

# 21<sup>st</sup> Edition of Global Conference on Catalysis, Chemical Engineering & Technology

Theme: Exploring New  
Horizons in Catalysis and  
Chemical Engineering



## Our OCMs



STANISLAW DZWIGAJ  
Sorbonne University, France



THOMAS J WEBSTER  
Interstellar Therapeutics,  
United States



DAI YEUN JEONG  
Asia Climate Change Education  
Center, Korea, Republic of



VLADISLAV SADYKOV  
Boriskov Institute of Catalysis,  
Russian Federation



SERGEY SUCHKOV  
R&D Director of the National Center  
for Human Photosynthesis, Mexico



ENRICO PARIS  
CREA-IT & DIAEE, Italy

11-13<sup>TH</sup>  
SEPTEMBER  
2025

## Scientific TOPICS

- Catalysis for Energy
- Chemical Engineering
- Heterogeneous Catalysis
- Environmental Catalysis
- Fluid Mechanics
- Petrochemical Engineering
- Green and Sustainable Chemistry
- Catalysis for Renewable Sources
- Catalysis for Biorefineries
- Advances in Catalysis and Chemical Engineering
- Biocatalysis and Biotransformation
- Surface Chemistry: Colloid and Surface aspects
- Computational Catalysis
- Homogeneous Catalysis
- Industrial Catalysis
- Organocatalysis
- Separation Processes
- Enzymatic Catalysis and Microbial Technology

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**VENUE**

Olympia Hotel, Events & Spa  
Carrer Mestre Serrano, 5, 46120 Alborià  
Valencia, Spain

**Stanislaw Dzwigaj, Sorbonne University, France**

Title: Application of vanadium and tantalum single-site zeolite catalysts in catalysis

**Thomas J Webster, Interstellar Therapeutics, United States**

Title: 30,000 nano implants in humans with no infections, no loosening, and no failures

**Dai Yeun Jeong, Asia Climate Change Education Center, Korea**

Title: Human impact on natural environment and its implications

**Vladislav Sadykov, Boreskov Institute of Catalysis, Russian Federation**

Title: Design of nanocomposite materials for active components of structured catalysts for biofuels transformation into syngas, catalytic layers of membrane reactors with oxygen/hydrogen separation and anodes of solid oxide fuels cells operating in the internal reforming mode

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

Title: Personalized and precision medicine (PPM) as a unique healthcare model through biodesign-inspired & biotech-driven translational applications and upgraded business marketing to secure the human healthcare and biosafety

**Isabel Oller Alberola, Plataforma Solar de Almería, Spain**

Title: Solar heterogeneous photocatalysis and photochemistry for urban wastewater regeneration and reuse

**Jean Paul Lange, University of Twente, Netherlands**

Title: Valorizing lignocellulose to ethylene glycol: Catalysis, catalyst deactivation and conceptual process design

**Enrico Paris, CREA-IT & DIAEE, Italy**

Title: Effect of bed material on syngas quality: Comparison of biomass gasification with different bed materials

**Ho Soon Min, INTI International University, Malaysia**

Title: Will be updated soon

**Haibo Ge, Texas Tech University, United States**

Title: Distal functionalization via transition metal catalysis

**Beatrice Vincenti, Sapienza University of Rome, Italy**

Title: Cleaner syngas from biomass gasification: Is K-Feldspar the key?

**Inayath Ali Khan, University of Southern Denmark, Denmark**

Title: Scalable synthesis of the PEM electrolysis anode material

**Martin Vlcek, Independent Researcher, Czech Republic**

Title: The living water

**Pawel Huninik, Adam Mickiewicz University, Poland**

Title:  $\pi$ -Selective hydroboration of alkynoic esters catalyzed by ionic liquids

**Shinya Hodoshima, Chiyoda Corporation, Japan**

Title: Energy efficient propylene production by catalytic cracking of light naphtha over zeolite based composites

**Jin Hee Lee, Korea Research Institute of Chemical Technology, Korea**

Title: Sustainable advancements in polyurethane monomer synthesis: Green pathways from CO<sub>2</sub> to isocyanates

**Dong Nam Shin, Research Institute of Science and Technology, Korea**

Title: Simultaneous removal of COS and H<sub>2</sub>S within blast furnace gas by using iron oxides

**Gayatri Udaysinh Ingale, University of Science and Technology, Korea**

Title: Development of industrial scale turquoise hydrogen production system via methane pyrolysis using metal beads

