

**An International Conference on**  
**“Technological Interventions for Sustainability” (CHEM-CONFLUX<sup>22</sup>) (April 14-16, 2022)**

**SCHEDULE OF TECHNICAL PROGRAMME**

**DAY – 1 (April 14, 2022)**

<b>Activity</b>	<b>Time (Hours)</b>	<b>Link</b>
Inaugural	1000 – 1100	<a href="https://teams.microsoft.com/l/meetup-join/19%3aNZ1ze5wWHCCEwpr6SzEDt9tKnFRr-3oXUE7-Bz-sk0s1%40thread.tacv2/1649606723730?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aNZ1ze5wWHCCEwpr6SzEDt9tKnFRr-3oXUE7-Bz-sk0s1%40thread.tacv2/1649606723730?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 1 (Prof. A. B. Pandit, ICT, Mumbai, India)	1130 – 1215	
Keynote Lecture – 2 (Prof. Ts. Dr. Su Shiung LAM, UMT, Malaysia)	1215 – 1300	
Keynote Lecture – 3 (Ir. Dr. Syamsul Rizal, USM, Malaysia)	1430 – 1515	<a href="https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL OSRoDtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649607780541?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL OSRoDtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649607780541?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 4 (Prof. Rahmat S. Gharebagh, University of Tehran, Iran)	1430 – 1515	<a href="https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649607950000?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649607950000?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>

**DAY – 2 (April 15, 2022)**

Keynote Lecture – 5 (Prof. Vimal Katiyar, IIT Guwahati)	1000 – 1045	<a href="https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL OSRoDtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608089047?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL OSRoDtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608089047?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 6 (Dr. Suneel Pandey, TERI, New Delhi)	1000 – 1045	<a href="https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608122700?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608122700?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>

Keynote Lecture – 7 <b>(Prof. Davide Manca, POLIMI, Italy)</b>	1430 – 1515	<a href="https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608270186?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608270186?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 8 <b>(Dr. Jie Zhang, Newcastle University, UK)</b>	1430 – 1515	<a href="https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608300778?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608300778?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
<b>DAY – 3 (April 16, 2022)</b>		
Keynote Lecture – 9 <b>(Prof. Meenesh R. Singh, University of Illinois, Chicago, USA)</b>	0900 – 0945	<a href="https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608373057?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608373057?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 10 <b>(Prof. Devendra Mohan, IIT BHU, Varanasi)</b>	0945 – 1030	<a href="https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608593537?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aGAYBIORj2G5TW4306C-FjR2pD5yRmGAYtwk_CC154rg1%40thread.tacv2/1649608593537?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
Keynote Lecture – 11 <b>(Prof. B. V. Babu, SRM University, Amaravati)</b>	0945 – 1030	<a href="https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608526762?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a7jJ0GxJL_OSROdtTHrrwDTPw3EeLVj6_u79KVzH7ihg1%40thread.tacv2/1649608526762?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>
VALEDICTORY FUNCTION	1245 – 1315	<a href="https://teams.microsoft.com/l/meetup-join/19%3aNZ1ze5wWHCCEwpr6SzEDt9tKnFRr-3oXUE7-Bz-sk0s1%40thread.tacv2/1649606999448?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aNZ1ze5wWHCCEwpr6SzEDt9tKnFRr-3oXUE7-Bz-sk0s1%40thread.tacv2/1649606999448?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>

**NOTE:**

1. Presenters are required to make a powerpoint presentation having 10-15 slides only.
2. Maximum allowable time for presentation is 8 minutes (including 2 minutes for Q&A).

<b>PROGRAM SCHEDULE FOR TECHNICAL SESSIONS (Chem-Conflux<sup>22</sup>) (April 14-16, 2022)</b>			
<b>Parallel Technical Session 1: Date: 14/04/2022 Timing – 1530 – 1730 hours</b>			
<b>TRACK 1: Renewable Energy and Green Processes (Part-1) (Date: 14/04/2022 Timing – 1530 – 1730 hours)</b>			
<b>Session Link: <a href="https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649608973648?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649608973648?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a></b>			
<b>Sl. No</b>	<b>Paper Id</b>	<b>Authors</b>	<b>Title</b>
1.	4	Sirajudheen Palliyalil, Vigneshwaran Sivakumar, Nabeena C P, Resha Kasim V C, Basheer M C and Meenakshi Sankaran	<b>Mechanistic view of MoS<sub>2</sub> confined chitosan-polyaniline hybrid composite for the photo-oxidation of cationic dyes</b>
2.	5	Anju Kumari and Sushil Kumar	<b>Extraction of Nicotinic and Iso-nicotinic acid From Aqueous Solution Using Ionic Liquid</b>
3.	16	Krishna Kumar Maurya, Anupam Rawat and Rama Shanker	<b>Monitoring of Biochemical based Sustainable Bacterial Concrete System using EMI Technique with PZT Sensor</b>
4.	21	Debapratim Goswami, Ananya Bhattacharjee, Puja Basak, Uttara Das and Champa Nandi	<b>LCA: A Perspective of Improvement of Hydro-Plants for Intensify Green Electricity</b>
5.	44	Akanksha Singh Rajput and Taraknath Das	<b>Syngas production by dry reforming of methane over calcined and reduced ZNi<sub>1-x</sub>Ce<sub>x</sub>/(Al<sub>2</sub>O<sub>3</sub>) catalyst</b>
6.	92	Pragya Tiwari, Ashish Sharma and Anupama Singh	<b>Pathways for Scrap Tire Management and Their Use as Fuel- A Review</b>
7.	109	Priyankesh Kumar, Devesh Kumar, Ravi Shankar and Prashant Saini	<b>Biodiesel from lemongrass oil and its performance and emission study with diesel engine in different proportion</b>
8.	121	Mayank Singh and Vilas Warudkar	<b>Impact of Physical Parameters Namely Angle of Attack (AOA) in Efficiency of Wind Turbine</b>
9.	152	Bhupendra Koshti, Rahul Dev, Ajaya Bharti, Audhesh Narayan and Priyanka Shrivastava	<b>Hybrid Solar Cooker Befitting Society and Environment: A review</b>

10.	154	Rahul Patel, Rahul Dev, Vineed Narayanan, Swastik Acharya and Supriya Yadav	<b>PV Integrated Solar Distillation System: A Review</b>
11.	169	Sneha Tomar and V.K. Singh	<b>Solvothermal preparation of Aluminium based MOF and its study for supercapacitor application</b>
12.	176	Priyanka Yadav, Sudeep Yadav and Dhananjay Singh	<b>Biogas Technology: Multicriteria decision making support system</b>
13.	181	Yogesh Rajput and Vivek Kumar	<b>Ecofriendly – Chitosan Based Flame Retardant Coating</b>
14.	182	Sunny Dubey and Vilas Warudkar	<b>A Review Paper on Aerodynamic Performance Comparison of Different Airfoil for Small Scale Horizontal Axis Wind Turbine</b>
15.	184	Jigar Mistry and Dr. Hardik Shah	<b>Software Implementation of PV Inverter Topologies</b>

