

18TH EDITION OF THE INTERNATIONAL
CONFERENCE ON

CATALYSIS, CHEMICAL ENGINEERING, AND TECHNOLOGY

*“From Discovery to Application: Catalytic
Innovations for Industrial Progress”*



Our SCIENTIFIC COMMITTEE



STANISLAW DZWIGAJ
Sorbonne University,
France



MICHELE ARESTA
Innovative Catalysis for Carbon
Recycling-IC2R, Italy



VICTOR CERDA
University of the Balearic
Island, Spain



MARTA I LITTER
University of General San
Martin, Argentina



DAI YEUN JEONG
Jeju National University, Korea,
Republic of



SERGEY SUCHKOV
Moscow State University of Food
Industry (MGUPP),
Russian Federation



M A MARTIN LUENGO
Institute of Materials Science of
Madrid, Spain

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
- Catalysts and Catalytic processes
- Catalysis and Zeolites
- Catalytic Materials
- Surface Chemistry: Colloid and Surface aspects



17-19
JUN 2024



Paris, France

| Hybrid Event



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Phone: +1 (702) 988 2320 | Whatsapp: +1 (540) 709 1879

TENTATIVE PROGRAM

Keynote Presentations

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| Stanislaw Dzwigaj Sorbonne University, France | Title: Application of metal single-site zeolite catalysts in heterogeneous catalysis |
| Michele Aresta Innovative Catalysis for Carbon Recycling-IC2R, Italy | Title: Towards the carbon cyclic economy: Catalysis for CO ₂ conversion into fuels |
| Victor Cerda University of the Balearic Island, Spain | Title: Autoanalysis, a powerful software for laboratory automation |
| M A Martin Luengo Institute of Materials Science of Madrid, Spain | Title: Catalysis chemical engineering and technology, catalysis for renewable sources, green chemistry |
| Sergey Suchkov The Russian Academy of Natural Sciences, 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 |
| Dai Yeun Jeong Jeju National University, Korea, Republic of | Title: The limitations inherent in sustainable development and how to overcome them |
| Venko Beschkov Bulgarian Academy of Sciences, Bulgaria | Title: Energy production by integrated adsorption and catalysis in fuel cells – the case of hydrogen sulfide |
| Marta I Litter University of General San Martin, Argentina | Title: TiO ₂ photocatalytic removal of hexavalent chromium and arsenic |

Oral Presentations

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| Haibo Ge Texas Tech University, Unites States Of America | Title: Distal functionalization via transition metal catalysis |
| Bijoy Biswas Auburn University, Unites States Of America | Title: Catalytic hydrothermal liquefaction of food waste: Screening the process parameter on product yield and characterizations |
| Ismaila Mudi University of Birmingham, United Kingdom | Title: Catalytic hydrogenation of furfural to 2-methylfuran over Ni/acidified biochar catalyst |
| Mustapha Yusuf University of Birmingham, United Kingdom | Title: Catalytic hydrodeoxygenation of benzoic acid as a typical bio-oil model compound: Reaction and kinetics |
| Jane Mueller Almac, United Kingdom | Title: IN Silico Informed metaGenomic Harvesting Technology- (INSIGHT) - How a smart platform can accelerate the timelines of genes-to-GMP |