**Yousef Alroomi, KIPIC, Kuwait**

Title: Natural gas as a transitional fuel for carbon emission reduction

**Ghazwah Alhabashi, KIPIC, Kuwait**

Title: The role of electrical/instrument maintenance in enhancing catalyst reactor efficiency in oil refineries

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

Title: Antibody-proteases as translational biomarkers, targets and potential tools of the next step generation as applicable for design-driven personalized and precision medical practice

**Majed Alamoudi, King Abdulaziz University, Saudi Arabia**

Title: Role of alkali earth metals in tailoring Ni/CeO<sub>2</sub> system for efficient ammonia decomposition

**Sajjad Ali, Prince Sultan University, Saudi Arabia**

Title: The role of hydrogen in sustainable energy solutions

**Delia Teresa Sponza, Dokuz Eylul University, Turkey**

Title: Production of nanocomposites from wastes to remove the pollutants

**Duygu Karadeniz, Istanbul Technical University, Turkey**

Title: Efficient photocatalytic degradation of methylene blue using molybdenum disulfide-doped polyacrylamide-polyvinylpyrrolidone hydrogel

**Osman Adiguzel, Firat University, Turkey**

Title: Thermomechanical processes and transformations governing reversibility in shape memory alloys

**Yaxin Su, Donghua University, China**

Title: Selective catalytic reduction of NO by C<sub>3</sub>H<sub>6</sub> over Cu(x)Co(y)Ce(z)O oxides derived from LDHs

**Pengju Wu, Jiangsu University, China**

Title: Current research progress in alkali metals poisoning of Selective Catalytic Reduction (SCR) denitration catalysts

**Ying Li, Jiangsu University, China**

Title: Research progress and future development trend of plasma technology in the field of mercury removal from flue gas

**Angyang Yu, Central China Normal University, China**

Title: Computational prediction of an important protein's structure

**Jorge A Delgado, Syensqo, China**

Title: Bimetallic catalysts for the hydrogenation of amides: From experimental to data-driven insights

**Sabah Baqi, Southern University of Sciences and Technology, China**

Title: Novel two step surface boron decoration of graphitic carbon nitride photoelectrodes for efficient charge transport and separation

**Xu Zhusong, 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

**Li Jian, Research Institute of Petroleum Exploration and Development, China**

Title: Generation, migration-accumulation characteristics and enrichment mechanisms of helium-rich gas reservoirs in China

**Diya KV, Lovely Professional University, India**

Title: Heterogeneous catalysis: Reaction mechanism and kinetic models

**Anmol Pandey, Indian Institute of Technology Kharagpur, India**

Title: Utilization of Li-ion mobile battery waste for adsorptive removal of hazardous Methylene Blue (MB) dye from waste water

**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

**Ladapborlang Mawrie, University of Science & Technology Meghalaya, India**

Title: Who gives the hydrogen? A mechanistic study through isotope labeling in photocatalytic hydrogen evolution reactions using cobalt complexes as a catalyst under neutral pH.

**S R Varadhan, Independent Researcher, India**

Title: FTIR and Raman spectral analysis on kerosene and crude oil-audetraction in gaselione, adverse effects on nature during production and transportation

**Tapati Bhanja Dey, Jain University School of Allied Healthcare and Science, India**

Title: Green chemistry in action: Enzymatic extraction of bioactive phenolics

**Aditi Das Talukdar, National Institute of Technology Rourkela, India**

Title: Development of GO-SiO<sub>2</sub> based superhydrophobic surface for oil and water separation

**Bhawna Rawat, INST Mohali, India**

Title: Untapped potential of lead-free halide perovskites for synergistic biomass valorization and solar fuel generation

**Sai Prakash Katke, University of Mumbai, India**

Title: Solar-powered rod-shaped Cu-MOF photocatalyst with carboxylate double linkers for efficient Cr(VI) reduction and rhodamine B degradation

**Ram Sambhar Shukla, CSIR-Central Salt and Marine Chemicals Research Institute (CSMCRI), India**

Title: Perspective of ruthenium complex catalyst system for selective oxidation of methane

**Ahmed Mourtada Elseman, CMRDI, Egypt**

Title: Multiwalled carbon nanotubes as hole collectors in inverted perovskite solar cells

**Moaz M. Abdou, Egyptian Petroleum Research Institute, Egypt**

Title: Catalytic esterification for the efficient synthesis of phosphinic dipeptides and their acetylated glucose derivatives