**TRACK 2: Renewable Energy and Green Processes (Part-2) (Date: 14/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aXX0200r3LJ3AFEAdtxN6YrvjJThshq7XnyFxFxHASf5N81%40thread.tacv2/1649608997540?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	7	Sanjay Singh and Ashish N. Sawarkar	<b>Co-pyrolysis of Garlic Stalk and Polyethylene Waste: Kinetics, Thermodynamics, and Synergistic Effect</b>
2.	20	Sumit Sharma, Shikha Singh, Saurabh Jyoti Sarma and Mohammad Danish	<b>Demonstration of aerobic granular sludge technology for bioethanol production from rice straw</b>
3.	26	Pranjal Tripathi, Sonam and Ram Sharan Singh	<b>Novel study on biodegradation of Brilliant Green dye by LDPE immobilized Bacillus licheniformis ST5 in packed bed bioreactor and investigation of external mass transfer effect</b>
4.	31	Dipankar Das and Prasanta Kumar Rout	<b>Effect of NaOH concentration on the mechanical and microstructural properties of fly ash based geopolymer</b>
5.	33	Sonam Tiwari, Pranjal Tripathi, R.S. Singh and Devendra Mohan	<b>Imidacloprid biodegradation using novel bacteria Tepidibacillus decaturensis strain S1 in Slurry bioreactor and microcosm study</b>
6.	39	Neetu Singh, Dipesh Shikchand Patle and Sushil Kumar	<b>Green Extraction technique of phenolic components from fruits waste by Microwave and Ultrasound Technology: A Review</b>

7.	42	Durgesh Soni, Arun Maithani and Pramod Kamani	<b>Utilization of Carbon Dioxide for preparation of Polyurethanes without using the toxic Isocyanates</b>
8.	43	Aparna Gautam, Sushil Kumar and Dipesh Shikchand Patle	<b>State of the Art of Photocatalyst for Biodiesel Production: A Review</b>
9.	45	Vidushi Sharma and Saumya Srivastava	<b>Sustainable Energy Production from Soil Microbiota</b>
10.	100	Kalyani Motghare, Kailas Wasewar and Diwakar Shende	<b>Extractive separation of second generation Bio-fuel: Butanol</b>
11.	123	Mahendra Singh and Dhananjay Singh	<b>Experimental Investigation of Dust Deposition on Solar Photovoltaic Panel in Northern India</b>
12.	140	Anugrah Agarwal, Harshita Nandal, Harsh Thakur, Aviral Bhardwaj, Ashmit Dubey, Pushpa Sharma and Seim Timung	<b>Schottky junction based solar energy harvesting for powering small devices</b>
13.	206	Viharkumar Patel and Hardik Shah	<b>Electrical Vehicle Battery Management system: Evaluating Crucial Parameters with case study</b>
14.	207	Amol Saner and Arvindkumar Mungray	<b>Performance of Microbial fuel cell as a post treatment unit of UASB reactor for distillery spent wash</b>
14.	211	Nisarg Modi, Harshpalsinh Thakore and Deep Modi	<b>Green Hydrogen : As a Source Of Renewable Energy</b>

**TRACK 3: Smart Materials for Sustainability (Part-1) (Date: 14/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aS4Z6EyFGT4XXnlzlzfE0oonFx3GjKDoXGYdWv-4rGHs1%40thread.tacv2/1649609015964?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	63	Krishna Kant Mourya, Up Singh and Suresh Kumar Tanwar	<b>High Temperature Self-Healing B4C incorporated Carbon B-Phenolic and Mo-Phenolic Ablative Composite</b>
2.	77	Kushlendra Lal Kharwar, Anupam Rawat and Rahul Srivastava	<b>Sustainability Analysis of Sandstone Using Smart Material by EMI Approach</b>
3.	82	Anil Kumar K, Jitendra Panwar, Suresh Gupta and Shobham Shobham	<b>One-pot synthesis of metal oxide-clay composite for the evaluation of dye removal studies: Taguchi optimization of parameters and antibacterial studies</b>
4.	89	Soumyajeet Majumder and Prasanta Kumar Rout	<b>A study on isothermal ageing and electrochemical behavior of Al-Cu-Mg alloy</b>
5.	93	Chandana V, Karthika Suresh, Aiswarya Santhosh, Krishnaprasad M, Aiswarya Sidharthan K and Shiny Joseph	<b>Synthesis and Characterization of PVA/Chitosan Anion Exchange Membrane and Effect of Nanofillers on the Anion Conductivity.</b>

6.	102	Raju Ranjan Kumar and Anupam Rawat	Improvement on mechanical, durability and micro-structural properties of concrete using different contents of metakaolin- A Review
7.	114	Amrendra Singh, Rakesh Kumar and P.K. Mehta	Performance of Self Compacting Concrete using Dual Admixture in Sulphate Environment
8.	149	Pooja Singh and Parul Katiyar	Impact of Compatibilization on Polypropylene (PP) and Acrylonitrile Butadiene Styrene (ABS) Blend: A Review
9.	150	Priyanka Yadav, Vikas Gupta and Meenu Singh	Role of Hybrid Hydrogel in Biomedical Applications
10.	161	Archana Arya, Abrar Ahamad, Avinash Chandra and Pradeep Kumar	Lignin based epoxy nanocomposites fabrication, characterization, and application: A review
11.	162	Nishant Sati, Piyush Pratap Singh, Priyanshu Rai and Rahul Dev	Battery life prediction and minimization of breakdown losses using predictive maintenance
12.	187	Shabnam Dan, Amit Chattree, Jishnu Naskar and Suantak Kamsonlian	Comparative study of ferromagnetic behaviour in bare and DDMAB-PMMA-PEG modified Manganese Ferrite (MnFe <sub>2</sub> O <sub>4</sub> ) nanoparticles
13.	215	Mohd Rashid Khan and Vivek Kumar	Fabrication and Characterization of ABS Composite Reinforced By Eggshell Powder
14.	242	David Gupta, Ajeet Kumar and Prashant Tiwari	Biodegradable hand gloves and comparison of shelf life
15.	E006	Aayush Gupta, Adarsh Rawat, Aditi Katyar, Shivam Chauhan, Shivam Maurya and Vivek Kumar	Development of PLA-Bagasse based packaging material substitute as single use plastics

**TRACK 4: Smart Materials for Sustainability (Part-2) (Date: 14/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aeqLNcuZXPSvISZqI59BHxb94D-FFK7ykvGMbGFyXWSw1%40thread.tacv2/1649609100399?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	18	Kriti Sharma and G.L. Devnani	Eco-friendly surface treatments of natural fibers for reinforcement in polymer composites
2.	19	Sachin Kumar Singh, Krishna Kumar Maurya, Rama Shanker and Achint Ranjan	Prediction of remaining life of RCC sewer manhole using smart material based EMI technique for sustainable environment
3.	24	Mehul Karkar, Dilip Sarode and Keyur Vadaliya	Synthesis and characterization of polymeric membranes by novel dip-coating method
4.	34	Manash Mudoj and Shishir Sinha	Determination of activation energy of natural fibre for polymer composite application