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| Orchidea Maria Lecian Sapienza University of Rome, Italy | Title: Markov chain of the K Ras4B dynamics and new pertinent markov-state model |
| Fabrizio Ambrosino University of Naples Federico II, Italy | Title: Study and characterization of zeolites for the removal of artificial radionuclides in wastewater samples from nuclear power plants |
| Jose Angel Siles Lopez University of Cordoba, Spain | Title: Towards improving urban waste management: Characterization and evaluation of odorous impact |
| Martina Kapp MARVIC EuropaVerde, Germany | Title: Moringa from sustainable cultivation exclusively from Cuba |
| Elisabete Alegria Instituto Superior de Engenharia de Lisboa, Portugal | Title: Halogen-enhanced metal-organic frameworks: Selective CO ₂ capture and sustainable chemical fixation |
| Parul Verma University of Groningen, Netherlands | Title: Biomimetic approach towards visible light-driven hydrogen generation based on a porphyrin-based coordination polymer gel |
| Danuta Olszewska AGH University of Krokow, Poland | Title: Catalytic materials for flue gas cleaning based on used drinking water filters |
| Janusz Lasek Institute of Energy and Fuel Processing Technology, Poland | Title: Simultaneous removal of VOC and NO _x from air in photo-catalytic process using a pilot-scale photo-reactor |
| Simon Lukato University of Warsaw, Poland | Title: Green and scalable approaches for synthesis and encapsulation of clean nanoclusters inside cerium MOFs for catalysis: Sustainable synthesis of exovinylene carbonates and glycerol carbonate from CO ₂ |
| Cesar I Mendez Garcia AspenTech, Mexico | Title: Mathematical modeling, optimization and design of control schemes for chemical reactors applied to the production of clean energy |
| Dror Malka Holon Institute of Technology, Israel | Title: Improving thermo-optic phase shifter technology using silicon strip waveguide with TiN heaters |
| Sergey Suchkov The Russian Academy of Natural Sciences, 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 |
| Vasily Ivanovich Lutsyk Russian Academy of Sciences, Russian Federation | Title: Phase diagrams 3D computer models as a novel tool to design the catalytic materials |
| Alexey Tsyganenko St.Petersburg State University, Russian Federation | Title: Advances in FTIR spectroscopy of catalysts |
| Choong Kil Seo Howon University, Korea, Republic of | Title: Harmful gases reduction characteristics according to the additive catalysts and support types of H ₂ -SCR |

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| Muhammad Tayyab Tsinghua University, China | Title: A binary dumbbell visible light driven photocatalyst for simultaneous hydrogen production with the selective oxidation of benzyl alcohol to enzaldehyde |
| Shunli Wang Smart Energy Storage Institute, China | Title: Large-scale energy storage safety warning and risk monitoring |
| Chaalal Omar Abu Dhabi University, Abu Dhabi University | Title: Possible application of new natural surfactant extracted from UAE desert plants in EOR of a selected carbonate oil reservoir: An experimental approach |
| Yarub Al Douri University of Sharjah, United Arab Emirates | Title: Incorporating nanotechnology into renewable energy |
| Orlando Armando Elguera Ysnaga National University of Engineering, Peru | Title: Review of research topics for scaling-up of sonochemical reactors (sono-reactors) |
| Osman Adiguzel Firat University, Turkey | Title: Shape reversibility and diffusionless transformations in shape memory alloys |
| Ozcan Koysuren Ankara University, Turkey | Title: Self-cleaning coatings based on the SiO ₂ /WO ₃ /ZnO film for solar cells |
| Cemil Koyunoglu Yalova university, Turkey | Title: Boron-doped catalysts and the production of energy from microalgae |
| Sandeep Gholap A star Institute of Sustainability for Chemicals, Energy and Environment (ISCE2), Singapore | Title: Single atom catalysis in biomass derived feedstock conversion |
| Sung Chyr Lin National Chung Hsing University, Taiwan | Title: Preparation and application of modified loofah sponges for metal chelation, protein purification, and enzyme immobilization |
| Ashanendu Mandal University of Calcutta, India | Title: Phenol removal from wastewater using innovative biological and industrial wastes as adsorbents |
| Suresh C Ameta Paher University, India | Title: Photocatalysis: A promising green chemical pathway |
| Prakash Kondekar Indian Institute of Naturopathy, India | Title: Fluid Mechanics for food industry |
| Ram Sambhar Shukla Inorganic Materials and Catalysis Division, India | Title: Cyclohexane oxidation catalysed by ruthenium complex at atmospheric pressure of molecular oxygen |
| Sirshendu Guha Engineers India Limited, India | Title: The primary aqueous aluminum-copper battery |
| Damodar V Prabhu Wilson College, India | Title: Transition metal ion catalysed studies of perfumery alcohols and phenols |
| Tokeer Ahmad Jamia Millia Islamia, India | Title: Functional heterojunctions nanocatalysts for scalable hydrogen production |

