

Oral Presentation



Oral Presentations	
1. Nano and Structural Materials for Sustainable Developments	
OL-01	Optimizing Lithium Ion Exchanged Zeolite 13X for Enhanced CO₂ Adsorption: A Systematic Analysis <i>Intivenuka Mohana Rao, Rekha Krishnan G, Deepthi L Sivadas K. Prabhakaran</i>
OL-02	Hydrothermal Synthesis of Surfactant-Capped NiSe₂ Nanoparticles with Tunable Optical and Enhanced Electrochemical Properties <i>Yogita Gendre, K. S. Ojha, Chinmaya Mahapatra, Yogita Gendre</i>
OL-03	Investigation of Mechanical Performance of 3D Printed Open Channel Sandwich Core <i>Basavaraja K, Amitkumar Halder, Vishwanath Managuli</i>
OL-04	GO-Cadmium Hydroxide Nanostrand Enriched Membranes with Enhanced Water Permeation and Dye Rejection Ability <i>Swati Gahlot, Vaibhav Kulshrestha, Bijay P. Tripathi</i>
OL-05	Highly active and durable Ru promoted Ni/CeO₂ catalysts for CO₂ methanation reaction <i>Nagasuresh Enjamuri, So Nishikawa, Masahiko Nishijima, Shohei Tada and Ryuji Kikuchi</i>
OL-06	Substrate Induced Chirality in Transition Metal Oxides <i>H. M. Shashanka, K. Inoue</i>
OL-07	Unveiling the Catalytic Role of High-Entropy Alloy–Carbon Composites in Hydrolysis Mediated Hydrogen Production <i>Gokul Raj, Ravi Nandan, Soumen Midya, Kanhai Kumar, Abhishek Kumar Singh and Karuna Kar Nanda</i>
OL-08	Phase engineering for photocatalytic H₂ production: Pd-TiO₂ system <i>K S Ashadevi, Naresh Nalajala</i>
OL-09	Valorization of Sanitary Napkin Waste into High-Surface-Area Biochar for Crystal Violet Removal: A Study of Adsorption Dynamics and Surface Chemistry <i>Anish Gore, Balasubramanian Kandasubramanian, Neelaambhigai Mayilswamy</i>
OL-10	Photocatalytic Performance of α-Bi₂O₃/Bi₁₈Mg₈O₃₆ Nanocomposite in Sunlight-Assisted Degradation of Organic Dyes <i>Banan W. A. Alghaswyneh and Vijaylakshmi Dayal</i>
OL-11	Sustainable Carbon Recovery from Effluent Gases Using Electrospun Polylactic Acid Membranes <i>Shrithi, Balasubramanian Kandasubramanian, Kshitija Vaidya</i>
OL-12	Efficient Pathway for the Synthesis of Quinazolinone and 2-Phenyl-2,3-Dihydro-1H-Perimidine Derivatives using Sustainable Heterogeneous [Cu]-Complex <i>Prasad N Dhone and Dr. Ramesh B. Dateer</i>
OL-13	Development of Phycocyanin- TiO₂ Composite Films for Reactive Oxygen Species-Mediated Degradation of Organic Pollutants <i>Harshal Kalaskara, Balasubramanian Kandasubramanian, Manisha Singh</i>

