APM 2022
Advancements in Polymeric Materials

CIPET सि पे ट

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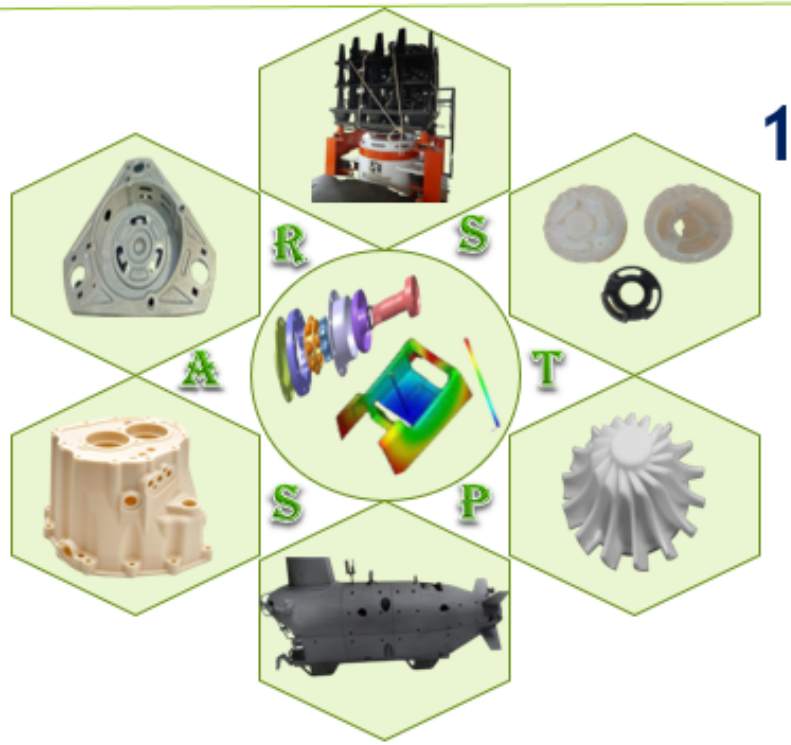

13th International e-Conference on Advancements in Polymeric Materials (APM-2022)

Probing Innovative & Sustainable Product Design and Manufacturing

(March 08-12, 2022)

PROGRAMME SCHEDULE

PROGRAMME SCHEDULE APM 2022 @ March 08-12, 2022

DAY 1 (March 8, 2022)		
Session Chairperson: Dr. P. S. G. Krishnan, Principal Director, CIPET		
09:15 – 10:00	**PLENARY LECTURE - I**	**Prof (Dr). Geoffrey Mitchell,** Institute Polytechnic of Leiria, Marinha Grande, Portugal *3D Printing a Novel Route to Fabricating New Polymeric Materials with Tailored Properties*
10:00 – 10.40	**KEYNOTE LECTURE - I**	**Prof. Mohammad Qasaimeh,** New York University, Abu Dhabi *Integrated 3D Printed Microfluidic Probes for Cell Separation, Biopsying, and Beyond*
11:00 – 11:40	**APM-2022 Inauguration Ceremony**	**Welcome Address: Prof. (Dr.) Shishir Sinha,** Director General, CIPET/Convener, APM 2022. **Special Address: Smt. Arti Ahuja, I.A.S,** Secretary (C&PC), DCPC, MoC & F. **Guest of Honour: Shri. Bhagwanth Khuba,** Hon'ble Minister of State, C&F. **Release of e-proceedings: Hon'ble Union Minister of C&F and Hon'ble Minister of State (C&F).** **Chief Guest Address: Dr. Mansukh Mandaviya,** Hon'ble Minister of C&F. **Vote of Thanks: Shri Kashi Nath Jha,** I.P. & T.A.F.S, Joint Secretary (PC), DCPC, MoC & F.
Co- Chairperson: Dr. Syed Amanulla, Chief Manager (Technical), CIPET**.**		
12:05 –12:25	**INVITED LECTURE - I**	**Dr. Neetu Singh,** Indian Institute of Technology Delhi *Engineering New Materials for Healthcare: A Chemist's Perspective*
12:25–12:45	**INVITED LECTURE - II**	**Dr. Subrata Chattopadhyay,** Indian Institute of Technology Patna *Multifunctional Nearly Monodisperse Biocompatible Polyethylene glycol Periodic Co-polymers via Aza-Michael Reactions*
12:50 – 13:50	**CONTRIBUTORY LECTURE - I**	1. **APM(O) -37 Dr. P. Pazhanisamy** *Synthesis and Characterization of poly (N-cyclohexylacrylamide-co-acrylamide/HEA) Hydrogels* 2. **APM(O) -15 Mr. Nikhil Kumar** *Multi-Stimuli Responsive Biphasic Dual Network Hydrogel for Drug Delivery* 3. **APM(O)-44 Mr. Gurumoorthi Ramar** *Design and Development of TPMS Scaffold for Bone Tissue Engineering Applications* 4. **APM(O)-50 Ms. Ipsita Pattanayak** *Synthesis and Characterization of Natural Hydroxyapatite Extracted from Caprine Bones* 5. **APM (O) -23 Mr. Shyama Sasikumar** *In vitro Tissue Microenvironment-based Drug Testing Platform to Predict Drug-Induced Liver Injury*
13:50 – 14:30		**LUNCH BREAK**

