| Day 1: February 22, 2024 |  |  |   |
|--------------------------|--|--|---|
| 8:30-9:30                | Registration (Auditorium)  |  |   |
| 9:30-10:00               | Inauguration (30 min)  |  |   |
| 10:05-10:40              | Chief Guest: Prof. A. B. Pandit, ICT Mumbai, INDIA Title: Progress and Nature  |  |   |
| 10:40-11:10              | High Tea break (30 min)  |  |   |
| Session-1: Parallel 7    | Technical Sessions (Auditorium)  |  |   |
| Session Chair            | Prof. Chinmay Ghoroi, IIT Gandhinagar, INDIA   |  |   |
| Session Co-Chair         | Prof. B. K. Chudasama, DSPMS, TIET, Patiala, INDIA   |  |   |
| 11:10-11:40              | Keynote-1: Prof. Animesh Jha, University of Leeds, UK Title: Semiconductor Doped Quantum dot Glass Structures for Solar Pho  | otocatalysis and Photot                          | hermal Applications   |
| 11:45-12:15              | Keynote-2: Prof. Fulvia Chiampo, Politecnico di Torino, ITALY Title: Wastes from crops and livestock as a methane resource: The role of engineering in the whole supply chain  |  |   |
| 12:20-12:50              | Keynote-3: Prof. S. Bedi, University of Waterloo, CANADA   |  |   |
| 12:55-13-25              | Keynote-4: Dr. Prhashanna Ammu, Mondelez International, USA Title: Circularity of Plastics in Packaging: A Brand Owners' perspective   |  |   |
| 13:25-14:25              | Lunch break (60 min)   |  |   |
| Session-2: Parallel T    | Γechnical Sessions (LT-201)  | Session-3: Parallel T                            | Fechnical Sessions (LT-202)   |
| Theme: Advancements      | s in Energy Engineering (AEE)  | Theme: Sustainable Environmental Solutions (SES) |   |
| Session Chair            | Dr. Ashutosh Yadav, IIT Jammu, INDIA   | Session Chair                                    | Dr. Ravi Kumar Arun, IIT Jammu, INDIA   |
| Session Co-Chair         | Prof. R. K. Gupta, DCHED, TIET, Patiala, INDIA   | Session Co-Chair                                 | Prof. H. Bhunia, DCHED, TIET, Patiala, INDIA  |
| 14:30-15:00              | Keynote 5: Jhumma Sadhukhan, University of Surrey, UK Title: Build biorefineries and let the natural world drive the economy   | 14:30-15:00                                      | Keynote 6: Prof. Anil Verma, IIT Delhi, INDIA<br>Title: Electrochemical Energy Conversion and Storage Technologies  |
|                          | Oral 1-4 (10 min each)   | 15:05-16:05                                      | Oral 5-9 (10 min each)  |
| 15:05-16:05              | Paper ID: 32; "Performance analysis of hybrid solar desalination system with thermal storage materials at different water depth"; Authors: Mukesh Kumar, Dhananjay Singh, Suresh Kumar Patel, Ravi Kumar Sonwany,Balendu Shekher Giri,Sunita Singh |  | Paper ID: 19; Hydrogen Embrittlement: Mechanisms, Impacts, and<br>Remedial Measures; Authors: Deepak Juneja, Satish Kumar Sharma  |
|                          | Paper ID: 98; Intensified production of levulinic acid as the building block from the sugars; Authors: Ketaki S. Nalawade, Parag R. Gogate   |  | Paper ID: 28; An Investigation for Malathion Pesticide Detection Using<br>Pure Cu Electrode Leading to Electrochemical Sensor; Authors: Ashirbad<br>Khuntia, Madhusree Kundu, Kamalakanta Mahapatra, Adhidesh Kumawat |
|                          | Paper ID: 101; Fabrication and Characterization of Shape-Stable<br>Composite Phase Change Materials Supported by Biomass-Derived   |  | Paper ID: 45; Advancing Sustainable Solutions: Harnessing Polyaniline/BiOCl/GO Ternary Nanocomposites for Solar-Powered   |