5.	117	Anjali Singh, P.K. Mehta and Rakesh Kumar	<b>Strength and Microstructure analysis of sustainable Self Compacting Concrete with Recycled Coarse Aggregate, Fly Ash and Silica Fume</b>
6.	126	Deepak Narayana Murthy Akundi, Sivasubramanian V, Meghana Preethi Addapuseela, Ajay Joseph, Keerthi Srijith and Sinu P	<b>Theoretical and Experimental Investigation on Polyethersulfone-Based Membranes</b>
7.	132	Anant Prakash Agrawal	<b>Evaluation of Mechanical Behaviour of Al-Zn-Mg Alloy Reinforced with Si<sub>3</sub>N<sub>4</sub>/Gr Metal Matrix Composite Fabricated by Stir Casting</b>
8.	135	Harroop Kaur, Anjali Nayal, Nisha Agarwal and Manash Mudoj	<b>Polymer composite material with Grewia Optiva fiber reinforcement</b>
9.	138	Pooja Singh and Parul Katiyar	<b>Nobel Approach to Utilize Waste Acrylonitrile Butadiene Styrene (ABS) to Blend with Polypropylene (PP) and to predict miscibility as well as mechanical properties of the blend</b>
10.	141	Anand Maurya, Vijay Singh, Pradeep Kumar and Shishir Sinha	<b>A review: Impact of Surface Treatment of nanofillers for improvement in thermo mechanical properties of the epoxy based nanocomposites</b>
11.	191	Nameirakpam Momo Singh and Thiyam Tamphasana Devi	<b>Determination of Soil Hydraulic Conductivity in a Flood Prone Region by Mini Disc Infiltrometer</b>
12.	198	Kanushreya Tyagi, Sakshi Rasanya, Vaishali Srivastava and Nikita Katiyar	<b>Fabrication and mechanical testing of PVC/EVA blend reinforced with modified MMTs</b>
13.	199	Pradeep Kumar and Shalinee Shukla	<b>Ferrochrome slag aggregate as a sustainable pavement construction material: A Review</b>
14.	205	Sravan Kumar Vanka, Alka Kumari and Siddhartha Moulik	<b>Preparation of cellulose based aerogel for oil water separation by hydrodynamic cavitation assisted pathway</b>
15.	247	Mahendra Singh, Deepak Singh, Suresh Kumar Patel and Dhananjay Singh	<b>Performance evaluation of photovoltaic thermal (PVT) hybrid solar dryer for drying of carrot (Daucus carota) vegetable</b>

**Parallel Technical Session 2: Date: 15/04/2022 Timing – 1100 – 1300 hours**

**TRACK 1: Nanomaterials for Sustainability (Part-2) (Date: 15/04/2022 Timing – 1100 – 1300 hours)**

**Session Link:** [https://teams.microsoft.com/l/meetup-](https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfmtOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609146197?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d)

[join/19%3a9yWvLufhROGArcpfmtOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609146197?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d](https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfmtOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609146197?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d)

1.	6	Abinash Das, Togam Ringu and Nabakumar Pramanik	<b>An Updated Overview on Zinc Oxide Nanoparticles (ZnO NPs): Properties and Advanced Biomedical Applications</b>
2.	8	Dinesh Kumar	<b>Conversion of glucose to 5 HMF and TRS using Cr<sup>2+</sup> loaded over cellulose nano crystals as sustainable catalyst</b>
3.	32	Anand Kumar Vishwakarma, Bhim Sen Yadav, Anchal Kishore Singh, Sarvesh Kumar and Naresh Kumar	<b>Synthesis, characterization and photocatalytic application of ZnO coating on Fe<sub>3</sub>O<sub>4</sub> nanocomposite</b>
4.	47	Pranali Kurhade, Shyam Kodape, Kunjan Junghare and Atul Wankhede	<b>Synthesis of MgO nanoparticles via Green route using M. longifolia floral extracts - A study of Morphology and Antimicrobial behavior</b>
5.	51	Kirti S, Suantak Kamsonlian and Vishnu Agarwal	<b>Review on synthesis of plant-mediated green Iron nanoparticles and their application for decolourisation of dyes</b>
6.	52	Kirti S, Suantak Kamsonlian and Vishnu Agarwal	<b>Superparamagnetic Fe<sub>3</sub>O<sub>4</sub> nanoparticles: green production and characterization by Hibiscus rosa-sinensis leaf aqueous extract and it's application in dye removal</b>
7.	53	Shruti Tyagi, Pankaj Kumar Tyagi and Dhriti Gupta	<b>A practical way to assess the toxicity of gold nanoparticles by chemical and green synthesis approaches</b>
8.	54	Pankaj Kumar Tyagi, Aruna Vinod Kapse and Tuba Rizvi	<b>Evaluate the toxicity of silver nanoparticles by chemical and green synthesis methods</b>
9.	57	Parag Thakur and Shriram Sonawane	<b>Experimental and numerical analysis of CO<sub>2</sub> absorption processes using fly ash based nanofluids</b>
10.	60	Mohit Kumar, Ganesh Swain, Ankur Verma, Ram Sharan Singh and Birendra Nath Rai	<b>g-C<sub>3</sub>N<sub>4</sub>/TiO<sub>2</sub> nanocomposite for effective photocatalytic degradation of Acid Blue 113 dye under LED light</b>
11.	61	Alok Kumar Trivedi, Arjun Kumar and M K Gupta	<b>Extraction of Nanocellulose from Wheat Straw and Its Characterization</b>
12.	67	Subia Ambreen and Arti Chouhan	<b>Impact of Precursor Chelation on Tantalum Based Nanoparticles for Removal of Dye from Water</b>
13.	137	Priya Kushwaha, Bushra Khatoon, Shabih-UI Hasan and M. Siraj Alam	<b>Effectiveness of Nanofluid as A Coolant in Heat Exchange Devices</b>
14.	194	Shruti Pandey, Shivani Prasad, Bibhankar Singh and Sushil Kumar	<b>Analysis of Antibacterial Effect of Silver Nanoparticles</b>



