



December 21, 2021, Tuesday (Day 1)

ICS Head office



December 22, 2021, Wednesday (Day 2)

Environmental Chemistry Section

<https://meet.google.com/ugu-anjk-fzd>

IIT Ropar, Punjab

[**Scientist-in-Charge:** Dr. Sanjeev S. Katti, Former DG, ONGC Energy Centre, Delhi

Co-Conveners: Dr. Debaprasad Mandal, IIT Ropar; Prof. Praveen Ramamurthy, IISc Bangalore;
Dr. Sharad Lande, Reliance Industries Ltd.]

9.35-9.45	Welcome address by Prof. Rajeev Ahuja, Director IIT Ropar
9.45-9.50	Introductory Remarks by Dr. Sanjeev S. Katti, Scientist-in-Charge, "Environmental Chemistry" & Department overview by HoD Chemistry, IIT Ropar
SESSION 1 (09:50-11:50) Chair: Dr. Tharamani CN, IIT Ropar	
9.50-10.30	Plenary Lecture (PL-1) Prof. Rajeev Ahuja, Director, IIT Ropar Title: Advanced Modelling of Materials for Clean Energy Applications: hydrogen storage materials and next-generation batteries
10:30-11.10	Plenary Lecture (PL-2) Prof. Sanjay Mandal, IISER Mohali Title: Smart Nanomaterials for Energy and Environment Applications
11:10-11.50	Endowment Lecture Dr. Asit Baran Panda, CSIR-NML (National Metallurgical Laboratory) Jamshedpur Title: Design and synthesis of efficient TiO ₂ based catalysts for visible light induced photocatalytic reaction
SESSION 2 (11:50-13:55) Chair: Dr. Sumeet Sharma General Manager (R&D) Reliance Industries Ltd.	
11:50-12:40	Invited Lecture (IL-1) Mr. Pradip Hosangadi, M/s Evonik Catalysts India Dr. Guillaume Vincent, France, M/s Evonik Catalysts Title: Topic 1: How Excel Rejuvenation is supporting the circular economy? Mr. Nirav Shah, M/s Evonik Catalysts, Woodlands, Texas Title: Topic 2: How Evonik's technology/catalyst solutions can help refineries/re-refineries to contribute towards sustainable society/circular economy?
12:40-13:15	Invited Lecture (IL-2) Prof. Satish Patil, IISc Bangalore Title: Organic Solar Cells: Essential Partners on the Road to Net Zero
13:15-13:55	Plenary Lecture (PL-3) Dr. Sandip Chatterjee, Scientist and Director, Ministry of Electronics and IT Title: Sustainable Environment friendly Printed Circuit Board recycling through pyro-metallurgy method
Lunch BREAK (13:55 - 14:20)	
SESSION 3 (14:20-16:30) Chair: Dr. Sanjib Patra, IIT Kharagpur	