|                  | Activated Carbon for Energy Storage.; Authors: Sheetal Sharwan,<br>Bidyut Mazumdar, and Prerana Sikarwar   |               | Degradation of Organic Pollutant and Photocatalytic Hydrogen<br>Generation; Authors: Pritam Hait, Rajeev Mehta, Soumen Basu   |
|------------------|--|---------------|---|
|                  | Paper ID: 206; An experimental study of the performance of passive type single basin double slope solar still; Authors: Mukesh Kumar, Suresh Kumar Patel, Dhananjay Singh, Vinay Mishra, Avinash Chandra, Balendu Shekher Giri, Sunita Singh         |               | Paper ID: 70; Synthesis and Characterization of Biomass Derived<br>Activated Carbon-Based Sulfur Cathode for Lithium Sulfur Batteries;<br>Authors: Sakshi Tiwari, A. K. Poonia, Dharm Pal   |
|                  | Paper ID: 145; Bio-based Surfactant from Biofuels: Production and optimization using Response Surface Methodology; Authors: Neha Rawat, Aman Kumar Bhonsle, Parvez Alam, Serges Bruno Lemoupi Ngomade, Tushar Agarwal, Raj Kumar Singh, Neeraj Atray |               | Paper ID: 112; Development of composite biohydrogels using gellan gum and glucomannan, and their potential application in sustainable agriculture and controlled release of bioactives in the gut.; Authors: Somnath Basak, Rekha S. Singhal    |
| 16:05-16:25      | Tea break (20 min)   |               |   |
| 16:25-17:15      | Poster Session-1 (LT Block-First Floor)  |               |   |
| Session Chair    | Dr. Mrunalini Gaydhane, BITs, Goa, INDIA   |               |   |
| Session Co-Chair | Dr. Diptiman Choudhury, DSCBC, TIET, Patiala, INDIA  |               |   |
|                  | Poster (1-14)  |               |   |
|                  | Paper ID: 7; Efficiency of bacteria source for bio-stabilization of soil;<br>Authors: Shagun Ishara, Aditya Parihar, and M.S. Reddy  | - 16:25-17:15 | Paper ID: 31; g-C3N4 loaded Bimetallic bismuth oxide nanocomposite for photocatalytic degradation of toxic pollutants.; Authors: Priti Rohilla, Dr. Bonamali Pal, Dr. Raj Kumar Das   |
|                  | Paper ID: 8; Core-shell structure of reduced graphene oxide@Ag-TiO2 for photocatalytic H2O splitting and CH3OH dehydrogenation under UV light irradiation; Authors: Shikha Rani, Satnam Singh, Bonamali Pal  |               | Paper ID: 43; Effect of nano-modified epoxy on the bond behavior of old-<br>new concrete interface; Authors: Mandeep Kaur, Dr. Himanshu Chwala<br>and Dr. Naveen Kwatra   |
| 16:25-17:15      | Paper ID: 9; Comparison of machine learning models to predict the phase equilibrium of N2-CO2 system for cryogenic carbon capture; Authors: Emel V Kurian, Pavitra Sandilya  |               | Paper ID: 115; Heterogeneous Mn3O4/CuO Interface for Boosted Oxygen Evolution Reaction: A Comprehensive Study; Authors: Sachin Pundir, Abhishek Chandel, Piyush Sharma, O.P. Pandey   |
|                  | Paper ID: 11; Optimal selection of energy storage medium for cryogenic energy recovery using a multicriteria-based decision analysis; Authors: Chamarthi Bharat Surya, Pavitra Sandilya  |               | Paper ID: 116; Bacterial Ingenuity: Synthesis of Rhamnolipid<br>Biosurfactant Utilizing Glucose as a Growth Enhancer and Waste Engine<br>Oil as Economical Substrates by a Non-Pathogenic Bacterium; Authors:<br>MOHAN JUJARU AND DR. AMIT JAIN |