OL-14	Synergistic EPDM-UHMWPE-Stainless Steel Integrated Multilayer Architecture for Advanced Aerospace Refuelling Applications <i>Pratyush Bagaria, Yash Avhad, Balasubramanian Kandasubramanian, Kshitija Vaidya, Shruti Gupta, Amol Indalkar</i>
OL-15	Tuning Crosslinking and Segmental Mobility in Carboxylated NBR via Ionic and Mixed Curatives <i>Shatakshi Joshi, A. Mouliswar Reddy, Sangram Rath, Balasubramanian Kandasubramanian</i>
OL-16	Advanced Epoxy Composites: Improved Thermal Stability via Metal-Organic Framework Nanofillers <i>Roshith K R*, Satheesh Kumar B, Santhosh Kumar K S</i>
OL-17	Effects of CTAB and EDTA Surfactants on Structural and Optical Properties of ZnSe Nanocrystals <i>Priya Chandra*, K.S. Ojha</i>
OL-18	Investigation of Optical and Structural Properties of Hydrothermally Synthesized MnS₂ Dichalcogenides <i>Ayushi Soni, Monalisha Swain, K. S. Ojha</i>
OL-19	Structural and Optical Properties of Ti doped Chromium Oxide Nanoparticles <i>Kajol Taiwade, Vivek Chandel, Abhinav Bhargav and Fozia Z. Haque</i>
OL-20	Hydrogenation of Cyclohexene using an Immobilized Pd(II) Complex of Substituted Benzimidazole on a Polymer Support. <i>Roopashree B, Shilpa M L, Gayathri V</i>
OL-21	Impact of Surfactant on Structural, Morphological, Electrical, and Biological Properties of Polypyrrole and its Composites <i>Kathyayani D and Pavithra S</i>
OL-22	Microstructural Evolution and Crystallographic Correlations of Martensitic Steel Bearings used in Space Applications <i>Jalaja K, L Y Naidu, Sushant K Manwatkar, R K Gupta, Satish Kumar Singh, Govind</i>
2. Materials for Energy Conversion and Storage	
OL-23	Banana Leaves Derived Carbon Nanostructure Embedded Cobalt Nanoparticles as Catalyst for Oxygen and Hydrogen Generation <i>Sarvesh Kumar, Balaram Sahoo</i>
OL-24	Quantum-Confined CeO₂ Quantum Dots on Activated Carbon Cloth for Selective Electrochemical Reduction of CO₂ to Formic Acid <i>Hemavathi M., Chob singh, Arvind H. Jadhav</i>
OL-25	Metal-modulated Spinel Bimetallic Oxides Microspheres as an Efficient Electrode Material for Selective Electrochemical Reduction of Carbon dioxide into Formic Acid <i>Akshay Gandigawad, Rohan Magadum, Arvind H. Jadhav</i>
OL-26	Urchin-like Sulfur-Doped Nickel Hydroxide Anchored on Nickel Foam for Enhanced Electrochemical CO₂ Reduction into Value-Added Product <i>Chob Singh, Hemavathi M., Arvind H. Jadhav</i>

OL-27	Thermal Treatment CoFe Prussian Blue Analogues for High-Performance Water Electrolysis <i>Gidderappa, K Sudhakara Prasad</i>
OL-28	Atmospheric Plasma Sprayed Co-Doped GDC Electrolyte for Metal Supported - Solid Oxide Fuel Cell <i>J. K Adithya, R. Sujal, S. Senthil Kumar S. T. Aruna</i>
OL-29	Effect of Substrate on V₂O₅ and Zinc Ion Modulated Hydrated V₂O₅ for High Performance Aqueous Zinc Ion Batteries <i>P. Vipin Kumar, Anagha P. Vincent, B. S. Nishchith, Ravikumar T, S. G. Bubbly, S. B. Gudennavar</i>
OL-30	NiFe-MOF as a Noble-Metal-Free Catalyst for Enhanced ORR Performance in Alkaline Media <i>Mopuri Vijaya Shiny, Machireddy Narendra Reddy, Loka Subramanyam Sarma</i>
OL-31	Biomass Derived Porous Carbon as Cathode Material for Long Cycling Aqueous Zinc-Ion Hybrid Supercapacitors. <i>Naveen S Reddy and Debasis Ghosh</i>
OL-32	Investigation of Electrochemical Energy Storage Properties of Nano-Structured NdFeO₃ <i>Nilesh Chougala, A. S. Patil, Sameer Kulkarni and Shidaling Matteppanavar</i>
OL-33	Reversible Al³⁺ Ion Insertion in Tungsten Trioxide (WO₃) for Aqueous Aluminum-Ion Battery <i>Homen Lahan and Shyamal K. Das</i>
OL-34	Cannon Ball Fruit Bark derived Porous Carbon for High Energy Density Supercapacitor Applications <i>Ajeesh KS, Sajitha TS, Narasimman R, Bibin John, Vijayalakshmi KP</i>
OL-35	Electrochemical Evaluation and Synergistic Effect of Mixed Metal Oxides (CeVO₄/CeO₂) as Electrodes for Hybrid Supercapacitors <i>Usharani S R, R Hari Krishna, Chandra Prabha M N, Bhargavi Vadappi</i>
OL-36	Boosting the Charge Storage Efficiency of Tellurium Nanopuzzles using Redox-Additives <i>CM Harish, K.A.Saraswathi, Kalagadda Venkateswara Rao</i>
3. Semiconductor Devices and Display Materials	
OL-37	Luminescent Properties Tb³⁺ Doped Tungstate Phosphors <i>Kiran R, S Masilla Moses Kennedy, Princy A, M I Sayyed, Sudha D Kamath</i>
OL-38	Ultrafast Nonlinear Optical Properties of Silver Nanoparticles embedded Borotellurite Glasses for All Optical Switching and Limiting Applications <i>Priyanka. V. Ganji, Sivasankara Reddy, U. Mahaboob Pasha</i>
4. Electroceramic, Smart and High Temperature Materials and Applications	
OL-39	BiFeO₃-PbTiO₃ Nanoparticles Near Morphotropic Phase Boundary <i>Jishor E. K., Sujoy Saha</i>

