



BITS Pilani
Hyderabad Campus

VALORIZATION 2024

International Conference on Science & Technology Integration for Circular Economy



Program Schedule

DAY 1: Thursday 18th January 2024

Venue: Room No. G204/A

10:00 – 10:20 AM	Inauguration
10:20 – 10:30 AM	Tea Break and Group Photo
Scientific Session: 1 Chair: Prof. P. Sankar Ganesh Department of Biological Sciences, BITS Pilani, Hyderabad Campus Venue: Room No. G204/A and Online Link: https://meet.google.com/nfg-qrne-fhv	
10:30 – 11:00 AM	Prof. Thallada Bhaskar, CSIR-Indian Institute of Petroleum, Dehradun <i>Keynote Lecture: Opportunities and challenges in thermo-catalytic conversion of biomass</i>
11:00 – 11:30 AM	Dr. Debashish Ghosh, CSIR-Indian Institute of Petroleum, Dehradun <i>Invited Lecture 1: Bioprocess development for fuels, chemicals, and nutraceuticals: Building a biorefinery concept</i>
11:30 – 11:40 AM	Poulami Banerjee, CSIR-National Environmental Engineering Research Institute, Hyderabad Zonal Centre <i>VAL 01: Microplastic Monitoring in Urban Lakes of Southeastern India: Essential Insights and Foundations for Sustainable Waste Valorization</i>
11:40 – 11:50 AM	Satwika Das, National Institute of Technology, Warangal <i>VAL 02: Mixed food waste hydrolysate utilization for citramalic acid production using recombinant Pichia pastoris; a biorefinery approach</i>
11:50 AM – 12:00 PM	Dr. Ravi Kumar Dhavaleswarapu, Combustion Gasification & Propulsion Laboratory, Indian Institute of Science, Bangalore <i>VAL 03: Effect of pretreatment on various biomass feedstocks: a mass balance and clustering approach</i>
12:00 – 12:10 PM	Shalini Singh, CSIR- Indian Institute of Chemical Technology, Hyderabad <i>VAL 04: Conductive Material and External Poised Potential Influence on Acidogenesis and Methanogenesis</i>
12:10 – 12:20 PM	Hemapiya S, BITS Pilani, Hyderabad Campus <i>VAL 05: Efficiency Evaluation of the Activated Sludge Process for Antibiotic Removal from Raw Domestic Sewage</i>
12:20 – 12:30 PM	J Santhosh, CSIR- Indian Institute of Chemical Technology, Hyderabad <i>VAL 06: Biohythane (Bio-H-CNG) Production from Food waste in Continuous Mode Operation with Acidogenic and Methanogenic Integration</i>
12:30 – 12:40 PM	Shagun Sharma, National Institute of Technology, Warangal <i>VAL 07: Carotenoid production and extraction using bakery waste hydrolysate from newly isolated Rhodotorula mucilaginosa</i>
12:40 – 12:50 PM	Maddipatla Naga Sai Karthik, BITS Pilani, Hyderabad Campus <i>VAL 08: Enhancing Methane Yield through Co-Biomethanation of Food Waste and Parthenium hysterophorus</i>
12:50 – 01:00 PM	Sandhya Kumari Gupta, BITS Pilani, Hyderabad Campus <i>VAL 09: Microplastics in Domestic Sewage Sludge: Extraction, Identification, and Impact on Anaerobic Digestion Processes</i>
01:00 – 02:00 PM	Lunch Break

