumar Banshiwal	DMSRDE	Kanpur
143	Curing studies of Phthalonitrile-Carbon fabric prepregs for fabrication of High-Performance Composite via Dynamic Themo-mechanical Analyzer	Ajit Shankar Singh	DMSRDE	Kanpur
151	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
153	Functionalized textiles with antimicrobial properties using Copper nanoparticles	Arun Kumar Patra	U P TEXTILE TECHNOLOGY INSTITUTE	Kanpur
157	Non-Noble Metal based Sustainable Heterogeneous Catalysts for Chemical Recycling and Upcycling of Plastic Waste	Venkata Krishnan	Indian Institute of Technology Mandi	Mandi
164	Beyond Conventional Bone Grafts: Printable Composites for 3D and 4D Biomanufacturing	Himansu Sekhar Nanda	IIITDM JABALPUR, MADHYA PRADESH, INDIA	Jabalpur
166	Smart and Ballistic Fibers and Their Technologies: Innovations and Challenges	Dibyendu Sekhar Bag	Defence Materials and Stores Research and Development Establishment	Kanpur
168	Development of a Green Synthetic Strategy for New Conjugated Polymers and Their Application in OFET	Arunkumar Patel	The Maharaja Sayajirao University of Baroda	Vadodara
170	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	Bhopal
175	Fluorescent Nanoconjugates Derived by RAFT Polymer Functionalization	Sonu Kumar	Mahindra University	Hyderabad
177	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	Kanpur
178	“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
194	Microplatsics in the Chenab River Ecosystem	Deepak Pathania	Central University of Jammu	Samba
200	Evaluation of $Mn_2P_2O_7$ Nanofibers for Enhanced Electrochemical Supercapacitor Performance	Sushama M. Giripunje	Visvesvaraya National Institute of Technology, Nagpur, Maharashtra, India	Nagpur
203	Engineering Nanocolloids for the Rational Design of Functional Nanoporous Polymers via Click-Inspired Chemistry toward Sustainable Nuclear Energy	Subrata Chattopadhyay	IIT Patna	Patna

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210	Role of hard and soft components in functional PU for Advanced Engineering Applications	Rani Rohini	Indian Institute of Technology	Jammu
215	Sustainable Wastewater Remediation by Hydrogels and Agricultural Waste-Based Adsorbents	Samrat MUKHOPADHYAY	IIT Delhi	South West Delhi
220	From Wheat Straw to Sustainable Fiber-Based Products: Shaping the Future of the Circular Economy	Vibhore Kumar Rastogi	Indian Institute of Technology Roorkee (IIT Roorkee)	Saharanpur
231	Label-Free Liquid Crystal Based Dielectric Genosensor for the quantitative detection of Infectious Bacterium	Rajesh	CSIR-National Physical Laboratory	New Delhi
243	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
246	Designing Polymers for Efficient Intracellular Delivery of Therapeutic Nucleotides	Aasheesh Srivastava	IISER Bhopal	Bhopal
251	Evaluation of Algae-Derived Material as Sustainable Additives for Elastomers	Suchismita Sahoo	Reliance Industries Limited	Navi Mumbai
260	Design and Development of Reprocessable Carbon Fiber Composites Using Covalent Adaptable Networks	Sravendra Rana	UPES	Dehradun
267	Enhancement of printing properties of water-based inks by the Addition of Aloe Vera gel for rotogravure/flexographic printing	Anurag Kulshreshtha	Indian Institute if Technology Roorkee	Saharanpur
269	Advanced Biomaterials for Additive Manufacturing of Orthopaedic Implants	Sumit Murab	IIT Mandi	Mandi
275	Advanced Polymer Filament Production for 3D Printing Using Twin-Screw Extrusion and Melt Pump Technology	Manoj Bansal	Thermo Fisher Scientific	Mumbai
285	Application of Polyaniline in Energy Storage Device in combination with Mxene	Amar Prasad Yadav	Tribhuvan University	Karhmandu
303	Jute Bast Fiber-Derived Nanocellulose: A Potential Biomaterial for Drug Delivery and Tissue Regeneration	Bodhisatwa Das	IIT Ropar	Ropar
311	Engineering Functional Polymeric Membranes and Materials for Separation Applications	Akshay Modi	Indian Institute of Science Education and Research (IISER) Bhopal, India	Bhopal
314	Future Of Smart Flexible And Shrink Sleeve Packaging	Chetan Jain	Taurus Packaging Pvt Ltd	Greater Nooida
316	Lipid Matrix Engineering for Controlled Drug Delivery: From Nanostructure Design to Drug Release	Paurnima Talele	Shri Guru Gobind Singhji Institute of Engineering & Technology, Nanded	Vishnupuri, Nanded
334	Janus Microbead Biosensors for Rapid Pathogen Detection	Dhrubajyoti Das	Vellore Institute of Technology	Vellore
335	Physics of Polymer Phase Separation	Gaurav Chauhan	IIT Indore	Indore
344	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	Bhopal
OFF-01	The Role of Polymers in Environmental Sustainability	Ravi Kant Pathak	University of Gothenburg, Sweden	Sweden

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OFF-02	Anti-counterfeit Methods for Smart Flexible Packaging: From Design to Printing Process	Arun Pande	Afflatus Gravure Pvt Ltd	Noida
OFF-04	Hybrid Dressings for Superior Management of Complex Wounds	Atharva Poundarik	Indian Institute of Technology	Ropar
OFF-07	Polymeric Membranes for Sustainable Fruit Juice Concentration: Bridging Materials Engineering, Beverage Quality, and Packaging Innovation	Aaditya Pandey	Indian Institute of Technology	Ropar