

**TENTATIVE  
PROGRAM**

5<sup>th</sup> Edition of Global Conference on

**CATALYSIS, CHEMICAL  
ENGINEERING AND  
TECHNOLOGY**

SEPTEMBER 16-18, 2019  
LONDON, UK



Novel Explorative Approaches trending in Catalysis,  
Chemical Engineering and Technology

## Keynote Presentations

**Title: Design of metal single-site zeolite catalysts for application in industrial and environmental catalysis**

Stanislaw Dzwigaj, Sorbonne Université-CNRS, France

**Title: Nanoscience of semiconductor nanostructures and applications to future concepts for highly efficient solar photon conversion to photovoltaics and solar fuels**

Arthur J. Nozik, University of Colorado, United States

**Title: Industrialization of (catalytic) chemistry in flow**

Rinus Broxterman, InnoSyn BV, The Netherlands

**Title: Catalysis in segmented flow from lab scale to production**

Claude De Bellefon, University of Lyon, France

**Title: Structurally - dimensional effects in selective heterogeneous catalysis of renewable biomass into important products of petrochemistry**

M.V.Tsodikov, A.V.Topchiev Institute of Petrochemical Synthesis RAS, Russia

**Title: Predictions of chemical reactivity with theoretical calculations**

Vitalina Kukueva, Cherkassy State Technological University, Ukraine

**Title: Passivation by atomic layer deposition to increase the lifetime of Co/Al<sub>2</sub>O<sub>3</sub> catalysts in the Fischer-Tropsch synthesis**

José Antonio Díaz López, Universidad Politécnica de Madrid (UPM), Spain

**Title: Ultrathin iron-cobalt oxides nanosheets as highly active electrocatalyst for water splitting**

John Zhonghua Zhu, The University of Queensland, Australia

**Title: In situ magic angle spinning NMR: A powerful tool for catalyst research**

Jian Zhi Hu, Pacific Northwest National Laboratory, United States

**Title: Process intensification: New perspectives for Chemical Engineering**

Eugenio Meloni, University of Salerno, Italy

**Title: From sequential chemo-enzymatic approach to integrated hybrid catalysis: Concept and examples**

Froidevaux Réonato, Institut Charles Viollette – University of Lille, France

## Oral Presentations

**Title: 51V-NMR chemical shifts and analyses of vanadium complex catalysts: A Cooperation of QC calculation and MLR analysis**

Masahiko Hada, Tokyo Metropolitan University, Japan

**Title: Palladium-catalyzed  $\beta$ -C(sp<sup>3</sup>)-H arylation of Weinreb amides via acidic ligands**

Guanghui An, Heilongjiang University, China

**Title: The effect of ionic liquids on the photocatalytic activity of BiOX semiconductors in cytostatic drug degradation**

Ewa Maria Siedlecka, University of Gdańsk, Poland

**Title: Novel efficient Pd-free catalyst for Suzuki C-C coupling reaction: Green protocol**

Mohamed Mokhtar, King Abdulaziz University, Saudi Arabia

**Title: Cluster beam deposition of preformed metal clusters for liquid and vapour phase catalysis**

Rongsheng Cai, Swansea University, United Kingdom

**Title: Hydrogen from clean biogas. A proof of concept of integrated process**

Angelo Vaccari, Alma Mater Studiorum - Università di Bologna, Italy

**Title: A prospective life-cycle assessment (LCA) of monomer synthesis: comparison of biocatalytic and oxidative chemistry**

Marie A.F. Delgove, Aachen-Maastricht Institute for Biobased Materials (AMIBM), The Netherlands

**Title: Structural and electrochemical study of IrO<sub>2</sub> and NiO-coated Ni Anode by atomic layer deposition (ALD)**

DJ Donn Matienzo, Industrie de Nora S.p.A, Italy

**Title: Room temperature reduction of carbon dioxide using localized surface plasmon energy**

Renu Sharma, National Institute of Standards and Technology (NIST), United States