Session Chairperson: Dr. B. Srinivasulu, Principal Director, CIPET.		
14:30 – 15:15	**PLENARY LECTURE - II**	**Prof. Bhuvanesh Gupta,** Indian Institute of Technology Delhi *Functional Biomaterials by Plasma Grafting of Polymers*
15:15 – 15:45	**KEYNOTE LECTURE - II**	**Prof. Josemon Jacob,** Indian Institute of Technology Delhi, *Polymeric Gels for Heavy Metal Ion Removal and Desalination*
15.45 – 16.15	**KEYNOTE LECTURE - III**	**Dr. Harish Kumar,** Central University of Haryana, *Metal oxide Nanoparticles Decorated with Conducting Polymer-Based Biomaterials for Advanced Functional Applications*
16.15 – 16.45	**KEYNOTE LECTURE - IV**	**Dr. Gajendra Prasad Singh,** Central University of Jharkhand, Ranchi *Hybrid nanocomposite Photocatalysts for the Photocatalytic Hydrogen Evolution from Water-splitting*
16:50 – 17:10	**INVITED LECTURE - III**	**Dr. Garima Agrawal,** IIT Mandi *Stimuli Responsive Polymer based Materials for Controlled Drug Delivery*
17:10 – 17:30	**INVITED LECTURE - IV**	**Dr. Sanjeev Kumar Mahto,** School of Biomedical Engineering, IIT (BHU**)** *Fabrication and Characterization of Soy Protein Isolate Based Scaffolds for Skin Tissue Engineering Applications*
Co-Chairperson: Dr. Syed Amanulla, Chief Manager (Technical), CIPET.		
17:35 – 18:25	**CONTRIBUTION LECTURE –II**	1. **APM(O) -06 Dr. Neetha John** *Studies on the Effect of ZnOModifications on PLA Membranes* 2. **APM(O)-42 Mr. D. Amrishraj** *Artificial Neural Network (ANN) based predictive Modeling of Tribological behavior of Poly Propylene (PP) composites reinforced with nano zirconia and tungsten di sulphide (WS_2)* 3. **APM(O) -07 Mr. Baban Dey** *Sulfonic Acid Functionalized Graphene Oxide Reinforced Polyethersulfone Nanocomposites With Enhanced Mechanical And Electrical Properties*. 4. **APM(O) -21 Mr. Srikanth Bhaskar Billa** *Two Component Polyurethane Urea System Exhibits Quadruple Shape Memory and Intrinsic Self-Healing Characteristics* 5. **APM(O) -24 Mr. Krishna Kant Mourya** *High Temperature Self-Healing B4C incorporated Carbon B-Phenolic and Mo- Phenolic Ablative Composite*
Day End		