|                  | Paper ID: 15; Detection of H2S Gas Using Metal-Decorated and Metal-<br>Doped Graphene Using Density Functional Theory; Authors: Diya<br>Mehta and Robin Singla   |               | Paper ID: 117; Beyond Graphene: Novel Perspective on 2D MBene structure; Authors: Monika, Piyush Sharma, and O.P. Pandey  |
|                  | Paper ID: 17; Agro-Food Waste-Derived Bioglasses: Engineered<br>Structures for Optimal Bone Regeneration; Authors: Navneet Kaur<br>Mattu, Kulvir Singh   |               | Paper ID: 119; Antibacterial activity investigation of ZnO-Ag nanocomposites prepared by thermal decomposition method against E. coli and S. aureus; Authors: Rahul Goyal, Partha Roy, P. Jeevanandam   |

|   | Paper ID: 25; Synthesis and application of bio-adsorbent for the removal of Tetracycline (TTC) antibiotics from its aqueous solution:  |   |   |
|---|--|---|---|
|   | A Equilibrium kinetic and thermodynamic study; Authors: Ashutosh   |   |   |
| 19:00-22:00                                     | Conference/Gala Dinner   |   |   |
| Day 2: Februar                                  | y 23, 2024   |   |   |
| 8:30-9:00                                       | Registration (LT-201)  |   |   |
| Session-4: Parallel Technical Sessions (LT-201) |  | Session-5: Parallel Technical Sessions (LT-202) |   |
|   | Theme: Materials in Engineering (MAT)  | Theme: Sustainable E                            | Environmental Solutions (SES)   |
| Session Chair                                   | Dr. Sarang P. Gumfekar, IIT Ropar  | Session Chair                                   | Dr. Manish Kumar Dhiman, NIT Hamirpur, INDIA  |
| Session Co-Chair                                | Dr. Amit Dhir, DEE, TIET, Patiala, INDIA   | Session Co-Chair                                | Prof. Anoop Verma, DEE, TIET, Patiala, INDIA  |
| 9:00-9:30                                       | Keynote 7: Dr. Prasun Roy, CFEES, DRDO, Delhi, INDIA<br>Title: Protective coating for mitigation of blast effects  | 9:00-9:30                                       | Keynote 9: Prof. V.C. Srivastava, IIT Roorkee, INDIA  |
| 9:35-10:05                                      | Keynote 8: Dr. Bhanu P. Singh, NPL, Delhi, INDIA Title: Carbon Nanotube Macroassemblies for Engineering Applications   | 9:35-10:05                                      | Keynote 10: Prof. Chinmay Ghoroi, IIT Gandhinagar, INDIA<br>Title: Impact of Atmospheric Particulate Matter on Energy Transition:<br>Demystifying Solar PV Soiling Loss and its Mitigations   |
|   | Oral 10-14 (10 min each)   |   | Oral 15-19 (10 min each)  |
|   | Paper ID: 21; Synthesis of Coal-derived Graphene oxide and its<br>Application in Glass-fiber based Polymer Composites for Improved<br>Mechanical Performance; Authors: Anushka Garg, Soumen Basu,<br>Rajeev Mehta, Roop L. Mahajan | 10:05-11:05                                     | Paper ID: 70; Synthesis and Characterization of Biomass Derived<br>Activated Carbon-Based Sulfur Cathode for Lithium Sulfur Batteries;<br>Authors: Sakshi Tiwari, A. K. Poonia, Dharm Pal   |
|   | Paper ID: 69; Fabrication and characterization of graphene-<br>reinforced MMC by FSP for Lightning Strike Protection of aircraft;<br>Authors: Anoop Singh, Dr Satish Kumar Sharma, Dr. Ajay Batish                                 |   | Paper ID: 89; Development of epoxy/flyash composites containing<br>Halloysite nanotubes: Thermal stability analysis and degradation kinetic;<br>Authors: Abrar, Ahamad, Pradeep Kumar, Brajesh Kumar                                    |
