20th Edition of International Conference on

Catalysis, Chemical Engineering and Technology

Theme: Catalytic Excellence: From Fundamentals to Industrial Applications

02-04 JUNE 2025
ROME, ITALY

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Our Scientific Committee

STANISLAW DZWIGAJ
Sorbonne University, France

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Portland State University, United States

THOMAS J J MULLER
Heinrich-Heine-Universitat Dusseldorf, Germany

DAI YEUN JEONG
Jeju National University, South Korea

SERGEY SUCHKOV
The Russian University for Medicine & The Russian Academy of Natural Sciences, Russia

MARTA I LITTER
University of General San Martin, Argentina

Scientific TOPICS

- Chemical Engineering
- Synthetic Chemistry Techniques
- Catalysis for Renewable Sources
- Green Chemistry
- Catalysis in Nanotechnology
- Catalysis for Energy
- Chemical Kinetics and Catalytic Activity
- Heterogeneous catalysis
- Analytical Methodologies
- Nuclear Chemistry/Radiochemistry
- Catalysis and Applications
- Environmental Catalysis
- Photochemistry, Photobiology and Electrochemistry
- Fluid Mechanics
- Micro-emulsion Catalysis and Catalytic Cracking\
- Macrocyclic and Supramolecular Chemistry

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Keynote Presentations

Ephraim Suhir, Portland State University, United States

Title: Will be Updated Soon....

Thomas J J Muller, Heinrich-Heine-Universitat Dusseldorf, Germany

Title: Catalytic one-pot multicomponent syntheses of functional chromophores – Synthetic efficiency meets functionality design

Stanislaw Dzwigaj, Sorbonne University, France

Title: Application of metal single-site zeolite catalysts in heterogeneous catalysis

Abdeltif Amrane, Institute of Chemical Sciences of Rennes, France

Title: Will be Updated Soon....

Marta I Litter, University of General San Martin, Argentina

Title: Use of iron nanomaterials for the treatment of metals, metalloids and emergent contaminants in water

Dai Yeun Jeong, Jeju National University, South Korea

Title: The roles and capacity building of NGOs as agents responding to climate change

Sergey Suchkov, R&D Director of the National Center for Human Photosynthesis, Mexico

Title: Personalized and Precision Medicine (PPM) as a unique healthcare model via design-driven bio- and chemical engineering view of biotech

Junwang Tang, Tsinghua University, China

Title: From photocatalysis to photon-phonon co-driven catalysis for inert molecules activation

Oral Presentations

Haibo Ge, Texas Tech University, United States

Title: Distal functionalization via transition metal catalysis

Marina Ratova, Manchester Metropolitan University, United Kingdom

Title: Visible light-active bismuth oxide-based photocatalytic coatings and their potential against biological contaminants

Chima Anyaegbu, Monash University, Australia

Title: Decatungstate catalyzed photochemical synthesis of 2-fluorosulfonyl derivatives

M R Akbari, Department of Civil Engineering and Chemical Engineering, Germany

Title: Analytical expressions of substrate concentrations for different particles in an immobilized enzyme system by new method AYM

Shivam, Helmholtz Zentrum Berlin fur Materialien und Energie, Germany

Title: Structured multilayer thin films for catalytic applications: A novel approach on catalyst design utilizing microfabrication techniques

Anthony Abou Rahhal, UCEIV/ULCO, France

Title: The effect of physico-chemical properties obtained by various preparation techniques on CoCuAl Oxide for CO2 purification of industrial flue gas

Luigi Antonio Pezone, Santa Maria Capua Vetere, Italy

Title: Global cooling is not a cost but the best economic investment of the world's people

Davide Frumento, RomaTre University, Italy

Title: Cultivating chlorella vulgaris in tubular photobioreactors: A potential lipid source for biodiesel generation

Oral Presentations

Misganaw Alemu Zeleke, University of Limerick, Ireland

Title: Green synthesis of SnO2@Cu(O,S) nanocomposite catalysts for reduction of Cr(VI) under dark condition

Michal Vastyl, Technical University of Ostrava, Czech Republic

Title: Microwave transformation of high-density polyethylene to hydrogen: the role of CoFeAlOx catalyst

Vladimir Valentinovich Egorov, FSRC "Crystallography and Photonics" RAS, Russian Federation

Title: Quantum-classical mechanics: Principles, applications, and prospects

Parfenova Maria, Siberian Branch of the Russian Academy of Sciences, Russian Federation

Title: Crystallization processes in Li,M,K||Cl (M=Nd,Pr) systems: Digital twins of phase diagrams, cross-validation of horizontal and vertical material balances, DTA spectrum simulation

Mikhail Kashchenko, Ural'skiy Gosudarstvennyy Lesotekhnicheskiy Universitet, Russian Federation