DAY 2 (March 9, 2022)		
Session Chairperson: Dr. S. N. Yadav, Principal Director, CIPET.		
09:00–09:45	**PLENARY LECTURE - I**	**Prof. Dr. Ashok Vaseashta,** NJCU, USA *Hierarchical Integration of Additive Manufacturing Process and Electrospinning for Rapid Prototyping*
09:45–10:30	**PLENARY LECTURE - II**	**Prof.(Dr.) Sabu Thomas**, Mahatma Gandhi University, Kerala *Circular Economy: New opportunities in Sustainable Nanomaterials and Polymer Bio-Nanocomposites*
10:30 – 11:00	**KEYNOTE LECTURE - I**	**Dr. Tse Nga Tina Ng,** University of California, San Diego, USA *Polymeric Devices for Infrared Upconversion Imagers and Energy Storage*
11:00– 11:30	**KEYNOTE LECTURE - II**	**Prof. Dr. Kantesh Balani,** Indian Institute of Technology Kanpur, *Adhesion Mechanics of Bacteria on Polymeric & other Biosurfaces*
11:40-12:00	**INVITED LECTURE - I**	**Dr. Satyaprasad P Senanayak,** National Institute of Science Education and Research (NISER), Bhubaneswar *Solution Processed Semiconductors for Futuristic Optoelectronic Devices*
12:00–12:20	**INVITED LECTURE - II**	**Dr. T. Eshwar,** CSIR-Central Electronics Engineering Research Institute, Pilani, *Elastomer based flexible Capacitive Pressure Sensors for realization of electronic skin (E-skin)*
12:20–12:40	**INVITED LECTURE - III**	**Dr. Aashish Ray,** S.S. Tegnoor Degree College, Karnataka, India *Development of highly sensitive PEDOT-PSS/AuNP nanocomposite-based sensor towards room temperature detection of greenhouse methane gas*
Co-Chairperson: Dr. Aashish Ray, S.S. Tegnoor Degree College, Karnataka, India		
12:40 – 13:30	**CONTRIBUTORY LECTURE - I**	1. **APM(O)-56 Ms. Nilimapriyadarsini Swain** *Nanosheet Structured 3D Porous Mn_3P/Ni as an Efficient Electrode Material for Energy Storage Application* 2. **APM(O) -32 Mr. Prasenjit Bhunia** α-Fe_2O_3*Flowers on Graphene Surfaces with Efficient Visible-Light-Activated Photo-electrochemical Glucose Detection* 3. **APM(O) -36 Mr. Ovais Ali** *Aggregation Behavior of Polyethylene Glycol in the Presence of Electrolytes and Non-electrolytes* 4. **APM(O) – 47 Mr. S. Ragul** *Investigation of Organic Ferroelectric Polymer Doping of Graphene using Kelvin Probe Force Microscopy* 5. **APM(O)-48 Mr. R. Karthikeyan** *Studies on thermo-mechanical and dielectric properties of the filler based polymer composite materials for wind turbine application.*
13:30 – 14:00		**LUNCH BREAK**

Session Chairperson: Dr. Smita Mohanty, Principal Scientist, CIPET.		
14:00 – 14:45	**PLENARY LECTURE - III**	**Dr. S. N. Jaisankar,** CSIR-CLRI, Chennai *Synthesis, Viscoelastic and Thermal Properties of Single-Walled Carbon Nanotubes Based Polyurethane*
14:45 –15:15	**KEYNOTE LECTURE – III**	**Prof. Dr. Rajendra Kumar Goyal,** Malaviya National Institute of Technology Jaipur, *Polymer/GNP Nanocomposites and Their Challenges*
15:15 –15:45	**KEYNOTE LECTURE – IV**	**Dr. Neeladri Das,** Indian Institute of Technology Patna, *Development of Porous Polymers to Capture Environmental Pollutants*
15:50 – 16:10	**INVITED LECTURE - IV**	**Dr. Yadagiri Naik Banothu,** DRDO, DYSL-SM, Hyderabad *Electroactive Shape Memory Polyurethanes (eSMPUs) based on Optimized Graphene Nanoplatelet (GNP) Composites*
Co-Chairperson: Dr. Aashish Ray, S.S. Tegnoor Degree College, Karnataka, India		
16:30 – 17:20	**CONTRIBUTORY LECTURE -II**	1. **APM(O)-45 Mr. Selvaraj Nagarajan** *Re-investigation of Polymeric Ring-banded Spherulites* 2. **APM(O) -30 Mr. Amresh Kumar Singh** *TPOs Composite Tensile Stress-Strain Behaviour Analysis For Automotive Application* 3. **APM(O) -31 Mr. Vuba Kiran Kumar** *Enhanced Thermo-Mechanical And Thermal Properties of MWCNT/MAgPP/PP Co-polymer Nanocomposites Prepared by Extrusion* 4. **APM(O) -41 Ms. V Binaz** *Experimental Investigation on Machinability of SustainableBasalt-PLA Composites* 5. **APM(O) -33 Mr. Sandeep Gairola** *Thermal Stability and Mechanical Behavior of Date Palm Leaves Reinforced Laminated Polypropylene Composites*
Co-Session Chairpersons: Dr. Lakshmi Unnikrishnan, Dr. T.Senthil, Dr. R. Ananthakumar, CIPET		
16:30 – 18:00	**Flash Poster Presentation** **Parallel Session – Hall-2**	**APM (P) -08, APM (P) -17, APM (P) -22, APM (P) -23, APM (P) -27, APM (P) -28, APM (P) -29, APM (P) -32, APM (P) -34, APM (P) -37, APM (P) -42, APM (P) -44, APM (P) -49, APM (P) -52, APM (P) -53, APM (P) -54, APM (P) -55**
Day End		