**Title: Using polyisobutylene-supported sulfur ligands for metal sequestering**

Hassan Said Bazzi, Texas A&M University at Qatar, Qatar

**Title: Pyrazole as a corrosion inhibitor for carbon steel in aqueous media**

Mohamed A. Abbas, Egyptian Petroleum Research Institute, Egypt

**Title: Photoelectrocatalytic removal of anticancer drug from water solution**

Aleksandra Pieczyńska, University of Gdańsk, Poland

**Title: The inhibition of hydrogen and oxygen recombination and over-all water splitting over Pt-TiO<sub>2</sub>**

Gongxuan Lu, Chinese Academy of Sciences, China

**Title: Catalyst and support materials in energy storage systems**

Annikka Santasalo-Aarnio, Aalto University, Finland

**Title: The mechanism of the base-free Ru(PTA)<sub>4</sub>Cl<sub>2</sub> catalyzed hydrogenation of CO<sub>2</sub> to formic acid**

Edward N. Brothers, Texas A&M University at Qatar, Qatar

**Title: Diesel fuel adulteration issues in Nigeria**

Oyinkepreye Lucky Bebetidoh, Newcastle University, United Kingdom

**Title: Catalytic CO<sub>2</sub> valorisation to building block molecules**

Soyeb Pathan, Hamad Bin Khalifa University (HBKU), Qatar

**Title: Structure & performance of Li/MgO supported molybdenum oxide for oxidative cracking of N-Hexane**

Cassia Boyadjian, American University of Beirut, Lebanon

**Title: Hydrogenation of Dibenzo-18-crown-6 ether using  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> supported Ru-Pd and Ru-Ni bimetallic nanoalloy catalysts**

Yogeshwar R. Suryawanshi, S.V. National Institute of Technology, India

**Title: Synthesis, characterization, and application of MOF@clay composite as a visible-light-driven photocatalyst for environmental remediation**

Radheshyam Rama Pawar, Kyushu University, Japan

**Title: Novel synthesis of mesoporous alumina by hydrothermal technique & their role as catalyst support for valuable chemicals**

Sujatha Parmeswaran, Veermata Jijabai Technological Institute (VJTI), India

**Title: Inorganic oxide systems with immobilized laccase as tools for dyes decolorization**

Katarzyna Jankowska, Poznan University of Technology, Poland

**Title: Cobalt ion species in water as an active homogeneous catalyst for oxidative decomposition of ammonium ion with ozone**

Haruka Aihara, Japan Atomic Energy Agency, Japan

**Title: Thermodynamic modeling for the carbonate system  $\text{Na-K-HCO}_3\text{-CO}_2$  in alkanolamines solutions: An extended application for  $\text{CO}_2$  scrubbing**

Zhibao Li, University of Chinese Academy of Sciences, China

**Title: A Novel synthesis of thiolato and phenoxo platinum (II) complexes by using phase transfer catalysis**

Ja'afar K. Jawad, Dean in the International University of Erbil, Iraq

**Title: Laccase-Electrospun materials as biocatalytic systems for application in environmental protection**

Jakub Zdarta, Poznan University of Technology, Poland

**Title: Low-temperature synthesis and inkjet printing of photoactive  $\text{TiO}_2$  on polymeric substrates**

Hesam Maleki, University of Liverpool, United Kingdom

**Title: Catalytic hydrogen release from Amine-Boranes**

Ashfaq Bengali, Texas A&M University at Qatar, Qatar

**Title: Environment management and advancing technological processes for technical lead production**

Ahmet Haxhijaj, University of Mitrovica, Republic of Kosova

**Title: The role of solids-solid solutions in the catalysis of Syngas production reactions**

Yvan J O Asencios, Universidade Federal de São Paulo (UNIFESP), Brazil

**Title: Acid-supported Poly(4-vinyl pyridine)s as the versatile catalysts**

Nader Ghaffari Khaligh, University of Malaya, Malaysia

**Title: Nanocomposites with different metals as magnetically separable nanocatalysts for oxidation of aldehydes**

Akbar Esmaeili, Islamic Azad University, Iran

**Title: Preparation and spectroscopic characterization of 2-Ethoxy isobutryl acid hydrazide and 2-ethoxy isobutryl aceto hydrazone and its metal complexes with  $\text{Co(II)}$ ,  $\text{Ni(II)}$  and  $\text{Cu(II)}$**

O. W. Salawu, Federal University Lokoja Kogi State, Nigeria

**Title: Physicochemical and remarkable photocatalytic activity of  $\text{CMC/BiFeO}_3/\text{PoPD}$  nanocomposite reinforced with cellulose nanocrystals (CNCs) for the degradation of Methyl Orange**