14:20-15:00	Plenary Lecture (PL-4) Prof. Riitta Keiski, Professor & Dean, University of Oulu, Finland Title: Chemistry and Engineering enabling the Energy transition – The role of Catalysis in fostering Sustainability
15:00-15:40	Plenary Lecture (PL-5) Prof. Tapas Kumar Maji, JNCSR Bangalore Title: Coordination Driven Supramolecular Metal-Organic ‘Soft’ Hybrid Nano-catalysts
15:40-16:20	Plenary Lecture (PL-6) Prof. Ashim Chowdhury, Emeritus Fellow, Calcutta University. Former Acharya P.C Ray Professor Title: Advancement of Agrochemicals & Impact on Environment under present perspective
16:20-16:30	Oral Lecture (OL-1) Ms. Sukhjot Kaur, IIT Ropar Title: Reducing the impact of CO ₂ emissions in environment by electrochemical reduction to value-added methanol
BREAK (16:30-16:40)	
SESSION 4 (16:40-18:35) Chair: Dr. Sharad Lande, Reliance Industries Ltd	
16:40-17:20	Plenary Lecture (PL-7) Prof. Rajnish Kumar, IIT Madras Title: Chemistry of gas hydrates and how one may use it for innovative solution
17:20-17:55	Invited Lecture (IL-3) Dr. Debabrata Patra, INST Mohali Title: Self-powered Supramolecular Assembly- A Tale of Chemical Powered Motion
17:55-18:05	Oral Lecture (OL-2) Mr. Mukesh Kumar, IIT Ropar Title: High-performance and environment benign aqueous rechargeable sodium-ion/sulfur batteries
18:05-18:15	Oral Lecture (OL-3) Ms. Amreen K. Bains, IISER Mohali Title: Bioinspired radical-mediated transition-metal-free synthesis of N-heterocycles under visible light
18:15-18:25	Oral Lecture (OL-4) Mr. Gaje Singh, IIT Ropar Title: Persubstituted imidazolium-based alkaline anion exchange membrane for solid-state Zn-air batteries
18:25-18:35	Oral Lecture (OL-5) Mr. Ranadip Goswami, CSMCRI Bhavnagar Title: High-Performance Water Harvester Framework for Triphasic and Synchronous Detection of Assorted Organotoxins with Site-Memory-Reliant Security Encryption via pH-Triggered Fluoroswitching
BREAK (18:35-18:40)	
SESSION 5 (18:40-20:20) (EVENING SESSION 1) Chair: Dr. Subhadip Neogi, CSMCRI Bhavnagar	
18:40-18:50	Oral Lecture (OL-6) Mr. Ganga Singh, IIT Ropar Title: Polyoxometalates based electron transfer modulation for artificial photosynthesis
18:50-19:00	Oral Lecture (OL-7) Mr. Rajesh Das, IIT Ropar Title: Construction of Mg(II)-Organic Frameworks for Efficient Chemical Fixation of CO ₂ From Direct Air Under Environment-Friendly Mild Conditions
19:00-19:10	Oral Lecture (OL-8) Mr. Pradeep Tripathi Title: Analysis of Heavy Metals in Seed Oil of Citrullus Lanatus Plant From Arid Zone of Western Rajasthan
19:10-	Oral Lecture (OL-9)

19:20	Mr. Man Singh, IIT Ropar Title: Bimetallic transition metal phosphide/phosphate for the high-performance aqueous battery supercapacitor hybrid
19:20-19:30	Oral Lecture (OL-10) Mr. Ribhu Maity, Mugberia Gangadhar Mahavidyalaya, Purba Medinipur Title: Photodegradation of Methylene Blue by Cu(II) complexes with NNN and NNO Schiff Base ligands under sunlight irradiation
19:30-19:40	Oral Lecture (OL-11) Dr. Milan Hait, Raman University, Kota, Bilaspur Title: Bioremediation of water pollutants from the effluents of Sirgitti Industrial area in Bilaspur (C.G.)
19:40-19:50	Oral Lecture (OL-12) Ms. Shehala Siddique, University of Allahabad Title: Rapid and selective sensing of Saccharin through interference synthesis of Gum Ghatti capped Silver Nanoparticles
19:50-20:00	Oral Lecture (OL-13) Dr. Sameer Vyas, Central Soil and Materials Research Station, New Delhi Title: Influence of Aggressive Chemical Environment on the long term Durability of hydropower structures and alternative remedial Measures
20:00-20:10	Oral Lecture (OL-14) Mr. Madhu K. N., Tontadarya College of Engineering Gadag Title: Groundwater Quality Assessment for Drinking Purpose Using WQI in and around Koppal City, Karnataka State, India
20:10-20:20	Oral Lecture (OL-15) Dr. Jalaj Tripathi Devgan, Title: xxx

December 23, 2021, Thursday (Day 3)

Environmental Chemistry Section

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IIT Ropar, Punjab

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Dr. Sharad Lande, Reliance Industries Ltd.]