DAY 3 (March 10, 2022)		
Session Chairperson: Dr. Abdul Kader, Principal Scientist, CIPET.		
09:00 –09:45	**PLENARY LECTURE - I**	**Prof. Dr Ramani Narayan**, University Distinguished Professor, Michigan Biotechnology Institute, USA *Re-designing carbon-carbon backbone (hydrocarbon) plastics for biodegradability-compostability*
09:45 – 10:15	**KEYNOTE LECTURE - I**	**Dr. Akhilesh K Gaharwar**, Texas A&M University, United States *Bioengineering Living Systems: Designing Biomaterials for In Situ Tissue Regeneration*
10:15 - 10:45	**KEYNOTE LECTURE - II**	**Dr. Y. Ravi Kumar,** National Institute of Technology Warangal *Design and Manufacturing of Bio-medical Devices using Additive Manufacturing Technology*
10:50 – 11:10	**INVITED LECTURE – I**	**Dr. Amit Jaiswal,** Indian Institute of Technology Mandi *Photothermally Active Nanomaterials for Biomedical Applications*
11:10 – 11:30	**INVITED LECTURE – II**	**Dr. V. Ravi Babu**, CSIR-CECRI, Tamilnadu 3D Bioprinted PLA/Mesoporous bioactive glass based Hierarchical Biomimetic composite scaffold with Rapid Apatite crystallization Ability and In-vitro cytocompatibility : A promising Niche For Bone Tissue Engineering
11:30 – 11:50	**INVITED LECTURE – III**	**Dr. G.T. Senthil Andavan,** SRM, Chennai *Biodegradable PU films of polycaprolactone polyols and Sustainable nanoparticles of castor oil with hybrid inorganic-organic Schiff bases*
Co-Chairperson: Prof. Dr. Rajendra Kumar Goyal, Professor and Head, Malaviya National Institute of Technology.		
11:50 – 12:50	**CONTRIBUTORY LECTURE -I**	1. **APM(O)-52 Ms. Srushti Lekurwale** *Investigation of sintering parameters on fine printability of 3D printlets using Selective Laser Sintering assisted advanced Additive Manufacturing Technology* 2. **APM(O) -25–Mr. Arun Kumar Bambam** *Effect of process parameter on tensile strength of AlSi10Mg parts fabricated through Selective Laser Melting* 3. **APM(O) -38 Mr. Alex Y** *Advancement of Additive Manufacturing Technology in Development of Personalized Knee and Elbow Implants* 4. **APM(O)-53 Dr. Aswini Kumar Mohapatra** *Development of Green Composite Membrane: A Critical Study of Cellulose Acetate & Corn Cob Composite* 5. **APM(O) -12 Mr Debabrata Ganguly** *In-situ modification of filler-filler network improvising the thermal conductivity and dispersion in hybrid elastomeric composite* 6. **APM(O) -34 Ms. Priyanka Soni** *Thermal stability and kinetic analysis of chemically treated hemp fiber reinforced epoxy composites*
12:50 – 14:00		**LUNCH BREAK**