OL-40	Development of Yb₂Si₂O₇ – Graphite Abradable Coating by Plasma Spraying for Aerospace Application <i>Anjana G, N. Balaji S. Senthil Kumar, S.T. Aruna</i>
OL-41	Grain Size and Annealing Treatment Induced Structural Phase Transformation Behavior of BiFeO₃-PbTiO₃ Ferroelectrics <i>Digvijay Narayan Singh, Ram Prakash Singh, Rajeev Ranjan</i>
5. Biomaterials, Bioengineering and Food Technology	
OL-42	Silk Sericin-Based Glycerol Plasticized PVA Films Enriched with <i>Curcuma longa</i> Extract for Effective Wound Healing <i>Devipriya Vasudevan, D. Sangeetha</i>
OL-43	Toward Sustainable Food Packaging: Safety and Performance Evaluation of Nanoparticle-Embedded Biopolymers <i>Jasline Joseph, Rubalya Valentina Sathianathan</i>
OL-44	Formulation and in vivo assessment of a novel Mouthrinse of <i>Coleus Amboinicus</i> in Chronic Periodontitis Patients with Diabetes Mellitus <i>M K Akhila, Ashwini. S, Greeshma C, Mahantesha S, Deveswaran Raja, Soumya Sajjan</i>
OL-45	Biomass Derived Carbon Quantum Dots Reinforced PVA/Pectin Composites for Eco-friendly, Biodegradable Food Packaging Application <i>Geethanjali Bijoy, D. Sangeetha</i>
OL-46	Formulation of Novel Chair-Side Anti-Microbial System and its Evaluation in Dental Operatories- A Pilot Study <i>Prakash Punj, Lavanya R, Greeshma C, Tushar Shaw</i>
OL-47	Eco-Friendly Oil–Water Separation by Fabrication of PLA and phycocyanin Electrospun Nanofiber Matrix <i>Mansi Thorat, Balasubramanian Kandasubramanian Manisha Singh</i>
OL-48	Optical and Biological Characterization of Smart Polymer-Based Carriers for Nano-Gold and Allogenic PRP in Dental Tissue Regeneration <i>Ashmitha Kishan Shetty, Suraksha Shetty, Serene Joy, Anbu Jayaraman, Rajamanickam Deveswaran, Sowmya S V, Dominic Augustine, Rutuja Biradar Dimple Sharma, Diksha Priyadarshini, Devi Priya Pesala, Devika Devarajan</i>
OL-49	Arktos: A Simple Tool for the Design of Polyhedral DNA Nanostructures <i>Harshitha Balaji, Anish Hemanth Samprathi, Rakshita Sukruth Kolipakala, Pushya Pradeep, Deepesh Nagarajan</i>
OL-50	Perusal of Silk-Fibroin Membrane as a Wound Healing Matrix over Palatal Donor site in Free Gingival Graft- A Case series. <i>Jyoti T naik, Rashmi paramashivaiah, M L V Prabhuji</i>
OL-51	Preparation and Characterization of Hydroxyethyl Cellulose/Cellulose Nanofiber Films Containing Boron-Infused Mica Particles and Assessment of its Antibacterial Activity for Anticariogenic Applications <i>Lalitha S Jairam, Akshatha Chandrashekar, Sivaranjani Gali, Deveswaran R^d, Akshay Arjun, T. Niranjana Prabhu</i>