Noor Haida Mohd Kaus, Universiti Sains Malaysia, Malaysia

**Title: Peptides as a tool for surface engineering in immunosensor area**

Julia Pinto Piccoli, University of São Paulo (USP), Brazil

**Title: Nanoparticles for chemical agent delivery into the porous media: A Comparative study**

Ehsan Nourafkan, University of Lincoln, United Kingdom

**Title: Sustainable development in green energies and the environment**

Abdeen Omer, Energy Research Institute (ERI), United Kingdom

**Title: Impact of using flow chemistry on applied catalysis**

Hany A. Elazab, The British University in Egypt, Egypt

**Title: Hydrogen donation from bio-acids over carbon nano tube (CNT) based bi-functional catalysts: Density functional theory study**

Jiajun Zhang, Queen's University Belfast, United Kingdom

**Title: Noble and base-metal nanoparticles supported on mesoporous metal oxides: efficient catalysts for the selective hydrogenation of levulinic acid to  $\gamma$ -valerolactone**

Matumuene Joe Ndolomingo, University of Johannesburg, South Africa

**Title: DFT calculations of Copper(I) coordination to ammonia and water in Cu-exchanged SSZ-13 catalyst for automotive environmental protection**

Dorothee Berthomieu, Institute Charles Gerhardt Montpellier, France

**Title: Modern Ab-Initio calculations based on thomas-fermi-dirac theory in high-temperatures and high-pressures environment**

Sergey Seriy, Institute of Dynamic Systems, Russia

**Title: Production of hydrogen by catalytic partial dehydrogenation of a commercial fuel for HT-PEM fuel cell applications**

Garcia Garrido Rafael, Université de Montpellier, France

**Title: Towards a transient multi-site kinetic model of cu-chabazite for NH<sub>3</sub>-SCR linked to the active site hydrothermal aging kinetics**

Selmi Erim Bozbağ, Koç University, Turkey

**Title: Pd Nanoparticles supported on copper oxide prepared via microwave – Assisted synthesis: An efficient catalyst for suzuki cross-coupling**

Shahir Sadek, The British University in Egypt, Egypt

**Title: Designing Photocatalyst nanostructure for enhanced photon-to-conversion efficiency and Hydrogen production**

Mohamed Nawfal Ghazzal, Université Paris-Sud, France

**Title: Johnson Matthey: A world leader in Catalysts and Process Technology**

Ronan Bellabarba, Johnson Matthey, United Kingdom

**Title: Development of an amperometric glucose biosensor based on electrocatalytic properties of carbon nanotubes**

Soheli Farhana, Universiti Kuala Lumpur, Malaysia

**Title: Modeling and optimization of tail-end acetylene hydrogenation reactors by the novel kinetic and decay rates and introducing the new reactor configuration**

Ourmazd Dehghani, Shiraz University, Iran

**Title: Catalysis: Making impossible – possible and possible - impossible**

Sargis Hayotsyan, Laboratory of innovations in catalysis, Armenia

**Title: Novel Heteroatoms doped Fe/N/C catalysts for highly efficient ORR in alkaline and acidic media**

Muhammad Rauf, Shenzhen University, China

**Title: Improving probiotic stability to achieve product maximum efficacy**

Davor J. Korčok, Research and development department and management, Serbia

**Title: Heterogeneous metal catalysts from waste cellulose-based polymeric ligand for various cross-coupling reactions**

Md Lutfor Rahman, Universiti Malaysia Sabah, Malaysia

**Title: Design and application of virus imprinted polymer (VIP) for the rapid and selective detection of Foot-and-Mouth Disease Virus (FMDV)**

Rasha Mohamed El Nashar, Cairo University, Egypt

**Title: Calculation of Geometric Structure, Electronic Characteristics, Vibration Frequencies and Thermodynamic Properties of C<sub>11</sub>H<sub>18</sub>-C<sub>14</sub>H<sub>24</sub> Alkyladamantanes according to DFT**

A. Saginayev, Atyrau Oil and Gas University, Republic of Kazakhstan

**Title: Interaction of corrosion-induced hydrogen with nascent defects in steel under neutron irradiation**

Evgenii Krasikov, National Research Centre (Kurchatov Institute), Russia

**Title: Modeling and optimization of tail-end acetylene hydrogenation reactors by the novel kinetic and decay rates and introducing the new reactor configuration**

Akbar Bolhassani, Department of Research and Development of Jam Petrochemical Complex, Iran

**Title: Synthesis of pure phase zeolite BEA from high silica South African coal fly ash (CFA) extracts and its application**