Session Chairperson: Dr. P.S.G. Krishnan, Principal Director, CIPET.		
14:00 – 14:45	**PLENARY LECTURE – II**	**Prof. Krishnan Kanny,** Durban University of Technology, South Africa *Foam Based Polymer Composites for Structural Application*
14:50 – 15:20	**KEYNOTE LECTURE – III**	**Dr. Manish Gupta,** Motilal Nehru National Institute of Technology,Allahabad *Prioritizing enablers in terms of Industry 4.0 technologies for Lean Manufacturing implementation through Fuzzy-AHP*
15:20 – 15:50	**KEYNOTE LECTURE – IV**	**Dr. Rajesh Kumar Sharma,** National Institute of Technology Hamirpur, *Impact of Surface Modifications on the Performance of Tribological Pairs*
15:50 – 16:10	**INVITED LECTURE – III**	**Dr. Abhishek Tiwari,** Indian Institute of Technology Ropar *Effect of Material Inhomogeneity on Crack Driving Force Under Creep Deformation*
16:10 – 16:30	**INVITED LECTURE – IV**	**Dr. Arun Kumar Padhy,** Central University of Jharkhand, Ranchi *Organic Molecules to Materials: Small Molecules Doing Wonders*
Co-Chairperson: Dr. V. Ravi Babu, Scientist, CSIR-CECRI.		
16:30 – 17:30	**CONTRIBUTORY LECTURE –II**	1. **APM(O)-54 Mr. Ganesh G. Garkhedkar** *Elimination Of Flow Marks In Injection Molded Product By Polymeric Flow Optimisation* 2. **APM(O) -13 Mr MohitGoswami** – *Mixed-Mode and Mode-I fracture analysis of elastomeric composites using damage model assisted finite element analysis* 3. **APM(O) -16 Mr Abhay Kumar** *Analyzing Geometrical Imperfections on Tire Tread Compound and Mechanical Validation Through Finite Element Analysis* 4. **APM(O) -29 Mr R.V Sadhu Sundar Singh** *Prediction of process parameters for friction stir welding of cast Aluminium alloy A319 by Neural network technique* 5. **APM(O) -26 Mr. V Suganth** *Three Dimensional modelling of moisture diffusion in fiber reinforced composites* 6. **APM(O)-46 Mr V Ganesh Ram** *Design and Analysis of Rear Brake Shoe*
Co-Session Chairpersons: Dr. Lakshmi Unnikrishnan, Dr. T.Senthil, Dr. R. Ananthakumar, CIPET		
16:30 – 18:00	**Flash Poster Presentation** **Parallel Session – Hall-2**	**APM (P) -04, APM (P) -09, APM (P) -10, APM (P) -11, APM (P) -12, APM (P) -13, APM (P) -14, APM (P) -15, APM (P) -24, APM (P) -30, APM (P) -31, APM (P) -33, APM (P) -38, APM (P) -43, APM (P) -46, APM (P) -47, APM (P) -51, APM (P) -57**
Day End		

DAY 4 (March 11, 2022)		
Session Chairperson: Dr. S. N. Jaisankar, Chief Scientist, CSIR- CLRI, Chennai. & **Co-Session Chairperson: Shri.Varun Singh Poonia,** Deputy Industrial Adviser, DCPC, Govt. of India.		
09:00 –09:45	**PLENARY LECTURE – I**	**Prof. Mohini Sain,** University of Toronto, Canada *Present and future of Multifunctional Carbon Composite in Energy Storage*
09:45 – 10:15	**KEYNOTE LECTURE – I**	**Dr Y. Shrike Zhang,** Harvard-MIT Health Science and Technology, Cambridge, Massachusetts, United States *3D Tissue Bioprinting*
10:15 – 10:45	**KEYNOTE LECTURE – II**	**Dr. S. Senthilvelan,** Indian Institute of Technology Guwahati, *Challenges: Polymer Product Design and Manufacturing and Performance*
10.45 – 11.15	**KEYNOTE LECTURE – III**	**Prof.(Dr.) Santanu Chattopadhyay,** IIT Kharagpur *CFD Modeling for the Prediction of Structural Deformation/ Instability in the Polymeric Extrudate Profile due to Die Swell using 3D models*
11:20 – 11:40	**INVITED LECTURE – I**	**Dr Sumit Sharma,** Dr. B. R. Ambedkar National Institute of Technology Jalandhar *Molecular Dynamics Study of Interfacial Properties of Carbon Nanotube Reinforced Polypropylene Composites*
11:40 – 12:00	**INVITED LECTURE – II**	**Prof. V.R. Gaval,** *Institute of Chemical Technology-Mumbai* *Advancement in warpage predictions accuracy for glass filled thermoplastics using integrative simulation approach*
Co-Chairperson: Prof.(Dr.) Santanu Chattopadhyay, IIT Kharagpur		
12:00- 13:10	**CONTRIBUTORY LECTURE -I**	1. **APM (O) -01 Mr Sujit Sharma** *Investigating the structural deformation of the extrudate during the processing and simulation of an extrusion die for polymeric products* 2. **APM (O) -09 Mr Abhijit Bera** *An Early-Stage Modification of Natural Rubber with Bio-based Integrant: A Green Obtention to enhance the Efficacy of Silica Dispersion in Tyre Tread Compound* 3. **APM(O) -10 Mr Saikat Das** *Physico-mechanical Properties of NXT Silane Grafted Styrene Butadiene Rubber/Silica Composites* 4. **APM(O) -14 Ms Sipra Khanra** *Reactive Compatibilization of the Fluoroelastomer and Silicone Rubber Blend with Fluoroelastomer-g-Acrylamide* 5. **APM (O) -05 Mr Asit Baran Bhattacharya** *Novel thermoplastic vulcanizatenano-composites (TPVNs) based on ultra-high molecular weight EPDM: Development, characterizations and applications* 6. **APM(O) -18 Mr Praveen Sreenivasan** *Study of processing and sound attenuation characteristics of hollow glass balloon filled rubber composite* 7. **APM(O)-49 Mr Pijush K Mandal** *An Experimental Study on Engineering Properties of LCP-Vectra A 950/PP composites*