SESSION 6 (09:30-11:40)	
Chair: Prof. Sanjay Mandal, IISER Mohali	
9:30-10:10	Plenary Lecture (PL-8) Dr. Nitin Labhsetwar, CSIR NEERI, (National Environmental Engineering Research Institute) Nagpur Title: Low-cost Materials for Cleaner Energy and Environmental Applications
10:10-10:50	Plenary Lecture (PL-9) Dr. Santanu Dasgupta, Senior Vice President (R&D), Reliance Industries Ltd. Mumbai Title: Sustainable production of food, feed, advance biomaterials and energy through Green Synthetic Biology
10:50-11:25	Invited Lecture (IL-4) Dr. Vitthal G. Gund, Vice President & Head-R&D, Navin Fluorine International Limited Title: Applications of Green Technologies in Fluorine Chemistry for Sustainable Growth

11:25-12:00	Invited Lecture (IL-5) Dr. Swapan Ghosh, Nova Surface-Care Centre Pvt. Title: Designing of Temperature Responsive Wettability by Simple Physical Blending of Polymers and Functional nano-micro fillers
BREAK (12:00-12:10)	
SESSION 7 (12:10-14:05) Chair: Dr. Anupam Bandyopadhyay, IIT Ropar	
12:10-12:50	Plenary Lecture (PL-10) Prof. Amitava Das, IISER Kolkata Title: Molecular Assemblies and Nano-aggregates for Imaging or Theranostic Applications
12:50-13:30	Plenary Lecture (PL-11) Dr. Yogendra Shastri, Chemical Engineering, IIT Bombay Title: Sustainable Valorization of Sugar Industry Waste: Green Chemistry to Sustainable Engineering
13:30-14:05	Invited Lecture (IL-6) Dr. Ankur Bordoloi, CSIR – Indian Institute of Petroleum, Dehradun Title: Mitigation of Green House Gases for commodity chemicals
Lunch BREAK (14:05 - 14:20)	
SESSION 8 (14:20-16:25) Chair: Dr. Debabrata Patra, INST Mohali	
14:20-15:00	Plenary Lecture (PL-12) Dr. Vijay G. Habbu, superannuation Adjunct Professor, ICT, Mumbai Title: The wonder material Plastics – at the crossroads of Sustainability
15:00-15:35	Invited Lecture (IL-7) Dr. Venkat Krishnan, IIT Mandi Title: Strategic Design and Development of Nanostructured Heterogeneous Catalysts for Clean Energy and Environmental Applications
15:35-16:10	Invited Lecture (IL-8) Dr. Sanjib Patra, IIT Kharagpur Title: Designing multifunctional arylene-vinylene terpyridyl conjugates for detection of environmentally concerned analytes
16:10-16:45	Invited Lecture (IL-9) Dr. Bama Prasad Bag, CSIR-IMMT Bhubaneswar Title: Xanthene derivatives for selective detection of Organophosphates
16:45-16:55	Oral Lecture (OL-16) Mr. Nilanjan Seal, CSMCRI Bhavnagar Title: Chemo-robust and bi-functional MOF with divergent open Co(II)-nodes for cooperative deacetalization-Knoevenagel condensation and mild-condition tandem CO ₂ fixation
16:55-17:05	Oral Lecture (OL-17) Mr. Subhadeep Biswas, IIT Kharagpur Title: Application of alginate and alginate bentonite hydrogel bead supported zero-valent iron (ZVI) catalyst for 4-nitrophenol reduction
17:05-17:15	Oral Lecture (OL-18) Dr. Gourisankar Roymahapatra, Haldia Institute of Technology, West Bengal Title: In silico investigation of Hydrogen adsorption efficiency of [Oxadiazole- mLi ⁺] complexes (m = 1, 2); in pursuit of green fuel storage
BREAK (17:15-17:25)	
SESSION 9 (17:25-18:50) Chair: Dr. Debashis Adhikari, IISER Mohali	

