

19<sup>TH</sup> EDITION OF  
GLOBAL CONFERENCE ON

# CATALYSIS, CHEMICAL ENGINEERING & TECHNOLOGY

*Expedite the Future Endeavours in Catalysis and  
Chemical Engineering*



## Our OCMs



STANISLAW DZWIGAJ  
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Institute of Materials Science of  
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### Scientific TOPICS

- Catalysis and Porous Materials
- Catalysis for Energy
- Photochemistry, Photobiology and Electrochemistry
- Catalysis for Renewable Sources
- Chemical Kinetics and Catalytic Activity
- Catalysis and Applications
- Homogeneous Catalysis, Molecular Catalysis
- Catalysis for Biorefineries
- Chemical Engineering
- Heterogeneous Catalysis
- Advances in Catalysis and Chemical Engineering
- Reaction Chemistry and Engineering
- Catalysis in Nanotechnology
- Industrial Catalysis and Process Engineering
- Environmental Catalysis

 **19-21**  
SEP 2024



*Rome, Italy*

| Hybrid Event



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# TENTATIVE PROGRAM

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## Keynote Presentations

<b>Thomas J Webster</b> Interstellar Therapeutics, United States	Title: Saving the environment: Removing toxic catalysts from nanoparticle synthesis
<b>Stanislaw Dzwigaj</b> Sorbonne University, France	Title: CO <sub>2</sub> -assisted dehydrogenation of propane to propene over Zn-BEA zeolites: Impact of acid–base characteristics on catalytic performance
<b>Marta Litter</b> University of General San Martin, Argentina	Title: Use of iron nanomaterials for the treatment of emergent contaminants in water
<b>Dai Yeun Jeong</b> Asia Climate Change Education Center, Korea, Republic of	Title: How to analyze the effectiveness of climate change policy
<b>Alec Groysman</b> Technion (Israeli Institute of Technology), Israel	Title: Corrosion problems and solutions in the chemical and petrochemical industry
<b>Sergey Suchkov</b> Institute for Biotech & Global Health of RosBioTech and A.I. Evdokimov MGMSU, Russian Federation	Title: Personalized and Precision Medicine (PPM) as a unique healthcare model to be set up through biodesign-inspired biotech-driven translational applications and upgraded business marketing to secure the human healthcare, wellness and biosafety
<b>Shunli Wang</b> Smart Energy Storage Institute, China	Title: Core state parameter monitoring of high-reliability smart energy storage systems

## Oral Presentations

<b>Rafael L Espinoza</b> RE Consulting, United states	Title: Main variables on the design of a fixed bed reactor
<b>Abul Kasem Fazlur Rahman</b> Oklahoma School of Science and Mathematics, United States	Title: Transition metal mediated activation of carbon dioxide
<b>Rajdeep Deka</b> Purdue University, United States	Title: Comparative study of sawdust and corn stover biomass: Evaluating the influence of reaction temperature on lignin depolymerization, sugar extraction, and reaction kinetics.
<b>Orlando Elguera</b> D.Sc. with Major in Analytical and Inorganic Chemistry/BSc. with Major in Chemical Engineering, Peru	Title: Review of research topics for scaling-up of sonochemical reactors (Sono-reactors)
<b>Sergey Suchkov</b> Institute for Biotech & Global Health of RosBioTech and A.I. Evdokimov MGMSU, Russian Federation	Title: Antibody-proteases as translational tools of the next-step generation to be applied for biotech, bioindustry and personalized and precision medical practice

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<b>Lukas Pluska</b> Exazyme GmbH, Germany	Title: Protein regression models as cornerstone of AI-guided protein evolution
<b>Osman Adiguzel</b> Firat university, Turkey	Title: Shape reversibility and functional characterization of shape memory alloys
<b>Enrico Paris</b> CREA-IT & DIAEE, Italy	Title: Enhancing syngas quality from biomass gasification using an iron-based splitting reactor
<b>Pieter Samyn</b> SIRRIS-Department Innovations in Circular Economy, Belgium	Title: Nanocellulose coatings for photocatalytic and photosynthetic properties
<b>Orchidea Maria Lecian</b> Sapienza University of Rome, Italy	Title: Markov chain of the K Ras4B dynamics and new pertinent markov-state model
<b>Ajaysing Sunilrao Nimbalkar</b> Korea Research Institute of Chemical Technology, Korea, Republic of	Title: Advancements in multimetallic alloy catalysts for enhanced biomass valorization: Unlocking sustainable solutions
<b>Doowook Kim</b> Korea institute of energy research, Korea, Republic of	Title: Parametric study on steam reforming of methane to syngas with Ru/Al <sub>2</sub> O <sub>3</sub> catalyst in an annular reactor
<b>Ashanendu Mandal</b> University of Calcutta, India	Title: Phenol removal from wastewater using innovative biological and industrial wastes as adsorbents
<b>Suresh C Ameta</b> Paher University, India	Title: Photocatalysis: An emerging green chemical pathway
<b>Reena Saxena</b> Suresh Gyan Vihar University, India	Title: Structural and functional evaluation of biochar produced from spent coffee grounds (SCG) for AgNPs removal from industrial effluent
<b>Ram Sambhar Shukla</b> CSIR-Central Salt and Marine Chemicals Research Institute (CSMCRI), India	Title : Rhodium-hexagonal mesoporous silica based effective heterogeneous catalyst for hydroformylation of vinyl esters
<b>Tokeer Ahmad</b> Jamia Millia Islamia, India	Title : Designing advanced heterostructured nanocatalysts for scalable H <sub>2</sub> production
<b>Rajesh Kumar</b> B.R.A. Bihar University, India	Title: Lipase mediated synthesis of modified bicyclic nucleosides
<b>Bhawna Rawat</b> INST Mohali, India	Title: Utilizing the undesirable oxidation of Lead-free perovskite for photocatalytic C(sp <sup>3</sup> )-H activation: Unraveling the serendipity
<b>Raina Sharma</b> Institute of Nano Science and Technology, mohali, India	Title: An investigation of the phosphate functionalization, kinetics, and mechanistic aspects of phosphorylated sporopollenin as sustainable catalyst for selective 5-Hydroxymethylfurfural formation in water
<b>Shally Gupta</b> Indian institute of Technology Delhi, India	Title: Sustainable recycling of valuable materials from lithium-ion battery waste via hydrometallurgical process