**Raafat abdeldayem, Masoura University, Egypt**

Title: The role of catechins as natural iron chelator

**Ahmed Diab Mohamed Ahmed El Esawy, Menoufia University, Egypt**

Title: Antibacterial activity of bioactive compounds extracted from the Egyptian untapped green algae *Rhizoclonium hieroglyphicum*

**Othmane Zakir, University Mohammed VI Polytechnic - Cadi Ayyad University, Morocco**

Title: Recent progress in nanomaterials for water treatment: Adsorption, photocatalytic, and antibacterial applications

**Omar Boualam, Higher school of technology of Fez. Sidi Mohammed ben Abdellah University, Morocco**

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

**Lhoussain Kadir, CRMEF FES, Morocco**

Title: Preparation and physicochemical characterization of lanthanum-calcium co-doped barium titanate

**Fatemehsadat Mirmohammadmakki, Shahid Beheshti University of Medical Sciences, Iran**

Title: Biosorption: A sustainable and practical effective technique for heavy metal reduction

**Mohammad Saleh Shafeeyan, Golestan University, Iran**

Title: Ammoxidation of palm shell based activated carbon to promote CO<sub>2</sub> adsorption

**Seyed Mostafa Hosseini Asl, IRI Science and Technology Supporters Foundation, Iran**

Title: Coal fly ash derived new generation versatile nano zeolites

**Azam Akbari, Tarbiat Modares University, Iran**

Title: Metal decorated 2D MXene-based catalyst for efficient deep oxidative desulfurization

**Paula Maseko, Rhodes University, South Africa**

Title: Synthesis and characterization of isonicotinic acid and nicotinic acid metal organic frameworks for use in the treatment of hepatocellular carcinoma

**Ndzondelelo Bingwa, University of Johannesburg, South Africa**

Title: Biofuel synthesis from biomass-derived platform molecules over inorganic perovskite catalysts

**Tooba Saeed, University of Peshawar, Pakistan**

Title: Synthesis of chitosan composite of metal-organic framework for the adsorption of dyes; kinetic and thermodynamic approach

**Mohammas Israr, Maryam Abacha American University of Nigeria, Nigeria**

Title: Frame wok for industrial benchmarking in logistics centric activities through CRITIC analysis and KANO questionnaire

*Oral presentation slots are available!!*

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**Maria, Murcia University, Spain**

Title: Removal of terephthalic acid, derived from polyethylene terephthalate plastics, using an advanced oxidation process based on a KrCl excimer photoreactor

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**William Mendes Godoy, University of Sao Paulo, Brazil**

Title: Synthesis and evaluation of styrene-based polymeric resin for glycerol acetalization: Effect of crosslinkers on swelling and catalytic performance

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**Mikhail Petrovich Kashchenko, Ural Federal University, Russian Federation**

Title: Fixation of atoms with increased masses, as a consequence of the existence of massive electron pairs - the basis of catalysis of low-temperature nuclear synthesis

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**Young Woo You, Korea Research Institute of Chemical Technology, Korea**

Title: Microwave-enhanced CO<sub>2</sub> reforming with C<sub>2</sub><sup>+</sup> gas mixture

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**Yong Soo Kim, University of Ulsan, Korea**

Title: Multimode exciton-polaritons in self-assembled hybrid organic-inorganic perovskite microcavities

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**Mengstu Etay Ashebir, Institute of Atomic and Molecular Sciences Academia Sinica, Taiwan**

Title: Electronic structure engineering of nickel single-atom catalyst by phosphorous for efficient electrocatalytic CO<sub>2</sub> reduction reaction in a proton-rich microenvironment

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**Sourav Halder, Indian Institute of Technology Kharagpur, India**

Title: Optimization of Fe<sub>3</sub>O<sub>4</sub> nanoparticles loading on reduced graphene oxide nanosheets for the efficient removal of aqueous p-nitroaniline and Cr(VI)

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**Mohammed El Amine Nouairi, Mustapha Stambouli University of Mascara, Algeria**

Title: Study and development of a colored filter for the attenuation of harmful ultraviolet optical intensity

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**Makhloufi Mohamed Cherif, University of Boumerdes, Algeria**

Title: Micro-wave synthesis of MnO<sub>2</sub> for high-performance supercapacitor application

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**A A Abduvayitov, Tashkent State Technical University, Uzbekistan**

Title: Morphology, composition and electronic structure of the CdS thin films surface

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*Poster presentation slots are available!!*

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