Title: Universal mechanism of catalysis of low-temperature nuclear fusion

Ahmad Hakamy, Umm Al-Qura University, Saudi Arabia

Title: An analysis of the magnetic properties of MxSn1−xOy nanocomposites in comparison

Reem Albashrawi, Saudi Aramco, Saudi Arabia

Title: Enhancing hydrogen production: Acidic-basic structural modification of nickel-based catalysts for ammonia decomposition

Osman Adiguzel, Firat University, Turkey

Title: The Role of twinning and detwinning reactions in martensitic transformations in shape memory alloys

Delia Teresa Sponza, Dokuz Eylul University, Turkey

Title: Photocatalytic hydrogen energy recovery from sulfide-containing wastewater using thiol-UiO-66 /Mn0.5Cd0.5S nanocomposites

Sergey Suchkov, R&D Director of the National Center for Human Photosynthesis, Mexico

Title: Antibody-proteases as a generation of unique biomarkers, potential targets and translational tools towards design-driven bio- and chemical engineering and personalized and precision medical practice

Shengli Jiang, Chinese Academy of Sciences, China

Title: Effect of heat treatment on the tribocorrosion behavior of 20Cr13 martensitic stainless steel

Liang Junxi, Northwest Minzu University, China

Title: Investigation on the mechanism of fixed-point modification of the attapulgite using high-throughput model inference

Guoshu Deng, Southeast University, China

Title: Facile synthesis and efficient nickel-based photothermal catalyst for selective production of CH4 and CO

Dae Dong Sung, Korea University Sejong Campus, Korea, Republic of

Title: New methods for identifying in vivo biomedical reaction mechanisms

Oral Presentations

Rajeshree Liya, Ahmedabad University, India

Title: Effect of substitution over aseries of La0.85Sr0.15Co1−yMyO3 (M = Rh, Pt, Ru, and Pd) perovskites for electrooxidation of water

Pankaj Kumar, Guru Ghasidas Vishwavidyalaya, India

Title: Hydrodeoxygenation of triglycerides/fatty acid over supported metal catalysts for the production of green diesel

Keyur Bhatt, Ganpat University, India

Title: Maximizing catalytic efficiency: Nano palladium integration with hetero calixarenes for future solutions

Akanksha Sharma, Ahmedabad University, India

Title: Enhanced CO2 reduction efficiency through tailored metal-support interactions in electrocatalysts

Ashanendu Mandal, University of Calcutta, India

Title: Application of solid waste materials for adsorptive removal of toxic phenol from wastewater to protect environment and also to generate circular economy

K O Xavier, Indian Oil Corporation Limited, India

Title: Advances in hydrotreating catalyst technologies for enhancing refinery sustainability

Reena Saxena, Suresh Gyan Vihar University, India

Title: Strategies for activating biochar to enhance its adsorbent properties through process condition optimization

Chidambaram Velusamy, Indian Oil Corporation Ltd, India

Title: Catalyst intervention for maximising light olefins in high severity FCC process

Suresh C Ameta, Paher University, India

Title: Photocatalysis: An emerging route for waste water treatment

Srinivasan T, Agurchand Manmull Jain College, India

Title: X-ray crystallography & structure based drug design

Sudip Barman, National Institute of Science Education and Research, India

Title: Hydrogen spillover enhances alkaline hydrogen electrocatalysis on interface-rich metallic Pt-supported MoO3

Girijesh Kumar Verma, Deen Dayal Upadhyay Gorakhpur University, India

Title: DMAP catalyzed heterocycle synthesis

Amarendra Kumar, Indian Institute Of Technology (IIT) Tirupati, India

Title: Design and optimization of a thermal air sterilizer prototype for airborne pathogen deactivation: A CFD approach

Manpriya Chopra, Lovely Professional University, India

Title: Environmental catalysis

Prakash Kondekar, Indian Institute of Naturopathy, India

Title: Food toxicity

Oral Presentations

Collin G Joseph, University Malaysia Sabah, Malaysia

Title: Detergent wastewater treatment using catalytic and non-catalytic ozone gas: Current updates and future directions

Hossam Ahmed Aly Moustafa Tieama, Abu Qir Fertilizers and Chemicals Industries Company, Egypt

Title: Understanding membrane fouling and chemical cleaning performance for cleaning agents, a review article

Jamal Zimou, Université Ibn Tofail, Morocco

Title: Experimental and numerical study of Ce1-xFexO2 thin films for photovoltaic applications

Omar Boualam, Université Sidi Mohamed Ben Abdellah, Morocco

Title: Catalytic oxidation of phenol using iron-supported illite: Optimization of parameters for efficient wastewater treatment