Scientific Session: 2 Chair: Dr. Chanchal Chakraborty Department of Chemistry, BITS Pilani, Hyderabad Campus Venue: Room No. G204/A and Online Link: https://meet.google.com/nfg-qrne-fhv	
02:00 – 02:30 PM	Prof. Tushar Jana, University of Hyderabad <i>Invited Lecture 2: Polymer Membrane: A Key Component in the Sustainable Energy Landscape</i>
02:30 – 02:40 PM	Damaraju Lakshmi Swetha, Vemgal Mounika, Dr. Syeda Amena Kausar, Telangana Mahila Viswavidyalayam <i>VAL 10: Chitin-based Membranes in Advancing Fuel Cell Technology</i>
02:40 – 02:50 PM	Anup Kumar Pradhan, BITS Pilani Hyderabad Campus <i>VAL 11: Platinum Nanostructure Based Electrode Material for Oxygen Electrocatalysis Impacting PEM Fuel Cell</i>
02:50 – 03:00 PM	Varshini, K. R. and Jyotsna R., Sri Venkateswara College of Engineering, Tamil Nadu <i>VAL 12: A novel perspective into the effect of fungal mycelia present in the bio-pretreated paddy straw on their enzymatic saccharification and optimization of process parameters</i>
03:00 – 03:10 PM	Vemula Smrithi, CSIR- Indian Institute of Chemical Technology, Hyderabad <i>VAL 13: Harnessing the Potential of Acidogenic Effluent for Enhanced Biogas Production</i>
03:10 – 03:20 PM	Jyotsna R., Sri Venkateswara College of Engineering, Tamil Nadu <i>VAL 14: A Novel Microfluidics-Based Technology for Polyethylene Terephthalate Waste Bioconversion into Poly-Beta Hydroxybutyrate (PHB)</i>
03:20 – 3:30 PM	Tea Break
Scientific Session: 3 Chair: Prof. Lavanya Suresh Department of Humanities and Social Sciences, BITS Pilani Hyderabad Campus Venue: Room No. G204/A and Online Link: https://meet.google.com/nfg-qrne-fhv	
03:00 – 03:30 PM	Dr. Advaita Rajendra, Indian Institute of Management, Sirmaur <i>Invited Lecture 3: Governing by (in)visibilising: A case of waste and waste-work</i>
03:30 – 03:40 PM	Dr. Himadri Borah, North Gauhati College, Assam <i>VAL 15: Impact of Pesticides on the Environment and Their Detection Using Biosensors</i>
03:40 – 03:50 PM	Sibin V Mathew, BITS Pilani Hyderabad Campus <i>VAL 16: Turbulent simulations of baffled stirred tank</i>
03:50 – 04:00 PM	Pratibha Kulkarni, Osmania University, Hyderabad <i>VAL 17: Valorisation by Recirculating Aquaculture system for green synthesis and sustainability</i>
04:00 – 04:10 PM	NVN Manognya, BITS Pilani Hyderabad Campus <i>VAL 18: Biogas Integration in Microgrid Energy Management: A Sustainable Approach for Community Independence</i>
04:10 – 04:20 PM	Navin R. T., Kongu Engineering College, Tamil Nadu <i>VAL 19: Study the Effect of Heterogeneous Catalytic Hydrothermal Liquefaction for Microalgae Species</i>
04:20 – 04:30 PM	Kasthuri S, PSG College of Arts & Science, Tamil Nadu <i>VAL 20: Comparative Analysis of Indigenous and Immobilized Enterobacter cloacae SK1 for in situ Lead Biosorption from Contaminated Foundry soil</i>
04:30 – 04:40 PM	P. Alekhya, Chaitanya Bharathi Institute of Technology, Hyderabad <i>VAL 21: Sensing the Unseen: Sensing and Remediation of Pollutants in Aqueous Solutions</i>
04:40 – 04:50 PM	Cheriyachan B Mattam, BITS Pilani, Hyderabad Campus <i>VAL 22: Politics of Waste Infrastructures in Upparpally, Thumkunta Municipality, HMDA, Telangana</i>
04:50 – 05:00 PM	Dhanush Chengal, Chaitanya Bharathi Institute of Technology, Hyderabad <i>VAL 23: Turning Trash into Treasure: Plant and Waste-Derived Nanomaterials for Agricultural Advancement</i>

Scientific Poster Presentations Chair: Dr. Ankur Bhattacharjee Department of Electrical and Electronics Engineering, BITS Pilani Hyderabad Campus Venue: G204/A (Corridor)	
10:30 AM – 4:30 PM	Pavithra Pari, Pramodha J., Sadhna R., Hemapriya S., P. Sankar Ganesh, BITS Pilani Hyderabad VAL 24: <i>Combating Global Energy Challenges Through Co-Biomethanation of Food Waste and Poultry Manure</i>
	Hemapriya S, Sneha Battacharjee, Aliza Hyder, Devi Lakshmi Mounika Akula, P. Sankar Ganesh, BITS Pilani Hyderabad Campus VAL 25: <i>Maximized Methane Recovery from Co-biomethanation of Food Waste and Sewage Sludge</i>
	Pavithra Pari, P. Sankar Ganesh, BITS Pilani Hyderabad Campus VAL 26: <i>Effect of Copper Cathode on Enhancing the Efficiency of Electrobiomethanogenesis</i>
	Priyanka Roy, Himanshi Dhar, Maria Leslie Kannath, Atish Kumar Behera, Hemapriya S, P. Sankar Ganesh, BITS Pilani Hyderabad Campus VAL 27: <i>Toxicological investigation of untreated and treated domestic sewage on Brassica nigra</i>
	Hemapriya S., P. Sankar Ganesh, BITS Pilani Hyderabad Campus VAL 28: <i>Investigating the Impact of External Additives during Food Waste Biomethanation</i>
	Sri Himaja Pamu, K. B. S Vashist, P. Sankar Ganesh, Satyapaul A. Singh, BITS Pilani Hyderabad Campus VAL 29: <i>Synergistic effect of noble metal (Pd, Rh, Pt, Ru, Ir) modified LaNiO₃ perovskite for photocatalytic water splitting</i>
END OF DAY 1	