15.	197	Neha Pal and Madhu Agarwal	Guar Gum/Agar Agar Composite for Synthesis of Silver Nanoparticles: Green Synthesis, Characterization, and Antibacterial Activity
16.	225	Sneha Tripathi, Padmaja Rai, Ved Prakash, Samarth Sharma, Durgesh Kumar Tripathi, Kavita Tiwari and Shivesh Sharma	Indole acetic acid-mediated amelioration of silver nanoparticles stress in <i>Oryza sativa</i> seedlings via regulation of oxidative stress
<b>TRACK 2: New technologies for Energy Conservation (Date: 15/04/2022 Timing – 1100 – 1300 hours)</b>			
<b>Session Link:</b> <a href="https://teams.microsoft.com/l/meetup-join/19%3aXX0200r3LJ3AFEAdtxN6YrvjJThshq7XnyFxHASf5N81%40thread.tacv2/1649609164893?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d">https://teams.microsoft.com/l/meetup-join/19%3aXX0200r3LJ3AFEAdtxN6YrvjJThshq7XnyFxHASf5N81%40thread.tacv2/1649609164893?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d</a>			
1.	119	Monjit Roy and Srimanta Ray	Petroleum Wastewater Treatment: Case study and comparative analysis on membrane bioreactors
2.	134	Ashvani Chaudhary and Ashutosh Pandey	Optimization of nutrient stressors for the growth and the carotenoids production of <i>Chlorella sorokiniana</i>
3.	136	Kamlesh Pandey and Ashwin Kannan	Extraction of Rutin from Coriander leaves using Surfactant based Aqueous Two-phase system
4.	142	Yatish Kumar Baghel and Vivek Kumar Patel	Computational Investigation of Erosion wear in the Eco-friendly Disposal of the Fly Ash through 900 Horizontal Bend of Different Radius Ratios
5.	146	Mandar Bhagat, Arvind Mungray and Alka Mungray	Pre-treatment of anaerobic sewage sludge by using a solenoid magnetic field for the osmotic microbial fuel cell
6.	157	Vartika Kushwaha, Sangeeta Negi and Harinder Singh	Comparison of heat transfer in heat exchanger having H-type fin with different fins for waste heat recovery: A Review
7.	159	Abhishek Nayak, Viegas Shanon, Feba Mariyam Joy and Nethaji Sundarabal	Preparation and characterization of copper-based metal organic framework for sorption and oxidation of asphaltenes
8.	196	Rishabh Rathore, Vaibhav Rathore and Vikas Singh	Design and Analysis of Solar operated Earth-Air Heat Exchanger
9.	200	Mannu Yadav and R. C. Vaishya	Solar Power Plant Site Selection Using GIS & RS with AHP: a Case Study of Fatehpur District in Uttar Pradesh, India

10.	201	Ankita Tagade, Lakshmi Rajpoot and Ashish N. Sawarkar	<b>Biochar Production from Finger Millet Straw via Slow Pyrolysis: Production, Characterization, and Kinetics</b>
11.	218	Lalit Kumar Singh and Zainab Mahmood	<b>High-cell-density batch fermentation of Rhodococcus opacus using a bagasse hydrolysate for triacylglycerol production</b>
12.	223	Deepali Pawar and Anant Marathe	<b>Potential of Cottonseed's oil Refinery waste (Acid oil) as a feedstock for the production of Palmitic Acid</b>
13.	232	Jagmohan Dixit, Dipesh Shikhchand Patle and Ashish N. Sawarkar	<b>Co-gasification of Petroleum coke and Biomass: Recent Advances, Challenges, and Future Perspective</b>
14.	236	M Sohail Pervez, Kazi Syed Zakiuddin and Brajesh Kumar	<b>Optimization of Sustainable Humen Power Rice Mill for Bran Protection</b>
15.	241	Priyank Srivastava, Bhupendra Koshti, Rahul Dev, Jitendra Gangwar and Supriya Yadav	<b>Design and Theoretical Analysis of Box-Type Step Solar Cooker</b>

**TRACK 3: Biomass utilization and bio energy (Part-1) (Date: 15/04/2022 Timing – 1100 – 1300 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aS4Z6EyFGT4XXnlelzfE0oonFx3GjKDoXGYdWv-4rGHs1%40thread.tacv2/1649609181903?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	14	Nor Irwin Basir, Zainal Ahmad, Keat Teong Lee, Nisha Navainthran and Dipesh S Patle	<b>Enhanced Mixing Towards Production of Fatty Acid Methyl Esters by In Situ Transesterification of Eucheuma Cottonii: Experimental Study</b>
2.	68	Shashi Bala Gautam Gautam, Mohd.Siraj Alam and Suantak Kamsonlian	<b>Fixed-bed column analysis in the adsorption of an As (III) from an aqueous solution using iron impregnated coconut husk adsorbent</b>
3.	86	Ankit Varshney and Dr Niraj Kumar Mishra	<b>Exergy, Energy (2E) analysis of charcoal produced by agriculture (biomass) residue for heat generation: An experimental analysis</b>
4.	87	Shyam Tekade, Kamlesh Digaskar, Prathamesh Chavan and Ashish Sawarkar	<b>Thermogravimetric Analysis and Experimental Pyrolysis Characteristics of Coconut Shell Waste under Vacuum, Inert and Atmospheric Conditions</b>
5.	99	Krishna Kumar Patel, Neelu Patel and Vishwajeet Pratap Singh	<b>Study of Chemically Treated Natural Plant Fibers in Soil Reinforcing Technology: A Review</b>
6.	101	Z. R. Rosanto, C. W. Purnomo and M. K. Ridwan	<b>Utilization of Spent Coffee Grounds into Bio-oil via Pyrolysis Using Bentonite Catalyst</b>

7.	118	Ramprakash Nagar, Avadhesh Sehra and Ashish N. Sawarkar	<b>Bioenergy Potential of Sugarcane leaves via Pyrolysis: Characterization, Kinetics, and Reaction Mechanism</b>
8.	124	Anoop Mishra, Amit Kumar and Ashish N Sawarkar	<b>Kinetic and Thermodynamic Analyses of Pyrolysis of Cotton Stalk</b>
9.	130	Sajal Agarwal, Himanshu Gupta and Ankur Gaur	<b>Synthesis and Characterization of Carboxy-Methyl Cellulose obtained from different Bio Waste material</b>
10.	167	Ashwani Kumar Rathore, Anjali Singh, Rajesh Katiyar and Deepak Kumar Patel	<b>Thermodynamic and Kinetic Study of Pyrolysis &amp; Co-pyrolysis of Sugarcane Bagasse and Smoked Cigarette Butts: A Review</b>
11.	168	Rajesh Katiyar, Ashwani Kumar Rathore, Anjali Singh and Deepak Kumar Patel	<b>Evaluation of Kinetic and Thermodynamic parameters of Pine Cone and Chicken Feathers Keratin using pyrolysis and co-pyrolysis.</b>
12.	173	Rimika Kapoor and Sudeep Yadav	<b>Compressed BioGas: A potential resource in achieving a circular bioeconomy</b>
13.	186	Lalit Kumar Singh and Jiya Singh	<b>Screening and identification of antibacterial activity of phytochemicals and antioxidant from Terminalia arjuna</b>
14.	203	Zavin Gajera, Arvind Mungray and Alka Mungray	<b>Hydrothermal carbonization of cow dung with human urine as a solvent: Kinetics and combustion behavior of produced hydrochar</b>

**TRACK 4: Biomass utilization and bio energy (Part-2) (Date: 15/04/2022 Timing – 1100 – 1300 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aeqLNcuZXPSvISZqI59BHxb94D-FFK7ykvGMbGFyXWSw1%40thread.tacv2/1649609199414?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	23	Abhishek Patel, Hinal Vachhani, Bhavin Soni and Geeta Kumari	<b>Activated carbon production from groundnut shell char via. chemical activation: A pilot-scale study</b>
2.	25	Harjeet Nath, Joydeep Das, Sachin Bhaladhare, Chandrani Debnath, Biswajit Sarkar, Rishabh Saxena and Santosh Deb Barma	<b>Development of lignocellulosic biomass derived Cu and Zn doped highly porous activated carbon and its utilization in anti-microbial treatment</b>
3.	27	Rajnikant Jadhao, Dr Jayant Kaware and Sakshi Bokade	<b>Experimental Studies on Alcoholic Extraction Oazadirachtin from The Neem Seed Kernels</b>
4.	69	Dhruv Agarwal and Sadhana Sachan	<b>Nanotechnological Intervention in Microalgae Based Biofuel Production: A Review</b>