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| Arun K Shandilya Dr.Hari Singh Gour University Sagar, India | Title: The helium in the petroliferous tube wells in Saugor Division, Southern Ganga Basin |
| Aditi Singhal Ahmedabad University, India | Title: Preparation and oxygen evolution reaction on nanoporous semi-transparent La _{0.8} Sr _{0.2} CoO ₃ coatings: Stability and mechanism in neutral medium |
| Sanjeev Yadav Shiv Nadar Institution of Eminence, India | Title: Hydrogen rich syngas using steam gasification of mixed food waste via nickel based catalyst |
| Divya Bajpai Tripathy Galgotias University, India | Title: Introduction, types, properties, and applications of switchable solvents: A review |
| Raina Sharma Institute of Nano Science and Technology, 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 |
| Komal Verma Indian Institute of Technology Guwahati, India | Title: Enhancing industrial wastewater treatment: Efficacy and optimization of ultrasound-assisted laccase immobilized on magnetic Fe ₃ O ₄ nanoparticles |
| Bhawna Rawat Institute of Nano Science and Technology, India | Title: Utilizing the undesirable oxidation of lead-free perovskite for photocatalytic C(sp ³)H activation: Unraveling the serendipity |
| RaviKrishna Chatti Tata Steel Ltd, India | Title: Characterization of zinc in blast furnace sludge in an integrated steel plant |
| Naveen Kulkarni Queensland University of Technology, India | Title: Novel enzymatic route for industrial aldehyde oxidation: A key step towards green chemistry |
| Neha Pandey Tata Steel Limited, India | Title: Photodegradation of total cyanide with the synergistic approach of H ₂ O ₂ and NaOCl |
| Sohan Bir Singh Indian Institute of Technology Guwahati, India | Title: Desulfurization by reactive adsorption over zinc oxide based adsorbents |
| Baibhav Kumar Delhi Technological University, India | Title: Effect of grain size on machinability and fatigue life of Inconel -718 |
| Tarnveer Kaur Sri Guru Granth Sahib World University, India | Title: Thermophysical and FTIR properties of different amino acids in aqueous 1-butyl-3-methylimidazolium bromide solutions |
| Sudip Barman National Institute of Science Education and Research, India | Title: IrO ₂ -modified RuO ₂ nanowires/nitrogen-doped carbon composite for effective overall water splitting in all pH |
| Alok Kole RCC Institute of Information Technology, India | Title: Application of artificial intelligence in process control & automation of chemical industry |