DAY 2: Friday 19th January 2024 Venue: Room No. G204/A	
Scientific Session: 4 Chair: Dr. Ankur Bhattacharjee Department of Electrical and Electronics Engineering, BITS Pilani Hyderabad Campus Venue: Room No. G204/A and Online Link: https://meet.google.com/nfg-qrne-fhv	
10:00 – 10:10 AM	Mr. Avinash Kumar Jha, Harbin Institute of Technology, Harbin, China VAL 30: <i>Symbiotic Sustainability: Homoacetogenic Bacteria as Dual Agents for Carbon Reduction and Acetic Acid Generation</i>
10:10 – 10:20 AM	Kandi Mounika, BITS Pilani, Hyderabad campus VAL 31: <i>Design Of Electrical Integration of Biogas-Fed Fuel Cell-Based Energy System</i>
10:20 – 10:30 AM	Urvashi Soni, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh VAL 32: <i>Economic Viability of Utilizing Rice Husk-Derived Silicate for Biodiesel Production in diatom Amphora sp.</i>
10:30 – 10:40 AM	Durga K Prasad Gudavalli, BITS Pilani, Hyderabad Campus VAL 33: <i>Design of Intelligent Load Control and Energy Sharing of Peer-to-Peer Prosumer Microgrid</i>
10:40 – 11:10 AM	Dr. Sourov Ghosh, Reliance Industries Limited, Mumbai Invited Lecture 4: <i>Would hydrogen and fuel cells be the solution for the clean energy revolution? Prospects & Challenges</i>
11:10 – 11:40 AM	Dr. Tathagata Sarkar, Ernst & Young Invited Lecture 5: <i>Waste-to-Energy projects development and implementation: A case study at Nagaland, India</i>
11:40 – 11:50 AM	Tea Break

Scientific Session: 5 Chair: Dr. Satyapaul A. Singh Department of Chemical Engineering, BITS Pilani Hyderabad Campus Venue: Room No. G204/A and Online Link: https://meet.google.com/nfg-qrne-fhv	
11:50 AM – 12:20 PM	Dr. Mandapaka Ravi Kiran, IPE Visakhapatnam <i>Invited Lecture 6: Production of Olefins: Alternative to crude refining</i>
12:20 – 12:50 PM	Mr. P. S. Devraj, Khazyen System India Pvt. Ltd. <i>Invited Lecture 7: Waste to wealth</i>
12:50 – 01:00 PM	Sarvesh B., and Srinithi D., Kongu Engineering College, Tamil Nadu VAL 34: Synthesis of ZnO doped TiO₂ nanoparticles for enhanced photocatalytic degradation of methylene blue using rotating packed bed reactor
01:00 – 01:10 PM	Nidhi Kumari, Dayalbagh Educational Institute, Dayalbagh, Agra VAL 35: Solid Waste Management in India: An Analytical Review
01:10 – 02:00 PM	Lunch Break