| 10:05-11:05                                     | Paper ID: 73; State-of-the-art review on Rheology of Styrene-<br>Butadiene-Styrene modified bitumen; Authors: Shubham Bansal,<br>Vivek Gupta, Tanuj Chopra, Rajeev Mehta   |   | Paper ID: 99; Alkaline extraction of phenolics from rice straw and their characterization; Authors: Harmeet Kaur, Dinesh Goyal  |
|   | Paper ID: 91; Styrene-Butadiene-Styrene polymer modified bitumen:<br>A review on compatibility and physico-chemical properties; Authors:<br>Shubham Bansal, Vivek Gupta, Tanuj Chopra, Rajeev Mehta                                |   | Paper ID: 100; Optimizing p-Nitrophenol (PNP) Degradation with Iron-<br>Doped Bismuth and Tungsten Photocatalyst: Exploring Water Matrix<br>Effects for Enhanced Performance; Authors: Manmeet Kaur, Dr. Amit Dhir,<br>Dr. Shilpi Verma |
|   | Paper ID: 93; Development and thermomechanical analysis of hybrid epoxy nanocomposite reinforced with reduced graphene oxide and HNT; Authors: Archana Arya, Pradeep Kumar, Avinash Chandra  |   | Paper ID: 113; Synthesis of degradable copolymer through chemical sequestration of carbon dioxide using salcomine complexes.; Authors: Akanksha Ranade, Prof. Rajeev Mehta, Prof. Amjad Ali   |
| 11:05-11:25                                     | Tea break (20 min)   |   |   |
| Session-6: Paralle                              | l Technical Sessions (LT-201)  | Session-7: Parallel                             | Technical Sessions (LT-202)   |

| Theme: Modeling and Simulation of Processes (MSP) |  | Theme: Sustainable Environmental Solutions (SES) |  |
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| Session Chair                                     | Dr. Neelkanth Nirmalkar, IIT Ropar, INDIA  | Session Chair                                    | Dr. Shushil Kumar, MLNIT, Allahabad, INDIA   |
| Session Co-Chair                                  | Prof. S. K. Ahuja, DCHED, TIET, Patiala, INDIA   | Session Co-Chair                                 | Prof. D. N. Ratha, DCED, TIET, Patiala, INDIA  |
| 11:25-11:55                                       | Keynote 11: Prof. Amit Dhiman, IIT Roorkee, INDIA;<br>Title: Computational Fluid Dynamics with Case Studies  | 11:25-11:55                                      | Keynote 12: Dr. Snadip Patil, E-Spin NanoTech, Kanpur, INDIA; <i>Title:</i> Nanofiber Technology & its Commercial Applications: Future Start-Ups                                     |
|   | Oral 20-28 (10 min each)   | 12:00-12:30                                      | Keynote 18: Prof. P. R. Gogate, ICT Mumbai, INDIA Title: Intensified production of biofuels from sustainable raw materials using ultrasonic reactors                                 |
|   | Paper ID: 62; Aqueous Two-Phase Flow Dynamics in Millichannels;<br>Authors: Joseph Abhisheka Rao B, Babajan Bakthar Khan, Sunil<br>Kumar Thamida, Anil B. Vir  |  | Oral 29-33 (10 min each)   |
|   | Paper ID: 76; Mixed convective viscous dissipative flow of Casson hybrid nanofluid with variable thermal conductivity at the stagnation zone of a rotating sphere.; Authors: Tanvi Singla, Bhuvaneshvar Kumar, Sapna Sharma                              | 12:35-13:40                                      | Paper ID: 142; Fabrication and characterization of cost-effective ceramic membrane utilizing; Authors: Sandhya Khatri, Abhishek Keshav Sharan Saxena, A.B. Soni                      |