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| Haitham Muhammad Bahaidarah King Fahd University of Petroleum and Minerals, Saudi Arabia | Title: A numerical investigation of the performance of a thermoelectric based water distiller |
| Ahmad Hakamy Umm Al-Qura University, Saudi Arabia | Title: Influence of annealing temperature on the structure and dielectric characterization of Indium-doped Tin Oxide (ITO) thin films on a boro-float substrate prepared by radio frequency sputtering |
| Safdar Hossain SK King Faisal University, Saudi Arabia | Title: Carbon support materials for the electrocatalyst for the formic acid electrooxidation |
| Yousef Alqahs Alanezi College of Technological Studies, PAAET, Kuwait | Title: Surface functionalized ceramic membrane using super hydrophilic catalysis to enhance of oil in water separation |
| Janus Louw Stellenbosch University, South Africa | Title: Techno-economic and life-cycle assessment of biobased plastic production |
| Janus Louw Stellenbosch University, South Africa | Title: Economic and environmental benefits of bioprocess improvements for the production of 2,3-butanediol and adipic acid in a sugarcane biorefinery |
| Mangaka Clara Matoetoe Cape Peninsula University of Technology, South Africa | Title: Preparation, characterization, and evaluation of electrochemical properties of binary mixed oxides of silica and ceria nanocomposite |
| Siphelo Ngqoloda Mintek, South Africa | Title: Application of platinum-alloy nanostructures to enhance ORR activity in PEMFCs |
| Nyiko Chauke Mintek, South Africa | Title: Tuning photoelectrocatalytic activities of BiVO ₄ nanofibers via annealing temperature |
| Jana Pisk University of Zagreb, Croatia (Hrvatska) | Title: Catalytic potential of vanadium coordination compounds in oxidation reactions |
| Boungou Cedric Clarfeler Marien Ngouabi University, Congo | Title: Coadsorption of H and Li on perfect and defective Ag(110) and Ag(111) surfaces: A DFT study with and without dispersion correction |
| Malonda Boungou Brice Rodrigue Marien Ngouabi University, Congo | Title: Adsorption and dissociation of Isocyanic acid (HNCO) on Rh(001) surface: A DFT study |
| Young Sang Cho Climate and Environmental Research Institute, Korea, Republic of | Title: Production of petroleum-like hydrocarbons on rock particles with H ₂ O and carbon compounds |
| Fouad El Mansouri Abdelmalek Essaadi University, Morocco | Title: Evaluation of different extraction methods on the phenolic profile and the antioxidant potential of ceratonia siliqua L. Pods extracts |
| Abdelmjid Bouazizi University of Moulay Ismail, Morocco | Title: Preparation and analysis of an efficient nanofiltration membrane with TiO ₂ -doped ZrO ₂ on pozzolan support for efficient filtration of dyes and heavy metal solution |

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| Ahmed Tawfik Kuwait University, Kuwait | Title: A Novel Approach Using Household Waste Digestate to Overcome Mono-Ethylene Glycol Inhibition for hydrogen producers |
| Seongwoo Woo Ethiopian Technical University, Ethiopia | Title: Improving the fatigue design of mechanical systems such as refrigerator |
| Ilhem Belarbi University of Mostaganem, Algeria | Title: Development and characterization of a new dolomite-based catalyst: Application to the photocatalytic degradation of pentachlorophenol |
| Siham Barama University of Sciences and Technology Houari Boumediene of Algiers, Algeria | Title: Driven visible-light of strategically photocatalytic degradation of methylene blue in water over Au-Ce@Amb catalyst and g-C ₃ N ₄ co-catalyst |
| Ademola Bolanle Raheem University of Port Harcourt, Nigeria | Title: Effective and green catalysts for the chemical depolymerisation of polyethylene terephthalate plastic bottle waste into its monomers and other products |
| Belhakem Mostefa University of Mostaganem, Algeria | Title: Selective catalytic of CO hydrogenation over functionalized Algerian diatomite |
| Naitali Fateh University of Science and Technology Houari Boumediene, Algeria | Title: Study of ketoprofen removal kinetics by a semiconductor material in a double tube reactor |
| Yamina Chergui University of Ahmed draia Adrar Algeria, Algeria | Title: Adsorption of Basic dye on Grape Marc based carbons activated with zinc chloride |
| Khayit Turayev University Termiz, Uzbekistan | Title: [C ₂₀ H ₂₄ CuNa ₂ O ₁₈ S ₄] _n complex compound synthesis and analysis |
| Arzu Akif Academician Y.H.Mammadaliyev Institute of Petrochemical Processes, Azerbaijan | Title: Oxidative dehydrogenation of 4-vinylcyclohexene to styrene in a two section reactor on metal-containing zeolites |
| Sadiq Hassan Yahya Khoreem Al-Razi University, Yemen | Title: Optical property enhancement of Zn-doped BaNi ferrite for advanced nanotechnology applications |
| Yahaya Kudush Kawa Njala University, Sierra Leone | Title: Assessment of solidwaste Management at Panga and Kabonde Chiefdoms in Pujehun District, Southern Sierra Leone |
| Isham Alzoubi Tehran University, Syria | Title: Predict energy consumption for land leveling using Integrating artificial neural network and PSO algorithm (PSO-ANN), Artificial Neural Networks (ANNs) and regression |
| Maria Candeia Kuliakita Sakukuma Federal University of Bahia, Syria | Title: Use of organocatalysis for the synthesis of phenyl-hydroxylated-butyrac acids |
| Reza hadjiaghaie Vafaie University of Bonab, Iran | Title: Control and automation of fluid at micro/nano scale for bio-analysis applications |