Parallel Scientific Sessions		
Scientific Session: 6 Chair: Prof. Supradeepan K Department of Mechanical Engineering BITS Pilani, Hyderabad Campus Venue: Room No. G204/A Link: https://meet.google.com/nfg-qrne-fhv		Scientific Session: 7 Chair: Dr. Satyapaul A. Singh Department of Chemical Engineering BITS Pilani, Hyderabad Campus Venue: Room No. G204 Link: https://meet.google.com/yoa-zzau-pbe
02:00 – 02:10 PM	Dr. Jaspreet Singh Aulakh, Defence Lab. Jodhpur VAL 36: Systematic Investigation on Shape Stability and Heat Storage Properties of Ternary Composite Phase Change Material	Varun Adithya M., Kongu Engineering College, Tamil Nadu VAL 47: Environment And Waste Management Strategies in Aerophonic Towers for Vertical Farming
02:10 – 02:20 PM	Dr. Asoke Kumar Paul, Techno India University, Kolkata VAL 37: Enhancing Energy Access in Remote Regions: A Comprehensive Solar Energy Storage Solution for Submersible Pumping Systems	Adyasha Anapurba Sahoo, Siksha 'O' Anusandhan, Odisha VAL 48: Bacillus sp. Commensal member in root of T. vulgaris – a Potential biofertilizer to sustain agro-economics
02:20 – 02:30 PM	Anshdha Nandra, Amity University Uttar Pradesh VAL 38: Addressing the Microplastics Challenge through Sustainable Waste Management and Policy Interventions towards a Circular Economy	Swathi Dash, GITAM University, Vizag VAL 49: Experimental Screening and Selection Criteria for Natural Coagulants Towards sustainable treatment of Water
02:30 – 02:40 PM	Alice Jasmine D, SRM Institute of Science and Technology, Chennai VAL 39: Sustainable development of microwave-assisted chemical additive treatment of sugarcane leaf waste: Effect on physiochemical structure and process optimization	Swetha Shree R, Saveetha Institute of Medical and Technical Sciences, Chennai VAL 50: Synthesis of Photocatalytic material from Chrome-Tanned Buffing Dust for treatment of Industrial Wastewater
02:40 – 02:50 PM	Pragnya Paramita Sahoo, Sahoo, Siksha 'O' Anusandhan, Odisha VAL 40: Microbes: A Key Player in Industrial Wastewater Treatment	Vikash, CSIR-Central Leather Research Institute VAL 51: Towards the Sustainability of Leather Industry: Utilizing Process-Generated Waste for Depilation
02:50 – 03:00 PM	Sweeti Mann, Delhi Technological University VAL 41: Water lettuce is an efficient substrate for ethanol production after pretreatment	Aman Raj, GITAM University, Vizag VAL 52: Efficacy of Natural Coagulants in Treating Selected Industrial Wastewaters

03:00 – 03:10 PM	Monark Bhatt, The Maharaja Sayajirao University of Baroda VAL 42: Valorization of Waste Pistachio Hard-shells to Magnetic Hydrochar: A Sustainable Dual-Action Water Remediation Material	Dr. Yadvinder Singh, Sri Guru Granth Sahib World University, Punjab VAL 53: Extraction and characterization of poly-β-hydroxybutyrate from biomass of cyanobacterium arthrospira sp. WUC79
03:10 – 03:20 PM	Claudia Jacob, Amity University, Uttar Pradesh VAL 43: Actionable Approaches to Circularity: Implementation of Strategies for Integrating Circular Economy Concepts in Real Estate Projects	Angelin Flora A, Kongu Engineering College, Tamil Nadu VAL 54: Green Synthesis of Starch Nanoparticles from Potato for Leather Coating Application
03:20 – 03:30 PM	Mounika M and Kabika G, Kongu Engineering College VAL 44: Synthesis of Layered Nanocomposite	Priya S. PSG College of Arts & Science, Coimbatore VAL 55: Use of Microbial Carotenoid for treatment of Wound infections – An in vivo study
03:30 – 03:40 PM	Jerin Rexiya S, Vel Tech Multi Tech VAL 45: Utilization of Waste Dry Leaf Litters for the Production of Enriched Vermicompost - A Sustainable, Circular Economy Approach	Deepika E, Megavarshini, Muraliprasath M, Kongu Engineering College, Tamil Nadu VAL 56: Green synthesis of CuO nanoparticle from Calotropis Gigantea for removal of synthetic dye
03:40 – 03:50 PM	Sibiraj S., Venu Rohith P. Kongu Engineering College, Tamil Nadu VAL 46: Study the effect of different functional group co-solvents in HTL using algal biomass	Vinoth Kannan S.R., BITS Pilani, Goa Campus VAL 57: Valorization of Cashew Apple and Its Pulp Waste
04:00 PM	Valedictory Session	
04:30 PM	Tea Break	

DAY 3: Saturday 20th January 2024		
Post-Conference Workshop		
09:30 – 10:00 AM	Introductory Session	G204/A
10:00 – 10:30 AM	Biomethanation Prof. P. Sankar Ganesh	DST-PURSE Lab A-Block Cellar
10:30 – 11:00 AM	Methane to Hydrogen Dr. Satyapaul A. Singh	Colloids and Interfaces Lab D-Block
11:00 – 11:30 AM	Membrane Fuel Cells Dr. Chanchal Chakraborty	DST-PURSE Lab A-Block Cellar
11:30 AM – 12:00 PM	Biogas to Electricity Prof. Supradeepan K	IC Engine Lab Mechanical Workshop
12:00 – 12:30 PM	Energy Management Dr. Ankur Bhattacharjee	DST-PURSE Lab A-Block Cellar
12:30 – 01:00 PM	Field visit to On-campus Biomethanation Plant Prof. P. Sankar Ganesh	Sewage Treatment Plant
01:00 PM	Lunch and End of Workshop	