5.	209	Dhundiraj Deshpande and Utkarsh Maheshwari	<b>Utilization of Castor Oil for Biodiesel Production: An Experimental Approach</b>
6.	210	Dhundiraj Deshpande, Utkarsh Maheshwari and Vivek Rangrajan	<b>Utilization of Ultrasonication for the Production Biodiesel from Algae oil</b>
7.	222	Arijit Duttagupta, Bhawana Bharti and Harinder Singh	<b>Preparation of Hydroxypropylated and Alkali Modified Starches and Application in Cookie Making with Reconstituted Flour- A Step in Enhancing Sorghum Starch Industrial Application</b>
8.	229	Kajol Pradhan, Jujaru Mohan, Shailee Gaur and Amit Jain	<b>Comparative Analysis of biosurfactant production by free and immobilized cells of Pseudomonas aeruginosa gi   KP 163922   using Waste Engine Oil</b>
9.	239	Gunavant Deshpande, Dipesh Patle and Ashish Sawarkar	<b>Multiobjective Optimization with Minimization of Eco-indicator and Damage Index for Ultrasound Intensified in situ Biodiesel Production from Microalgae</b>
10.	244	Satyapriy Das and Sangeeta Negi	<b>Bioconversion and enzymatic transformation of Low-Density Polythene (LDPE) waste into fuel and its precursors through Paenibacillus sp.</b>
11.	245	Jyoti Srivastava, Joyabrata Mal, Manju Verma and Rupika Sinha	<b>Computational Screening and Evaluation of a Novel Endoglucanase Source for Valorization of Lignocellulosic Biomass</b>
12.	246	Ravi Kumar Sonwani	<b>A feasible approach for the biodegradation of Congo red dye in Moving bed biofilm reactor (MBBR)</b>
13.	252	Anjumol Kizhakkummuriyil Purushan and Partha Kundu	<b>Study the Degradation of VOC using Microbial Consortia</b>
14.	262	Amrita Ranjan and Pamela Welz	<b>Investigation of an Effective Acid Pre-Treatment Method for the Valorisation of Canola Fine Agricultural Residues</b>
15.	E007	Komal Kumar Yadav and Tamal Ghosh	<b>Cyanide Sensing by naphthohydrazone Derivative</b>

**Parallel Technical Session 3: Date: 15/04/2022 Timing – 1530 – 1730 hours****TRACK 1: Air, Soil, and Water pollution and control (Part-1) (Date: 15/04/2022 Timing – 1530 – 1730 hours)****Session Link:** [https://teams.microsoft.com/l/meetup-](https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609245625?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d)[join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609245625?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d](https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609245625?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d)

1.	48	Krishna Kumar Singh and Rakesh Chandra Vaishya	<b>Response Surface Optimization via Box-Behnken for treatment of Municipal Wastewater by two stage Hybrid constructed Wetland</b>
2.	73	Nikhil Kawatra and Akhilesh Dubey	<b>Hydroponics technology for treated wastewater and nutrient recovery: A review</b>
3.	78	Rachael Barla, Smita Raghuvanshi and Suresh Gupta	<b>Analysis on bio-mitigation of flue CO<sub>2</sub> by Chemolithotrophs in a continuous pilot-scale bubble column reactor</b>
4.	79	Abhishek Anand, Smita Raghuvanshi and Suresh Gupta	<b>Simultaneous removal of carbon dioxide (CO<sub>2</sub>) and nitric oxide (NO<sub>x</sub>) utilizing a mixed bacterial consortium in a glass bio reactor: Evaluation of removal efficiency, characterization of microbial communities and value added products</b>
5.	116	Shiwangi Kesarwani and Radha Rani	<b>Microbial fuel cell integrated wetland for management of contaminated water bodies: A review study</b>
6.	151	Sarvesh Patel, Vitthal L. Gole and Jyoti Sharma	<b>Removal of antibiotic Cefixime from wastewater using UVC/Sodium persulphate system</b>
7.	153	Sriparna Singh and A.K. Sachan	<b>A Review on Smart Aggregate Based Structural Health Monitoring</b>
8.	156	Rohit Kushwaha, R.S. Singh and Devendra Mohan	<b>Arsenic Tolerant and Arsenite Oxidizing Bacterial Strain Isolated from Ratanpur Block of Varanasi District, Uttar Pradesh</b>
9.	158	Shambhoo Sharan, Prateek Khare and Ravi Shankar	<b>Electrochemical degradation of ofloxacin using PbO<sub>2</sub>/Pb lead battery electrode: Parametric optimization and kinetics study</b>
10.	165	Shambhoo Sharan, Prateek Khare, Ravi Shankar, Rishabh Singh Shengar and Rudra Pratap Singh	<b>Membrane less microbial fuel cell for simultaneous energy production and treatment of wastewater</b>
11.	171	Pulkit Garg	<b>Electrochemical degradation of wastewater containing metronidazole using Ni-foam as anode</b>
12.	174	Mona Singh and Parul Katiyar	<b>Electrochemical technique for treating wastewater</b>

13.	177	Pushpendra Kushwaha and Madhu Agarwal	Adsorption of Cationic Dye by Using Metal Industry Solid Waste as an Adsorbent
14.	178	Namrata Kulshreshtha, Sachin Kumar and Rakesh Chandra Vaishya	Drivers affecting Ambient Air Pollution amid COVID-19 pandemic in Prayagraj, India
15.	234	Arti Chouhan and Ashutosh Pandey	Sunlight-induced photocatalytic removal of cationic and anionic dyes by Mof-199 in polluted water

**TRACK 2: Air, Soil, and Water pollution and control (Part-2) (Date: 15/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aXX0200r3LJ3AFEAdtxN6YrvjJThshq7XnyFxFxHASf5N81%40thread.tacv2/1649609265549?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	96	Kajal Gautam, Suantak Kamsonliana, Sushil Kumar and Yatindra Kumar	Electrochemical Treatment of Wastewater containing Rective Blue 4 (RB 4) Dye by using Airlift Electrocoagulation and Optimization of Multivariate Parameters
2.	103	Kanhaiya Lal Maurya, Ganesh Swain, Ankur Verma and Ram Sharan Singh	Bioremediation of Congo red dye using modified bio-carrier and immobilized by Lysinibacillus fusiformis in packed bed bioreactor continuous study
3.	104	Pawan Kumar and V. P. Singh	Assessment of the reduction of risk to human health after phytoremediation of heavy metal contaminated site
4.	112	Hari Sai Bhaskar Muripindi, Sanjay Raj Appikonda, Sumanth Adugula, Bharadwaj Rajana and Gangadhar Rajana	An IoT based air quality measuring setup using MQ series air quality sensors and Arduino
5.	113	Koushani Sarkar, Gourab Banerjee, Asis Mazumdar and Arunabha Majumder	Agricultural Contamination in River Water in West Bengal: A Situation Overview for Last Ten Years
6.	125	Prajjwal Chaudhary, Prajjwal Pandey, Maharshi Yadav and Vitthal Laxmanrao Gole	Efficient removal of Brilliant green dye and turbidity using moringa oleifera seed powder.
7.	143	Imran Ahmad and Debolina Basu	Taguchi L16 (44) Orthogonal Array-Based Study and Thermodynamics Analysis for Electro-Fenton Process Treatment of Textile Industrial Dye
8.	180	Darpan Varshney, Shailesh Ghodke and Utkarsh Maheshwari	Development and Utilizing Graphene Oxide for the Wastewater treatment: An Experimental Evaluation
9.	212	Kirti Vardhan Jaitawat, Tanay Anand and Astitva Kumar Gupta	Pollution Control via Mass Integration in Petroleum Refining Industry