|   | Paper ID: 78; Numerical Investigations on the hydrodynamic force for a Janus Cylindrical particle; Authors: Manish Dhiman  |  | Paper ID: 147; Fungi-based Microbial Fuel Cells (MFCs) an alternative source of energy and waste management; Authors: Vaanie Godbole, Pankaj Gautam, Avinash Sharma, Manoj Kumar Pal |
|   | Paper ID: 80; Numerical investigation on an in-line array of trimmed annular finned tubes for weight reduction in a crossflow heat exchanger; Authors: Mohit Raje, Amit Dhiman   |  |  |
| 12:00-13:40                                       | Paper ID: 84; Identification of uniform thermodynamic equilibrium in tetrahedral liquids at liquid-liquid phase transition temperature; Authors: Arvind K. Gautam  |  | Paper ID: 160; Utilizing Kapok seed for Mn (II) removal from synthetic wastewater solution through adsorption; Authors: Mansi Sahu, V.K. Singh                                       |
|   | Paper ID: 183; Forced Convection heat transfer from confined circular/ semi-circular heaters and coolers with various orientations; Authors: Rajvinder Kaur, Sapna Sharma, Avinash Chandra   |  |  |
|   | Paper ID: 221; Effects of viscous dissipation, temperature dependent thermal conductivity and local thermal non-equilibrium on the heat transfer in a porous channel to Casson fluid; Authors: Rajvinder Kaur, Sapna Sharma, Avinash Chandra             |  | Paper ID: 176; Treatment Of Textile And Pharmaceutical Wastewater<br>Using Low-Cost Adsorbents For Single And Multi-Component Systems";<br>Authors: Umesh Kumar, Kesheo Prasad       |
|   | Paper ID: 209; Study of phase change materials in a spherical enclosure under periodic boundary conditions: Applications in thermal energy storage and heat management systems; Authors: Tanvi Singla, Sapna Sharma, Bhuvaneshvar Kumar, Avinash Chandra |  | Paper ID: 196; Advance Corrosion Resistant Coatings In Recent Era: A Review of Advances And Perspectives; Authors: Sonika Lamba1, Rajendra Vishwakarmaa*                             |
|   | Paper ID: 223; Use of spent ballast as a column material for enhancing load carrying capacity of soft clay bed: Numerical  |  | visitwakai maa   |

|  | Analysis; Authors: Srijan , Pooja Kharra , Kevin Somra , Gautam<br>Narula, Aditi Sharma   |   |   |  |
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| 13:40-14:30  | Lunch break   |   |   |  |
| Session-8: Paralle   | Session-8: Parallel Technical Sessions (LT-201) Session-9: Parallel Technical Sessions (LT-202)   |   |   |  |
| Theme: Applied Radiation Technology (ART) & Materials in Engineering (MAT) |   | Theme: AI, Machine                      | Learning, and Data Analytics in Process Design/Optimization (AML)   |  |
| Session Chair  | Prof. Amit Dhiman, IIT Roorkee, INDIA   | Session Chair                           | Dr. Chandi Sasmal, IIT Ropar, INDIA   |  |
| Session Co-Chair   | Prof. B. C. Mohanty, DPMS, TIET, Patiala, INDIA   | Session Co-Chair                        | Prof. S. S. Mallick, DME, TIET, Patiala, INDIA  |  |
| 14:30-15:00  | Keynote 13: Dr. Rajesh K. Upadhyay, IIT-BHU, Varanasi, INDIA<br>Title: Radioactive Particle Tracking Technique and Its Application on<br>Different Multiphase Flow Reactors   | 14:30-15:00                             | Keynote 14: Prof. Kishalay Mitra, IIT Hyderabad, INDIA; <i>Title: Scope of Machine Learning in Chemical Process Systems Engineering</i>   |  |
|  | Oral 34-39 (10 min each)  | 15:05-16:15                             | Oral 40-44 (10 min each)  |  |