13:10 – 14:00		**LUNCH BREAK**
Session Chairperson: Dr. Syed Amanulla, Chief Manager (Technical), CIPET		
14:00 – 14:45	**PLENARY LECTURE - II**	**Prof. Dr. G. C. Mohan Kumar,** National Institute of Technology Karnataka, Surathkal, *PVA-PVP Based Hydrogel Composites for Tissue Engineering Applications*
14:45– 15:15	**KEYNOTE LECTURE – IV**	**Dr.-Ing. Can Dincer,** University of Freiburg, Freiburg, Germany *CRISPR-Powered Microfluidic Multiplexed Nucleic Acid Testing*
15:15– 15:45	**KEYNOTE LECTURE – V**	**Dr. Abhijit Chatterjee,** Dassault Systems *Science Aware Digital Platform To Design Next Generation Material*
15:50 – 16:10	**INVITED LECTURE – III**	**Dr. Sujin B Babu,** IIT Delhi *Modelling One Hinge Artificial Swimmer in a Newtonian Fluid for Drug Delivery Application*
16:10 – 16:30	**INVITED LECTURE – IV**	**Dr. Balasubramanian Paramasivan,** National Institute of Technology Rourkela *Use of Kombucha Bacterial Cellulose as a Packaging Materials*
Co-Chairperson: Prof.(Dr.) Santanu Chattopadhyay, IIT Kharagpur		
16:30 –17:30	**CONTRIBUTORY LECTURE –II**	1. **APM (O) -17 Dr. Rakesh Kumar** *Fabrication and Mechanical Properties of Glass Fabric Based Sandwich Panels with Acid Catalysed Furfuryl Alcohol as the Binder* 2. **APM(O) -35 Mr. Aditi Mahajan** *Biodegradable polymer selection for food packaging applications through multi-criteria decision making approach* 3. **APM(O) -27 Ms. Kajal Mishra** *Fabrication and Characterization of Moringa Oleifera Seed Filler as Novel Reinforcement in Epoxy Composites: Barrier and Interfacial Compatibilities* 4. **APM(O) -02 Mr .G Jeevi** *Interlaminar shear behaviour of E-glass/Basalt reinforced vinyl ester hybrid composites enhanced with silane coupling agent* 5. **APM(O)-40 Mr. Karri Santhosh Kumar** *Comparative assessment of machinability of woven jute and glass fiber reinforced epoxy composites*
Session Chairpersons: Dr. Lakshmi Unnikrishnan, Dr. T.Senthil, Dr. R. Ananthakumar, CIPET		
16:30 – 18:00	**Flash Poster Presentation Parallel Session – Hall-2**	**APM (P) -01, APM (P) -02, APM (P) -05, APM (P) -06, APM (P) -16, APM (P) -18, APM (P) -20, APM (P) -21, APM (P) -25, APM (P) -26, APM (P) -35, APM (P) -36, APM (P) -40, APM (P) -41, APM (P) -45, APM (P) -48, APM (P) -50, APM- (P) – 58**
Day End		