10.	214	Rishi Verma and Sushil Kumar	Treatment of Synthetic Tannery Wastewater using electrocoagulation in a Rotating Electrode Reactor
11.	216	Gaurav Meena and Nekram Rawal	Removal of Cr <sup>6+</sup> from aqueous solutions using low cost activated carbon prepared from waste tires
12.	226	Joydeep Das, Abhijit Mondal and Soma Nag	Nanoadsorbent: A modern-day panacea for the decontamination of wastewater
13.	254	Akshat Patel and Amit Jain	Applications of Biosurfactants in Heavy Metal Bioremediation

**TRACK 3: Air, Soil, and Water pollution and control (Part-3) (Date: 15/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aS4Z6EyFGT4XXnlzlzfE0oonFx3GjKDoXGYdWv-4rGHs1%40thread.tacv2/1649609287612?context=%7b%22id%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	9	Bhanu Pratap Singh and Manju Verma	Removal of metals from copper mill tailings using bioleaching
2.	35	Bhanu Pratap Singh and Manju Verma	Recovery of copper through microbial mediated phytomining
3.	38	Sakshi Agrahari and Sushil Kumar	Sustainable Techniques for Dairy Wastewater Treatment
4.	40	Saurabh Yadav, Suantak Kamsonlian and Shubham Pal	Treatment of Municipal Wastewater Using Electrochemical Membrane Bioreactor
5.	41	Saurabh Yadav, Suantak Kamsonlian and Shubham Pal	A Review of Electrochemical Methods for Treatment of Wastewater
6.	46	Amit Kumar Gomey, Syed Saim Ali and Rakesh Kumar	Experimental study of different acids and amines based deep eutectic solvent for CO <sub>2</sub> capture
7.	120	Maharshi Yadav, Vitthal Laxmanrao Gole, Prashant Kumar Gupta, Piyush Kumar Verma, Prince Kumar, Sikandar Maurya and Jyoti Sharma	Disinfection of groundwater by modified shallow water hand pump using Hydrodynamic cavitating technique
8.	155	Swati Gupta and Sushil Kumar	Pharmaceutical Industry Wastewater Treatment: A Review of Current trends in the Technologies Used
9.	228	Shraddha Wadatker, Diwakar Shende and Kailas Wasewar	A Review on Fly Ash Cenosphere and its Applications in Construction, Polymeric Composites and Wastewater Treatment
10.	233	Arvind Kumar Chaurasiya, Poorn Prakash Pande, Ravi Shankar and Amar Nath	Natural sugar based xanthates A New Emerging materials for Removal of Toxic metal ions from water

11.	243	Basudev Singh and Jyoti Sharma	Comparison of water treatment techniques used for various purposes with implosion technique
12.	E001	Riti Thapar Kapoor	Removal of Congo Red Dye by Parthenium hysterophorus and its Impact on Wheat Seeds
13.	E004	Anuradha Pandey, Anubhav Rawat, Nekram Rawal, Debolina Basu	Prediction of Effect of Wind Speed on Air Pollution Level using Machine Learning Technique
14.	E008	Ankita Srivastava, Radha Rani, Sushil Kumar	Removal of Reactive Black 5 dye using mixed microbial culture immobilized at adsorbent saw dust: Batch and Fixed-bed Column Studies

**TRACK 4: Energy integration, climate change and environment impact assessment (Date: 15/04/2022 Timing – 1530 – 1730 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aeqLNcuZXPSvISZqI59BHxb94D-FFK7ykvGMbGFyXWSw1%40thread.tacv2/1649609303472?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	2	Champa Nandi, Uttara Das and Somudeep Bhattacharjee	The Impact of COVID-19 on Climate Change and Clean Energy Generation: Review, Opportunities, Challenges, and Future Direction.
2.	3	Jaya Saha, Bijaya Saha and Champa Nandi	Renewable Energy Management for Micro-grid
3.	11	Banty Prajapati and Yogesh Morabiya	Sequential Combining Microwave Method Follow By Ultrasound Pretreatment Process For Extraction Of Nutmeg Seed Essential Oil
4.	28	Kenu Getu Yitayew and H. Gangadhara Bhat	Causes, Effects and Management practices of Urban Heat Islands: A review
5.	29	Sayanta Ghosh, Renu Lata and K. C. Gouda	A RS-GIS Based Approach to Assess the Impact of Land Cover Variations on Climate Variability and Air Quality for Sustainable Environmental Planning in Beas Valley, Himachal Pradesh, India
6.	80	Praveen Banothu, Dinesh Bejjanki and Sampath Kumar Puttapati	The synthesis of carbon electrode from biomass derived eucalyptus leaves through a chemical activation process for supercapacitor cells application
7.	81	Dinesh Bejjanki, Uday Bhaskar Babu Gara, Kishant Kumar and Sampath Kumar Puttapati	PANi @SnO/RGO ternary composite via interfacial polymerization and its synergetic effect for better performance of Supercapacitor
8.	97	Praveen Kumar, Sheo Prasad Shukla and Raj Mohan Singh	Municipal Solid Waste Management using GIS based Optimization



9.	128	Arjun S, Taniya Kumari Shaw and Smita Raghuvanshi	<b>Experimental understanding and Life Cycle Impact Assessment of Anaerobic Digestion of Food Waste</b>
10.	144	Rishabh Sharma, Srijan Pandey, Mahendra Pratap Singh, Mayank Upadhyay, Bushra Khatoon and M. Siraj Alam	<b>Enhancement of Heat Transfer Behaviour in Plate Heat Exchanger using Nanofluids</b>
11.	166	Alpesh Gauswami and Hardik Shah	<b>A study on front-end AC/DC converter for electric vehicle battery charger with boost power factor correction</b>
12.	193	Shyam Tekade, Aniket Kumbhar, Deep Velhal, Ashish N. Sawarkar and Pratik Sutar	<b>Hydrogen Generation using Sea Water and Aluminum</b>
13.	195	Nandlal Pingua and Arvind Gautam	<b>Characterization of Supercooled Monatomic Potential Model of Water During Liquid-Amorphous Transition</b>
14.	219	Priyanka Baruah and Partha Pratim Dutta	<b>Performance study of energy efficient solar dryer for drying Agricultural crops</b>
15.	238	Neeraj Gautam, P Ravi Kiran and Sanjay Singh	<b>Impact assessment report of solar light: A case study of Rural Tribes (Vantangiya) of Pali Block, Gorakhpur, India</b>