| 15:05-16:15  | Paper ID: 123; Surface modification of titanium alloy using graphene oxide for biomedical applications; Authors: Pawandeep kaur, Jyotsana Mehta, Dinesh Goyal   |   | Paper ID: 42; GUI development for Data Treatment in Radiotracer based RTD Analysis of Industrial Pulp digesters using Data Science; Authors: Vibhuti Sharma, Avinash Chandra, Sharad Saxena, Anu Bajaj                          |  |
|  | Paper ID: 139; Fabrication and characteristic analysis of Graphene oxide-based Humidity sensor with an aspect for moisture sensing in transformer oil; Authors: Vikash Ranjan, Shailesh Kumar, Prasenjit Basak            |   | Paper ID: 44; Prediction of Residence Time Distribution (RTD) models using Machine Learning Techniques for Continuous Flow Pulping Digester; Authors: Vibhuti Sharma, Sharad Saxena, Avinash Chandra, and Anu Bajaj             |  |
|  | Paper ID: 181; Synthesis and characterization of novel crystalline polyaniline/Kaolin composite; Authors: Vineeta gautam, Umesh kumar, Kesheo Prasad  |   | Paper ID: 203; "ENELP: An Ensemble Node Embedding based Link<br>Prediction in Protein-Protein Interaction Networks by Attributed Graph<br>Embedding"; Authors: Mukesh Kumar, Dharmendra Kumar, Sushma<br>Kumari, Biswajit Sahoo |  |
|  | Paper ID: 177; Synthesis of nano membranous composite material based on Polyaniline/MWCNTs/Cellulose acetate for selective electrochemical detection of Ascorbic Acid and Catechol"; Authors: Vineeta Gautam, Umesh Kumar |   | Paper ID: 79; Blockchain Technology: Catalyzing Sustainability in<br>Chemical Industry Processes and Practices; Authors: Sonal Saxena, Seema<br>Bawa, Rajiv Kumar   |  |
|  | Paper ID: 111; Comparative study on various length scale and chirality of single walled carbon nanotubes by using molecular simulation approach; Authors: Arvind K. Gautam, Rahul Saha, and Manish Kumar Dhiman           |   | Paper ID: 30; LiFi over WiFi as a viable and health cognizant indoor<br>Communication Technology; Authors: Anushka, Dr. Sharad Saxena, Dr.<br>Rajesh Kumar  |  |
|  | Paper ID: 137; Soft, flexible and skin-compatible electrodes for monitoring electrophysiological parameters; Authors: Sunita Mehta, Purva Singal, Sunita Mishra   |   |   |  |
| 16:15-16:35  | Tea break (20 min)  |   |   |  |
| 16:35-17:15  | Poster Session-2 (LT Block-First Floor)   | Poster Session-2 (LT Block-First Floor) |   |  |
| Session Chair  | Dr. A. K. Tiwari, Dr. BRANIT, Jalandhar, INDIA  |   |   |  |

| Session Co-Chair  | Dr. Vivek Gupta, DCED, TIET, Patiala, INDIA   |  |  |  |  |
|-------------------|---|--|--|--|--|
|                   | Poster (14-27)  |  |  |  |  |
| 16:35-17:15       | Paper ID: 120; Artificial Intelligence: scope and demand in Bioprocess; Authors: Naincy Tiwari, Dr. Anand Kumar Pandey  | - 16:35-17:15                                | Paper ID: 138; Sustainable Integration of Rice Stubble Biochar in Cementitious Composites: A Novel Approach to Mitigate Stubble Burning Impact; Authors: Sarmad Rashid, Dr. Arpit Goyal, Dr. A.B Danie Roy, Dr. Manpreet Singh |  |  |
|                   | Paper ID: 121; Microbial Engineering:A Boon to Enhance Food<br>Sustainability; Authors: Prachi Paharwar   |  | Paper ID: 180; A Green approach towards synthesis and waste management of Biological MOF for drug delivery applications; Authors: Khushboo Yadava, Pawan Kumar   |  |  |