DAY 5 (March 12, 2022)		
Session Chairperson: Dr. Sandesh Kumar Jain, Principal Director, CIPET.		
09:00 –09:45	**PLENARY LECTURE - I**	**Dr. Manjusri Misra,** University of Guelph, Canada *Plastic Waste Challenges to Sustainable Materials: A Global Circular Economy Approach*
09:45 – 10:15	**KEYNOTE LECTURE - I**	**Prof. Dr. Susanta Banerjee**, Indian Institute of Technology Kharagpur *The Recent Development on Phosphorus and Pyridine Containing Sulfonated Polytriazoles: Proton Exchange Membrane Properties*
10:15 – 10.45	**KEYNOTE LECTURE - II**	**Dr. S. Anandhan,** National Institute of Technology Karnataka, India. *PVDF Nanocomposite-based Electrospun Fabrics for Various Applications*
10:50– 11:10	**INVITED LECTURE - I**	**Dr. S. Ananda Kumar,**Anna University, Chennai *Al-MCM-41 reinforced epoxy-CE-Poly-benzoxazine hybrid nanocomposites with high di-electric constant and low di-electric loss*
Co-Chairperson: Dr. G. T. Senthil Andavan, SRM University, Chennai.		
11:10 - 12:40	**CONTRIBUTORY LECTURE -I**	1. **APM(O) -28 Dr. A. Murali** *Cu(0) Mediated Controlled Radical Polymerization of Nanocomposites: Graphene as a Macroinitiator* 2. **APM(O) -19 Simran Kaur Dhillon** *Polyaniline derived copper embedded in nitrogen-doped carbon catalyst for bio-energy generation in microbial fuel cells* 3. **APM(O) -20 Mr Nilanjan Mukherjee** *Effect of Surface Functionalization of Multiwalled Carbon Nanotubes (MWCNTs) towards Block Copolymer grafting via SI-RAFT Technique : A Novel Nanofiller in PEM application* 4. **APM (O) -03 Ms Arunima Singh** *Wet-Spun Solid PVDF Fibers and its Characterization* 5. **APM(O) -04 Mr Anupam Das** *Development of superior proton conducting PBI composite membranes by incorporating phosphoric acid-loaded covalent organic framework* 6. **APM(O) -22 Mr. Prakash Vislavath** *Effect of hybrid filler on acoustic properties of ionomeric composite* 7. **APM(O) -11 Mr R Ashok** *Experimental investigation on the mechanical properties of carbon glass-bombyxmori reinforced epoxy hybrid composites*
12:40 – 13:30		**LUNCH BREAK**

Session Chairperson: Prof. Dr. Susanta Banerjee, Indian Institute of Technology Kharagpur & **Co-Session Chairperson: Shri. Varun Singh Poonia,** Deputy Industrial Adviser, DCPC, Govt. of India.		
13:30 – 14:15	**PLENARY LECTURE - II**	**Prof. B. C. Ray,** NIT Rourkela *Material Recovery Strategies from Thermoset Composites*
14:15 – 14.45	**KEYNOTE LECTURE-III**	**Dr. M. Abdul Kader,** Central Institute of Petrochemicals Engineering & Technology Ahmedabad *Recent Developments in Plastics Circular economy*
14:45 – 15.15	**KEYNOTE LECTURE-IV**	**Prof. D. D. Sarode**,Institute of Chemical Technology-Mumbai *Recycle and Reuses of Plastic waste for sustainable development*
15:20 -15.40	**INVITED LECTURE – III**	**Dr.Akhil S Nair,** SEDAXIS – Advanced Materials Pvt. Ltd, Chennai *Continuous Fiber Co-Extrusion for Lightweight Composite 3D Printing - Possibilities and Use Cases*
Co-Chairperson: Dr. G. T. Senthil Andavan, SRM University, Chennai.		
15:45- 16:45	**CONTRIBUTORY LECTURE -II**	1. **APM (O) -08 Riya Koley** *Waste MoringaOleifera Gum Based Sustainable Multifunctional Additive for Rubber* 2. **APM (O) -43 Mr. Ashish Raghavan** *Biomedical based Polyolefin Waste: Effect of Sterilization and Reactive Compatibilization on the Properties of Blends* 3. **APM(O)-55 Mr. Sravendra Rana** *Plastic Waste Management: Vitrimer- A sustainable approach* 4. **APM(O)-39 Mr. Gaurav Mishra** *Recycled PPCP mixed filler composite for Automobile application* 5. **APM(O)-51 Ms. V Veena** *Study of recovery and re-use of glass and carbon fibres*
17:00 -17:30	**VALEDICTORY FUNCTION**	**Feedback** **Concluding Remarks** **Vote of Thanks** **APM 2023 Announcement**
Day End		