17:25-17:35	Oral Lecture (OL-19) Mr. Vishram D. Hiremani, Karnataka University Title: Preparation and Physicochemical Assessment of Bioactive Films based on Chitosan and Starchy Powder of White Turmeric Rhizomes (<i>Curcuma Zedoaria</i>) for Green Packaging applications
17:35-17:45	Oral Lecture (OL-20) Ms. K. Vara Lakshmi, GITAM University, Visakhapatnam Title: Groundwater Chemistry and Ionic Ratios as An Indicator to Assess the possible Salinity Intrusion in Coastal District of Andhra Pradesh, India
17:45-17:55	Oral Lecture (OL-21) Mr. Kaustav Bhattacharyya, Vidyasagar College, Kolkata Title: Optimization of Process Parameters and Kinetic Approach of Biosorption by a Cadmium(II) Resistant Strain <i>Candida tropicalis</i> XTA1874 for Wastewater Treatment
17:55-18:05	Oral Lecture (OL-22) Dr. Pragati Fageria, University of Rajasthan Title: Efficient photocatalytic degradation of pollutants using ZnO/Au and ZnO/Ag nanomaterials
18:05-18:15	Oral Lecture (OL-23) Mr. Anurag Kadawasara, J. N. V. University, Jodhpur Title: Adsorptive Parameters of Peanut Shell Active Carbons (PSAC) for Removal of Fluoride Ions
18:15-18:25	Oral Lecture (OL-24) Mr. Sardar Singh Poonia, J. N. V. University, Jodhpur Title: Facile Synthesis of Thiocarbamoyl Chitosan for Adsorptive Removal of Cr(VI)
18:25-18:35	Oral Lecture (OL-25) Ms. Priya Tanwar, JNV University Jodhpur Title: Assessment of deteriorating ground water situation of Jodhpur district areas with special reference to fluoride concentration
18:35-18:40	Poster (OL-26) Dr. Shweta Vyas, University of Kota Title: Biopolymer based Nanocomposites: Sustainable Solution for Pollution Control
18:40-18:45	Poster (OL-27) Mr. Anurag Samson Lall, University of Agriculture, Technology and Sciences, Prayagraj Title: Biosorption of Zn(II) ions from aqueous solution by <i>Bombax ceiba</i> bark
BREAK (18:45-19:00)	
SESSION 10 (19:00-20:05) EVENING SESSION 2 Chair: : Dr. Subhadip Neogi, CSMCRI Bhavnagar	
19:00-19:10	Oral Lecture (OL-28) Dr. Kumud Pandey, Radha Govind Group of Institutions Meerut & NIT Hamirpur Title: Volatile Organic Compounds in Indian Atmosphere
19:10-19:20	Oral Lecture (OL-29) Nayana Senan V., Mahatma Gandhi College, Thiruvananthapuram, Kerala Title: Evaluation of Corrosion Protection of Mild Steel in 1M NaOH Medium using Zinc-Curcumin-Succinic Acid Metal Complex
19:20-19:25	Poster (OL-30) Ms. Prerna Higgins, University of Agriculture Technology and Sciences, Prayagraj Title: Efficacy of metal oxides bio-nano-composite for the adsorptive removal of pharmaceutical drug
19:25-19:30	Poster (OL-31) Mr. Runit Isaac, University of Agriculture Technology and Sciences, Prayagraj Title: Study on the Efficiency of Magnesium modified biochar composite and its adsorptive behavior towards aqueous solution of Cu ²⁺
19:30-19:40	Oral Lecture (OL-32) Ms. Divya Rathi, xxx Title: xxx
19:40-	Oral Lecture (OL-33)

19:50	<p>Ms. Ommi Amala, GITAM University, Visakhapatnam Title: Assessment of Corrosive activity and Scale Formation of Groundwater in Visakhapatnam District using Hydrochemical Facies</p>
VALEDICTORY (20:00-20:15)	
	Concluding Remarks by Dr. Sharad Lande, Reliance Industries Ltd
	Vote of Thanks by Co-Convener Prof. Praveen Ramamurthy, IISc Bangalore

December 24, 2021 (Friday) (Day 4)

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