|                   | Paper ID: 122; Bioelectrochemical systems can reduce antibiotic-<br>resistant bacteria in soil ecosystems: Emerging approaches for soil<br>remediation; Authors: Sakshi Singh |  | Paper ID: 187; Waste to Wealth: Carbon coated ZrSiO4 Nanocomposites from Recycled Plastic and natural Zircon For oxygen Evolution Catalysis; Authors: Abhishek Chandel and O P Pandey  |  |  |
|                   | Paper ID: 124; Artificial Intelligence: role and significance in pathway designing; Authors: Dr. Anand Kumar Pandey, Alsaifiya Choudhary                                      |  | Paper ID: 213; A comprehensive study on rooftop rainwater harvesting and post-harvest treatment using Acoustic and Hydrodynamic Cavitation;  |  |  |
|                   | Paper ID: 125; Bioprocess Industries: The Future with AI/ML and Data Mining; Authors: Rudrakshi Mishra, Anand Kumar Pandey.   |  | Authors: Aniruddha Pandit, Ketan Desai   |  |  |
|                   | Paper ID: 132; Approaches for The Synthesis of Silicon<br>Nanoparticles; Authors: Ravinder Pal Singh and Mohit Agarwal  |  | Paper ID: 217; Synergetic Effect of Self-Healing Tung-Oil Microcapsules with Nano-Clay in Epoxy Coatings for Corrosion Inhibition; Authors: Nikhil Sharma, Dr. Shruti Sharma, Dr. Sandeep Kumar Sharma, Dr. Rajeev Mehta       |  |  |
|                   | Paper ID: 134; Sustainable trends in the development of firefighting foam; Authors: Pragya Malik, Durgesh Nandini, Bijay P. Tripathi  |  |  |  |  |
| Day 3: February 2 | 4, 2024   |  |  |  |  |
| 8:30-9:00         | Registration (LT-201)   |  |  |  |  |
| Session-10: Paral | lel Technical Sessions (LT-201)   | Session-11: Parall                           | lel Technical Sessions (LT-202)  |  |  |
| Theme: Chemical & | Process Engineering (CPE)   | Theme: Bioprocess and Food Engineering (BFE) |  |  |  |
| Session Chair     | Dr. A. K. Gautam, NIT Hamirpur, INDIA   | Session Chair                                | Dr. R. K. Arya, Dr. BRANIT, Jalandhar, INDIA   |  |  |
| Session Co-Chair  | Dr. Rakesh Gupta, DCHED, TIET, Patiala, INDIA   | Session Co-Chair                             | Dr. Sapna Sharma, DOM, TIET, Patiala, INDIA  |  |  |
| 9:00-9:30         | Keynote 15: Dr. Sachin Kimar, SSS-NIBE Kapurthala, INDIA<br>Title: R&D Advancement in Biogas Technology for Sustainable<br>Development  | 9:00-9:30                                    | Invited Talk 2: Manish K Dhiman, NIT Hamirpur, INDIA Title: Modelling of Gas Explosion: #Hydrogen  |  |  |
| 9:35-10:05        | Keynote 16: Prof. S.K. Kansal, SSBSCT PU Chandigarh, INDIA<br>Title: Industrial and Municipal Wastewater- Generation and<br>Treatment   | 9:35-10:05                                   | Invited Talk 3: Dr. Ashutosh Yadav, IIT Jammu, INDIA Title: Machine Learning-based CFD Modeling of Multiphase Reactors   |  |  |
| 10:10-10:30       | Invited Talk 1: Dr. S. K. Behera, VIT Vellore, INDIA  | 10:05-12:00                                  | Oral 53-61 (10 min each)   |  |  |

|             | Title: Industrial Symbiosis – An excellent platform for decoupling industrial growth from environmental degradation   |   |
|-------------|---|---|
| 10:35-12:00 | Oral 45-52 (10 min each)  | Paper ID: 67; Effect of Drying on Extraction of Anthocyanins from Syzygium cumini (Jamun); Authors: Amritpreet Kaur, Darshanjot Kaur, Ovais Shafiq Qadri  |