TENTATIVE PROGRAM

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| Ramona Massoud Iran National Standards Organization, Iran | Title: Heavy metals bioremoval by lactobacillus acidophilus in milk as a green technology |
| Zahra Karimi University of Science and Technology, Iran | Title: Red mud-based catalysts |
| Mohammad Ebadollahi K.N. Toosi University of Technology, Iran | Title: Feasibility study of using green technologies in order to supply energy and waste management of direct reduction iron plant |

Oral Presentation slots are available

Poster Presentations

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| Marco Antonio Gaya de Figueiredo State University of Rio de Janeiro, Brazil | Title: Technology roadmap: Trends in the use of fluidized bed catalytic cracking catalysts in bio-oil co-processing in refineries |
| Elisabete Alegria Instituto Superior de Engenharia de Lisboa, Portugal | Title: Nanocomposites based on Fe ₃ O ₄ and BaTiO ₃ in oxidation of benzyl alcohol and 1-phenylethanol using different energy inputs |
| Xia Li Tianjin Key Laboratory for Prevention and Control of Occupational and Environmental Hazards, China | Title: Catalytic asymmetric diels-alder reaction of 2-Hydroxychalcone as a dienophile with VANOL-borate ester complex |
| Xia Li Tianjin Key Laboratory for Prevention and Control of Occupational and Environmental Hazards, China | Title: Synthesis and anti-hypoxia activity of salidroside |
| S R Varadhan Netaji IAS Academy, India | Title: Spectroscopic investigation and vibrational assignments on life saving pharmaceutical compounds |
| Kapil Satya Pal Singh Indian Institute of Technology Bombay, India | Title: Synthesis of 2-phenyl ethyl acetate using cation exchange resin in multifunctional reactors |
| Kartik Upadhyay Kurukshetra University, India | Title: Plastic waste to liquid fuel through pyrolysis |
| Alejandro Martinez Amariz University of Santander, Colombia | Title: Technical feasibility study in obtaining hydrogen through electrolysis using process water from crude extraction wells and existing energy surplus in a Colombia oil field |
| Abdulaziz Alghamdi King Fahd University of Petroleum and Minerals, Saudi Arabia | Title: Catalytic conversion of low-density polyethylene/HVGO blend to light olefins over zeolite catalyst |
| Amru Alghamdi King Fahd University of Petroleum and Minerals, Saudi Arabia | Title: Autoignition temperature prediction using machine learning |
| Mohammed Mesrar University of Sidi Mohamed Ben Abdellah, Morocco | Title: Advancements in dielectric materials: A comprehensive study on properties, synthesis, and applications |

TENTATIVE PROGRAM

Al Zahraa Fatima El Cheikh
Limerick University, Lebanon

Title: D-Xylose dehydration into 2-furfuraldehyde using novel zinc-copper-based catalysts

Rekaik Mouna

Mohamed Seddik Ben Yahia University of
Jijel, Algeria

Title: Nickel-alumina composite coatings on a steel substrate

Larbi Nour El Houda

University of Mostaganem, Algeria

Title: The dynamics of dye interactions: Simultaneous (dual) removal of two textile dyes from industrial effluents using humic substances

Wapwera Augustine Jidimma

University of Jos, Nigeria

Title: A review on the the effect of paper mill effluent in improving soil nutrient for agricultural productivity

Mohanad Hussein Oleiwi

University of Babylon, Iraq

Title: Experimental study on the heat transfer enhancement of a latent heat thermal energy storage using air injection technique

Poster Presentation slots are available