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<b>Shashank Shekhar</b> Indian Institute of Technology New Delhi, India	Title: Iron-based catalyst for production of hydrogen and carbon nanotubes through the catalytic decomposition of methane.
<b>Ieva Kiminaite</b> Lithuanian energy institute, Lithuania	Title : Upcycling of plastic to carbon black and H <sub>2</sub> -Rich gas
<b>Tianyi Hu</b> PetroChina Planning and Engineering Institute, China	Title: High performance HZSM-5 zeolite catalysts for catalytic cracking of hydrocracking diesel to produce light olefins
<b>Jiren Zheng</b> National Sun Yat-sen University, Taiwan	Title: Photocatalytic oxidation of elemental mercury by hydrophobic reduced graphene oxide modified CeO <sub>2</sub> /TiO <sub>2</sub>
<b>Xianhu Long</b> Sun Yat-sen University, China	Title: Sustainable Fe(III)/Fe(II) cycles triggered by co-catalyst of weak electrical current in Fe(III)/peroxymonosulfate system: Collaboration of radical and non-radical mechanisms
<b>Tao Zhong</b> Sun Yat-sen University, China	Title: Cu nanocrystals coupled with poly (heptazine imide) for synergistically enhanced photocatalytic CH <sub>3</sub> SH elimination: Facet engineering strengthened electron pump effect
<b>Samaila Muazu Batagarawa</b> Umaru Musa Yaradua University, Nigeria	Title: Surface enhanced hematite (Fe <sub>2</sub> O <sub>3</sub> ) from natural sand as catalyst for application in biodiesel production
<b>Mojeed Olalekan Bello</b> University of Ilorin, Ilorin, Kwara State, Nigeria	Title: Photo-degradation of methylene blue dye using TiO <sub>2</sub> Enhanced by adsorptive properties of Zeolite-Y
<b>Naima Habbab</b> Laboratory of Chemistry of Natural Gas, Faculty of Chemistry (USTHB), Algeria	Title : Synthesis and characterization of CexMnY-Mg <sub>4</sub> Al <sub>2</sub> hydrothalcite based system. application in oxidation of n-Butanol.
<b>Mahmoud Fathy Mubarak</b> Egyptian Petroleum Research Institute, Egypt	Title: Advancements in catalytic processes for sustainable chemical engineering
<b>Hossam Ahmed Aly Moustafa Teama</b> Abu Qir Fertilizers Company, Egypt	Title: Understanding membrane fouling and chemical cleaning performance for cleaning agents, a review article
<b>Toritsegbone Erik Tite</b> Durban University of Technology, South Africa	Title: Exploration of the application of free and immobilized laccase enzymes for the treatment of paper industry effluent
<b>Yohannes Yirga Kefela</b> Mekelle University, Ethiopia	Title: Mixed convection MHD boundary layer flow and heat transfer of nanofluid over an exponentially stretching sheet with effects of thermal radiation and viscous dissipation
<b>Kesatie Legesse Habtemariam</b> Mekelle University, Ethiopia	Title: Development of wearable health monitoring devices for chronic disease management
<b>Barkouch Hamid</b> University of Moulay Ismail, Morocco	Title: Development of modified electrodes for electrochemical analysis of flubendiamide under UV excitation.

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***Oral Presentation slots are available***

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## Poster Presentations

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<b>Tim Lenz</b> Technical University of Munich, Germany	Title: Perfectly isotactic polypropylene upon in situ activation of ultrarigid meso metallocenes
<b>Lukas Eylert</b> Technical University of Munich, Germany	Title: Catalytically programmed functional nano-objects using artificial intelligence
<b>Xia Li</b> Tianjin Key Laboratory for Prevention and Control of Occupational and Environmental Hazards, China	Title: Enantioselective total syntheses of flavonoid diels-alder natural products
<b>Xia Li</b> Tianjin Key Laboratory for Prevention and Control of Occupational and Environmental Hazards, China	Title : Upgrading of biomass-derived platform compound 5-hydroxymethylfurfural to high-value chemicals: An environment-friendly corrosion inhibitor
<b>Meriem Hafied</b> Batna, Algeria	Title: Structure, charge delocalization and activation of C-C, C-H, C-X bonds in small cycloalkanes: Theoretical approach

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***Poster Presentation slots are available***

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