|             | Paper ID: 24; Study of Interaction of Serum Albumin with Pharmacological Drugs Using Isothermal Titration Calorimetry Technique; Authors: Vani Arora, Apoorva Pathania, Harmandeep Kour, Anu Radha Pathania                                     | Paper ID: 95; Atmospheric plasma mediated quality changes in finger millet starch and its mechanism; Authors: Parinder Kaur, Prof Uday S. Annapure  |
|             | Paper ID: 83; Ultrasound-assisted cooling crystallization of ciprofloxacin; Authors: Yagna S. Hirpara, Parag R. Gogate  | Paper ID: 110; Extraction of mango (Mangifera indica) seed kernel starch: Process optimization for extraction using response surface methodology (RSM) and its comparative characterization with commercial corn (Zea mays) starch.; Authors: Bharat Singh Irom, Uday S. Annapure, Jyoti S. Gokhale |
|             | Paper ID: 94; Unlocking the potential of cashew apples: Bioactives preservation and kinetic modelling; Authors: Vikramaditya R. Shirsat; Prakash D. Vaidya; Vishwanath H. Dalvi; Rekha S. Singhal; Anil K. Kelkar; Jyeshtharaj B. Joshi         | Paper ID: 103; "Determination of the bovine serum albumin subjected to microwave interaction by liquid chromatographytandem mass spectrometry"; Authors: Dr. Sushma Kumari, Mr. Dharmendra Kumar, Dr. Sunil Kumar Singla  |
|             | Paper ID: 170; Greener Production of Styrene via Low-<br>Temperature Dehydration of Phenethyl Alcohol over Co-<br>Supported P/ZrO2; Authors: Neha Dhiman  | Paper ID: 157; Biosurfactant Production by free and immobilized cells of P.aeruginosa using waste engine oil; Authors: Mohan Jujaru, Kajol Pradhan, Shailee Gaur, Sushil Kumar and Amit Jain  |
|             | Paper ID: 28; An Investigation for Malathion Pesticide Detection Using Pure Cu Electrode Leading to Electrochemical Sensor; Authors: Ashirbad Khuntia, Madhusree Kundu, Kamalakanta Mahapatra, Adhidesh Kumawat                                 | Paper ID: 12; A Technical Analysis of Biofuel Production from<br>Dairy Waste Sludge for Sustainable Environment; Authors: Rohit<br>Pathak, Sandeep Singh, Inderpreet Singh Ahuja  |
|             | Paper ID: 218; Computational evaluation of optimum tumor size-dependent MNP dose for realistic breast tumor models with different injection strategies in magnetic hyperthermia; Authors: Sandeep Nain, Dr. Neeraj Kumar, Dr. Pramod Kumar Avti | Paper ID: 220; Comparative analysis on the effect of aeration and agitation on quality and quantity of algal biomass for its further valorization to value-added products; Authors: Bimalpreet Singh, Amit Dhir and Prangya Ranjan Rout   |
|             | Paper ID: 175; Techno-economic analysis for the innovative process of pre-treatment of paddy straw for biofuel production; Authors: Lalitha Shree, Dr. Anurag K. Tiwari, Dr. Sachin Kumar   | Paper ID: 149; Impact of Different Preprocessing Treatments on<br>The Germination of Bottle Gourd Seeds for the Application of<br>Hydroponic; Authors: Pranav Prakash Dr.Mohit Agarwal Dr.Amit<br>Munjal  |

|             | Paper ID: 150; Characterization and Morphological study of foulant in water-cooled heat exchanger of a fibre manufacturing industry; Authors: Gursimranjot Singh Mavi, Dr. Vineet Srivastava, Dr. Anoop Verma | Paper ID: 193; Effects of recycled SAW slag and the process parameters on the chemistry of stainless steel claddings; Authors: Jatinder Garg, Sonu Bala Garg, Kulwant Singh, Sunil Kumar Singla |
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| 12:00-12:20 | Tea break (20 min)  |   |
| 12:25-13:00 | Valedictory Session (LT-201)  |   |
| 13:00-14:00 | Lunch break   |   |