**Parallel Technical Session 4: Date: 16/04/2022 Timing – 1045 – 1245 hours**

**TRACK 1: Process intensification, modeling and techno-economic feasibility (Part-1) (Date: 16/04/2022 Timing – 1045 – 1245 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3a9yWvLufhROGArcpfntOnKecPwMy59Y3UYf8bAeuDnR41%40thread.tacv2/1649609396820?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	10	Prashant Giri and Yogesh Mahajan	<b>Optimal Sequencing of Conventional Distillation Column Train for Multicomponent Separation System by Evolutionary Algorithm</b>
2.	12	Fazal Belam and Dolly Gandhi	<b>Preparation of Zeolite by non-conventional source of heating and its application</b>
3.	49	Fiona Mary Antony, Kailas L Wasewar, Diwakar Z Shende, Sushil Kumar, Dharm Pal and Hasan Uslu	<b>The sustainable approach of process intensification in bio refinery through reactive extraction coupled with regeneration for recovery of protocatechuic acid</b>

4.	64	Siva Mullapudi, Shubhanshu Sharma, Dipesh S Patle and Uday Bhaskar Babu Gara	<b>Oxygen Excess Ratio Control of PEM fuel cell: Fractional order Modeling and Fractional Filter IMC-PID Control</b>
5.	65	Shubhanshu Shrama, Siva Mullapudi, Dipesh S Patle and Uday Bhaskar Babu Gara	<b>A novel MISO PEM Fuel Cell control structure: Model based Control</b>
6.	66	Akash Buroolia, Radhika Gandu, Dipesh S Patle, Seshagiri Rao Ambati and Uday Bhaskar Babu Gara	<b>Economic and Environmental Feasibility of Vapor Recompression in Middle Vessel Batch Distillation for Separation of Ternary Zeotropic Mixture</b>
7.	105	Anuj Kumar, Diwakar Shende and Kailas Wasewar	<b>Reactive Separation of Biosource Levulinic acid using TOA and TBP in Sunflower oil</b>
8.	106	Anuj Kumar, Diwakar Shende and Kailas Wasewar	<b>Experimental Optimization using CCD for Reactive Separation of Levulinic acid</b>
9.	107	Asaad Salim Bded Alibraheemi and Mohd Azmier Ahmad Azmier	<b>Overview of Natural Additives Enhancers and Their Effectiveness in Mitigating Crude Oil Flow Issues: Characterization and Cases Study</b>
10.	108	Mohd Kafeel, Deepshikha Singh, Zainal Ahmad and Shabih Hasan	<b>Selectivity Engineering with Hybrid Reactive Distillation Configurations: Effect of Pseudo-Homogeneous Concentration Based Kinetics with Non-Reactive Species</b>
11.	127	Avinash Pandey, Devashish Srivastava and Vitthal L. Gole	<b>Cavitation analysis inside a sonochemical reactor</b>
12.	139	Sandeep Yadav, Bushra Khatoon, Shabih-Ul Hasan and M. Siraj Alam	<b>Hydrodynamics of Shear Thinning Fluid in a Square Microchannel: A Numerical Approach</b>
13.	175	Shivang Rampriyan and Bahni Ray	<b>Recent advances in brine concentration techniques for minimal/zero liquid discharge applications</b>
14.	227	Lalit Kumar Singh and Aradhna Pal	<b>Optimization of process parameter for cellulase production by Bacillus licheniformis MTCC 429</b>
15.	248	Shitanshu Pandey and Sushil Kumar	<b>Reactive Extraction of Gallic Acid from Fermentation Broth Using Tri-N-Octylamine in 1-Decanol: Equilibrium, Thermodynamic and Kinetics Studies</b>

**TRACK 2: Process intensification, modeling and techno-economic feasibility (Part-1) (Date: 16/04/2022 Timing – 1045 – 1245 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aXX0200r3LJ3AFEAdtxN6YrvjJThshq7XnyFxHASf5N81%40thread.tacv2/1649609425793?context=%7b%22Tid>

1.	13	Mohammed Al-Aghbari and Ashish M Gujarathi	<b>Water Management in oil field using Multi-Objective Optimization</b>
2.	30	Debika Debnath and Anirban Debbarma	<b>Study of the Electrochemical Behaviour of Proton Exchange Membrane (PEM) Fuel Cell in MATLAB/Simulink</b>
3.	75	Nitin Kanse, Prashant Dhanke, Abhijit Patil and Dattatraya Dengale	<b>Modeling and Simulation of Vacuum Membrane Distillation for Desalination</b>
4.	84	Aditya Sawant, Siddharth Tayde, Barun Singh and Nikhil Masand	<b>CleanSea : The Deep Learning Model for Ocean Waste Detection</b>
5.	85	Naveen Kumar, Ajaya Bharti and Devendra Prasad	<b>Physical and Mechanical Properties of Mg Foams and Composites Fabricated by Powder Metallurgy using Salt (NaCl)</b>
6.	95	Bushra Khatoun, Vikas Kumar Choudhary, Shabih-UI Hasan and Siraj Alam	<b>Numerical Study of Non-Newtonian Fluid Flow Behaviour in T-Type Microchannel</b>
7.	98	Kalyani Motghare, Kailas Wasewar and Diwakar Shende	<b>Microwave Assisted Recovery of butanol from aqueous media: Process Intensification approach</b>
8.	111	Antarim Dutta, M. Siraj Alam and Shabih-UI Hasan	<b>A Conceptual Design Algorithm for Hybrid Reactive Distillation Columns for Cyclic Reaction Schemes</b>
9.	122	Alankrita Priyadarshini, Partha Pratim Dutta and Paragmoni Kalita	<b>A Computational Study on the Performance of a Single Cylinder Variable Compression Ratio Diesel Engine</b>
10.	129	Ram Raj Meena, Rishi Kumar and Pramod Soni	<b>Hydrodynamic Simulation of Electrochemical Reactor using CFD</b>
11.	163	Vikas Kumar, Bushra Zehra and Ashutosh Ghosal	<b>Comparative Analysis of Extractive and Pressure Swing Distillation for Tert-Amyl-Methyl-Ether Reactive Distillation Process</b>
12.	183	Swati Yadav and Rakesh Angira	<b>Performance Evaluation of Opposition Based Differential Evolution Algorithm (OPDE) on Benchmark Functions</b>
13.	221	Rashmi Chaudhari	<b>Computation fluid dynamic study of oxygen enriched fuel in a furnace for lower stack emission pollutants</b>
14.	237	Ashish M. Gujarathi, Rashid Al-Hjari, Mohammed Al-Namani, Nassr Al Hosni and Osama Al Mazroui	<b>Machine learning based data analysis aspect for cumene production process</b>
15.	253	Mahesh Sharma, Jitendra N. Gangwar, Bireswar Paul and Sushil Kumar	<b>Modeling and Simulation of Pressurized Water Scrubbing Technology for Biogas Purification</b>