OL-52	Peering in to the PRF world: Comparative Analysis of Structural and Elemental Profile of L-PRF vs T-PRF using Inductively Coupled Plasma – Optical Emission Spectrometry <i>Arigela Sai Vamsi, Aysha Jebin, Prabhuji Mlv</i>
OL-53	Cell Viability, Wound Healing and Osteogenic Potential of Partially Demineralized Tooth Matrix Combined with Injectable- Platelet Rich Fibrin: In –Vitro Analysis <i>Harshitha Gowda Banglore Hanumanthe, Ravishankar Krishna, Srikari Srinivasan</i> <i>Harshitha Gowda Banglore Hanumanthe</i>
OL-54	Fabrication of Nanophosphor Embedded Nanoemulsion-Coated Histopathology Slides for Optical Differentiation for Oral Cancer <i>Dominic Augustine, Sowmya SV, Premakumar HB, T. Niranjana Prabhu, Akshay Arjun, Clement D Wilfred Divya Puttegowda, M.V Diya, Taha Siddiqui, Shreya Subramanya, Sonali Shaw, Subramanya Vaidya</i>
OL-55	From Binding to Breakage: Probing the Bio-Nano Interface of Cerium Sulfide Nano Particles and DNA <i>Farhat Afsar, Chandra Prabha M N, R Hari Krishna</i>
OL-56	Enhancement of Flexural and Compressive Strength of Methacrylate-Based Composites through Glass Fiber Reinforcement <i>Pushpanjali K, Nithin Shetty, Mukul Saini, Niharika N, Prajwal G C, Nisarga Nayak T C, M Shahid</i>
OL-57	Assessment of Cytotoxicity of a Novel Pulp Stone Decalcifying Agent: An in vitro Study <i>Prabhu Vivek Ashok, Nithin Shetty, Shruthi Nagaraja, Poornima Ramesh, Dinesh K, Kavimalar Ravichandran</i>
OL-58	Osteoconductive Electrospun PLA-TCP Bioactive Scaffold with Antioxidant Property, An in vitro Analysis <i>Sanil Narayanan, Balasubramanian Kandasubramanian, Payal Varma, Manisha Singh</i>
OL-59	Daidzein-Infused PLGA/Chitosan/β-TCP Composite Scaffold for Osteoporotic Bone Regeneration: An Integrated <i>In Silico</i> and <i>In Vitro</i> Approach <i>Saranya Srinivasan, Ashwathi Vijayalekha, Ashok Kumar Pandurangan</i>
OL-60	Biodegradable PLA-Spirulina Electrospun Nanofiber Membranes for Oil-Water Separation <i>Snehal Chavan^a, Balasubramanian Kandasubramanian^{b*}, Manisha Singh^b, Payal Varma</i>
OL-61	Evaluation of Antiproliferative Properties of CoMnZn-Fe₂O₄ Ferrite Nanoparticles in Colorectal Cancer Cells <i>Venkatesha Narayanaswamy, Bilal Rah, Imaddin A. Al-Omari, Alexander Kamzin, Hafsa Khurshid, Jibran Sualeh Muhammad, Ihab M. Obaidat and Bashar Issa</i>
OL-62	Comparison of Titanium-Prepared Platelet-Rich Fibrin and Connective Tissue Graft in Papilla Reconstruction: A Randomized Controlled Trial <i>Amrutha Rao, Bhavya B</i>
OL-63	Structural Characteristics and Thermal Properties of Calcium Fluoride Doped Bioactive Glasses <i>Harish Madival, Asha Rajiv</i>

OL-64	Bioactive Hydrogel Films from PVA and Spirulina for Smart and Safe Food Packaging <i>Sarah Barfe, Balasubramanian Kandasubramanian, Payal Varma</i>
OL-65	Preparation and Evaluation of Effect of Banana and Potato Peel Based Membranes on Shelf Life of Bakery Products <i>Harshitha B. R., Ashwini M., Geeta D Goudar, Archana G Lamdande, Ashok M. Sajjan, Bipin S. Chikkatti, Sharanappa Achappa and Nagaraj R. Banapurmath</i>
6. Computational Techniques	
OL-66	Genistin in Digital Pipeline: Targeting PI3K-Mtor Pathway against Ovarian Cancer Through Computational Approach <i>Mangala Shenoy K, Suvarna G Kini</i>
OL-67	Development of a Modular AI Framework for Multi-Defect Detection and Human-Guided Additive Manufacturing <i>Kritika Tripathi, Balasubramanian Kandasubramanian</i>
OL-68	AI-Powered Detection of Interlayer Defects in Polyester Additive Manufacturing via Microscopy Imaging <i>Aaisha Bhura, Balasubramanian Kandasubramanian, Kshitija Vaidya</i>
OL-69	Integrating AI and ML into Smart Education: A Synthesis of Global Trends and Implications for the Indian Education System <i>Hrishikesh K R, Jagan Mohan Gowda L M, Akash M N, Bindushree S M, Sahana P Shankar</i>
OL-70	DFT Coupled with Isothermal DSC for Investigating Cold Crystallization Behavior of PPS <i>Gaurav Jadhav, Kshitija Vaidya, Balasubramanian Kandasubramanian</i>