Sarra Kitanou, Ibn Tofail University, Morocco

Title: Hybrid process Membrane Bioreactor (MBR) in domestic wastewater treatment: Performance and process modeling

Rawia Nasri, University of Tunis El Manar, Tunisia

Title: Photocatalytic activities under solar light of NaLi1.07Co2.94(MoO4)5 nanoparticles

Mabatho Moreroa, University of South Africa, South Africa

Title: Co-digestion of abattoir effluent and rumen content for waste management and biogas production – A case study

Mbemba Kiele Molingo, Marien Ngouabi University, Congo

Title: Development of a process for producing zirconium rich alkali-resistant glasses containing heavy metals present in fly ashes from municipal solids waste incineration

Maria Candeia Kuliakita Sakukuma, Higher Institute of Education Sciences in Lubango/Huila (ISCED-HUILA), Angola

Title: Studies towards at the synthesis of (+)-Adenophorine

Ramona Massoud, Iran National Standards Organization, Iran (Islamic Republic of)

Title: Food bio decontamination and probiotics

Ardeshir Hesampour Mahalati, Islamic Azad University, Iran (Islamic Republic of)

Title: Catalytic and thermostability engineering of phytase enzyme through targeted site-directed mutagenesis for industrial enzyme application

John Godwin, Kogi State College of Education, Nigeria

Nanochemistry: Current perspective and further prospects with Artificial Intelligence (AI)

Oral Presentation slots are still Open!!

Poster Presentation

Xiuping Liao, Macquarie University, Australia

Title: Gasification of solid wastes for high-purity hydrogen and syngas production with CO2 capture

Albert Pujol, Christen Ostenfeld and Wriborg Jønson, Denmark

Title: Direct air capture cost reduction and market development via process intensification. Establishing the DAC insetting concept

Oleksandr Lozovskyi, Institue of Colloid Chemistry and Chemistry of Water, Ukraine

Poster Presentation

Title: Processing of polyethylene into hydrocarbon fuels by catalytic cracking on Pillared Inter Layered Clays (PILC)

Rizwan Ali, Khalifa University, United Arab Emirates

Title: Hierarchically structured nanospherical fibrous silica-supported bimetallic catalysts: An enhanced performance in methane decomposition for simultaneous production of hydrogen and carbon nanomaterials

Fadi Ibrahim Ahmed, Head of Chemistry Department of Al-shujaa bin Al-aslam School, Kuwait

Title: Manufacture and use of a submarine with 3D artificial intelligence-engineered nano-polymer membranes to dually address water pollution in the Arabian Gulf and reduce co2 in air

Abdulwahab Ali Hussein Salah, King Fahd University Of Petroleum And Minerals, Saudi Arabia

Title: 3D RuCo spheres on carbon cloth with phosphorus-nitrogen co-doping for improved hydrogen and oxygen evolution electrocatalysis

Muhammad Kamran Shereen, Southern University of Science and Technology, China

Title: Design and performance analysis of a U-Shaped slot rectangular microstrip patch antenna for wearable health monitoring systems

Jian Li, Research Institute Of Petroleum Exploration And Development, China

Title: Effect of organic phosphorus addition on the state of active metal species and catalytic performance of NiW/Al2O3 hydrodesulfurization catalyst

Zhusong Xu, Research Institute Of Petroleum Exploration And Development, China

Title: Surfactant-confined synthesis of novel W-precursor and its application in the preparation of efficient hydrotreating catalysts

Farida Babayeva, Institute of Petrochemical Processes, Azerbaijan

Title: Dehydration dimerization of methano

Tarek K Motawi, Cairo University, Egypt

Title: Potential serum biomarkers for early detection of diabetic nephropathy

Ayoub Boualli, Cadi Ayyad University, Morocco

Title: Contribution to the valorization of tetraclinis articulata (thuya) wood sawdust: Hemisynthesis and anticancer activity of natural and hemisynthetic products

Beatice Makasi, University of South Africa, South Africa

Title: Adsorptive desulfurization of diesel fuel using activated carbon from waste biomass (Carica papaya-PVA)

Lefrada Leila, Faculty of Exact Sciences and Sciences of Nature and Life, Algeria

Title: Synthesis and characterization of new asymmetric triazacyclohexane ligands

Armin Mohebbi, Amir Kabir University Of Tech, Iran (Islamic Republic Of)

Title: Experimental investigation on the effects of oxidizing and non-oxidizing biocides on microbial disinfection of cooling tower of Kangan Petro refining company

Oussama Bachir Bouiadjra, Djillali Liabes University, Algeria

Title: Fe doping effects on the electronic structure and visible-light absorption of BaInO?F: Insights for photoelectrochemical applications using first-principles calculations

Poster Presentation slots are still Open!!