**TRACK 3: Sustainable and Green technologies (Date: 16/04/2022 Timing – 1045 – 1245 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aS4Z6EyFGT4XXnlelzfE0oonFx3GjKDoXGYdWv-4rGHs1%40thread.tacv2/1649609446827?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	50	Fiona Mary Antony, Kailas L Wasewar, Diwakar Z Shende, Sushil Kumar, Dharm Pal and Hasan Uslu	<b>Ionic Liquids as green solvents in process industry for reaction and separation: emphasizing on recovery of Protocatechuic acid</b>
2.	56	Amrisha Khandelwal, Roop Kishor and Vishwajeet Pratap Singh	<b>Sustainable utilisation of sugarcane bagasse ash in highway subgrade- A Critical review</b>
3.	58	Anugraha Karwa, Yatik Thakwani and Murchana Changmai	<b>Development of biodegradable film enhanced by date-seed extracts</b>
4.	62	Chandan Kumar Gupta, Anil Kumar Sachan and Rakesh Kumar	<b>Durability Properties of Self Compacting Concrete Using Sugarcane Bagasse Ash for Sustainable Development</b>
5.	70	Shailee Gaur, Vennu Revanth, Suresh Gupta and Amit Jain	<b>Bioconversion of low-cost Waste Engine Oil to a mixture of mono- and di-rhamnolipid: An improvement of submerged fermentation by parameter optimization</b>
6.	71	Kanchan Nandeshwar, Shyam Kodape, Ajit Rathod and Swapnil Tiwaskar	<b>A Review on the Study of Valorisation of Plant Extract using Membrane Separation</b>
7.	83	Anjali Singh, P.K. Mehta and Rakesh Kumar	<b>Sustainable Self Compacting Concrete with Recycled Coarse Aggregate and Fly As</b>
8.	94	Gaurav Kant, Himanshu Shekhar, Ashutosh Pandey and Sameer Srivastava	<b>Recombinant bio-synthesis of isoprene for industrial applications via manipulating mevalonate and non-mevalonate pathways in different model organisms: A review</b>
9.	160	Aanand Kumar and Radha Rani	<b>Importance of arbuscular mycorrhiza in amelioration of abiotic stress in plants: An approach towards climate resilient</b>
10.	164	Shikha Kumari and Sushil Kumar	<b>Potential of deep eutectic solvent's "class of green solvent "for the extraction of an organic compound: A Review</b>
11.	170	Manish Kumar and Thirugnanasambandam Sivasankar	<b>Sonochemical Synthesis of Low-Cost Catalyst from Wheat Husk and its Application</b>
12.	172	Saurabh Mishra and Vivek Kumar	<b>Improvement of fire retardant properties of flammable plastics by fire retardant coating material</b>

13.	179	Piyush Tripathi, D. Basu and Priyaranjan Pal	<b>Environmental Impact of Recycling Sewage Sludge into Cementitious Matrix: A Review</b>
14.	217	Shraddha Wadkar, Diwakar Shende and Kailas Wasewar	<b>Synthesis of chitosan-fly ash buoyant composite coated with NiO for enhanced adsorptive removal of methylene blue</b>
15.	224	Prateek Sharma, Pratik Sheth and B N Mohapatra	<b>Chemical Characterization of Refuse Derived Fuel (RDF) using Py GC-MS</b>

**TRACK 4: Other contemporary topics relevant to theme of conference (Date: 16/04/2022 Timing – 1045 – 1245 hours)**

**Session Link:** <https://teams.microsoft.com/l/meetup-join/19%3aeqLNcuZXPSvISZqI59BHxb94D-FFK7ykvGMbGFyXWSw1%40thread.tacv2/1649609463526?context=%7b%22Tid%22%3a%2275c6a54f-cdc9-4ed2-941c-7096cf7dbda0%22%2c%22Oid%22%3a%22a8896452-3723-4e3a-a1c1-3f13650e0831%22%7d>

1.	17	Debasish Debnath, Nawshad Hossain, Madhurima Som, Shawan Mandal, Samrat Roy and Anal Ranjan Sengupta	<b>A Review On The Effect Of Different Performance Parameters For Unconventional Blade H-Darrieus Wind Turbines</b>
2.	22	Ganesh Swain, Ravi Prakash Jaiswal, B.N. Rai and Ram Sharan Singh	<b>Biodegradation of Acid blue dye using chemically modified polypropylene biocarrier in a moving bed biofilm reactor: Process optimization and continuous study</b>
3.	55	Dharmendra Kumar Singh, Binayaka Nahak, Ashish Goel and Pooja Singh	<b>Finite element simulation of T-shape branch using Tube- hydroforming process</b>
4.	74	Harleen Kaur, Dixit, Hari Om, Sanjeev Kumar and Davinder Singh	<b>Potential of sewage surveillance in early detection of COVID-19: A Review</b>
5.	76	Satyabrata Nanda, Siraj Ahmed and Vilas Warudkar	<b>Effect of uniformly varying width leading-edge slots on the aerodynamic performance of wind turbine blade</b>
6.	88	Sarita Singh, Ambak Rai and Ravi Prakash Tewari	<b>Recent Advancement in Hyaluronic Acid-Based Hydrogel for Biomedical Engineering Application: A Mini-Review</b>
7.	91	Arun Singh Chahar, Priyaranjan Pal and Bhupendra Pal Singh Yadav	<b>Study on High Performance Concrete using Chemical Admixtures - A Review</b>
8.	148	M. Siraj Alam, Bushra Khatoun, Shoaib Kamil and Hitesh Babu	<b>Experimental Analysis of Cascade CSTRs with Step and Pulse Inputs</b>
9.	185	Lalit Kumar Singh and Abhimati Shukla	<b>Effect of hexavalent chromium on the growth of Aspergillus proliferans</b>
10.	188	Anchal Bahman and Deepak Sahu	<b>Safety analysis techniques used in process industries</b>

<b>11.</b>	189	Krutika Iyer, Anurag Tiwari, Neelkanth Nirmalkar and Mohit Trivedi	<b>Interfacial mass transfer and chemical reaction from a spherical drop in viscoplastic fluids</b>
<b>12.</b>	202	Sameer Srivastava, Himanshu Shekhar and Gaurav Kant	<b>Recent advances in use of 4- coumarate coenzyme A ligase (4CL) as target gene for improving delignification of paper pulp in Leucaena leucocephala in Indian perspective: A review.</b>
<b>13.</b>	208	Kapil Kumar and Shashi Bhusan Singh	<b>Reliability Evaluation of Multi-level Power Converter Topologies for DFIG Wind Turbine System</b>
<b>14.</b>	213	Navya Vajpayee, Febin Roy, Sakshi Wasson and Devesh Singh	<b>Dynamics of Viscous Dispersions in Concentric Cylinders</b>
<b>15.</b>	231	Achint Ranjan, Rama Shanker and Sachin Singh	<b>Dynamic Characterisation of Bridge Girder using EMI Technique</b>