Nkululeko ZN. Ndlovu, Cape Peninsula University of Technology, South Africa

**Title: Preparation and coke-resistance study of Ru promoted Mesoporous Ni/Al<sub>2</sub>O<sub>3</sub>□ CeO<sub>2</sub> catalyst in Dry Reforming of Methane**

Yuqi Wang, Northwest University, China

**Title: Dynamics of flow pattern in standard mixing vessel stirred by pitched blade turbine**

Tomáš Brůha, Institute of Termomechanics, Czech Republic

**Title: Effect of the Electronic State of Cu, Ag, and Au on Diesel Soot Abatement**

Grisel Corro, Benemerita Universidad Autonoma de Puebla, Mexico

**Title: Synergistic Catalysis of nano-metal and semiconductor (metal oxides) molecular/atomic-layer film coated on the support of Novel Hybrid complex nano-structured Pt Catalyst prepared by photochemical route**

Jicheng Zhou, Xiangtan University, China

**Title: Synthesis, characterization and studies on the effect of ligands on ring opening polymerization**

Prabhuodeyara M Gurubasavaraj, Rani Channamma University, India

**Title: Extraction and comparison of essential oil from neem seed by using soxhlet extraction and simple distillation methods**

Bereket Tesfaye, Dire dawa university school of chemical and bio-Engineering, Ethiopia

**Title: Design & Synthesis of cost effective NiPMoS/Laponite and its use as a Superior Catalyst for Hydrodeoxygenation of Furfural**

K. Shanthi, Anna University, India

**Title: Correlation between acidity and catalytic performance of mesoporous zirconium oxophosphate in phenylglyoxal conversion**

Haimei Xu, Macquarie University, Australia

**Title: FeCo-Supported nitrogen-doped reduced-graphene oxide (FeCo/NG) as catalyst towards oxygen reduction reaction**

Kee Shyuan Loh, Universiti Kebangsaan of Malaysia, Malaysia

**Title: Palladium/carbon nanotubes/charcoal hybrid composite and its catalytic behavior in the hydrogenation of trans-cinnamaldehyde**

Elaine Yoshiko Matsubara, University of São Paulo, Brazil

**Title: Micropumps: Characteristics and design optimization for Drug delivery**

Yasser Abd El-Monem Rihan, Atomic Energy Authority, Egypt

**Title: Synthetic pyrroles derivatives as potential pesticides**

Dr.P.M.Veerasha Sharma, Chemogenesis Research and Development Centre, Hubli

**Title: Synthesis of novel co-assembled silica nano-plate supported catalysts and their application in the catalytic non-thermal plasma technology for nitrogen and hydrogen fixation from air and water for the production of ammonia, nitric acid and novel fertilisers with carbon dioxide capture**

Galip Akay, Case Western Reserve University, USA

**Title: NMR Methods for operando analysis of heterogeneous catalytic processes**

Mojtaba Mirdrikvand, The University of Bremen, Germany

**Title: Preparation of activated carbon derived from arecanut shell agro waste using phosphoric acid catalyst : Estimation of ferets diameter**

Abhijit Shankar Jadhav, 1Department of Chemical of Engineering AISSMS COE, India

**Title: Effects of support on the catalytic activity and stability of Ni-based catalysts during dry reformation of methane**

Mahmoud M.Khader, Qatar University, Qatar

**Title: Plasma surface activation of fibers for immobilization of enzymes on conductive and non-conductive textiles: Application to various processes**

Nemeshwaree Behary, Lille University, France

**Title: Chemistry of graphene: adsorption of CO at pristine, doped and defected supported graphene**

Luca Vattuone, Università degli Studi di Genova, Italy

**Title: Preparation, properties and application of mesoporous sulphated zirconia G**

Gong-Yi Guo, Shanghai Jiao Tong University, China

**Title: The conversion of poly aromatic hydrocarbon into fine chemicals and fuels over molybdenum phosphide supported on various acidic and porous materials**

Muhammad Usman, King Fahd University of Petroleum and Minerals, Saudi Arabia

**Title: Rapid, ionic-liquid mediated catalytic conversion of lignocellulosic Sunn hemp fibres to biofuel precursors**

Saikat Chakraborty, Indian Institute of Technology Kharagpur, India

**Title: Characterization of synthesized nano-sized ZSM-5 zeolite catalysts by using X-ray powder diffraction data and rietveld method**

Rasha A. Al-Ghamdi, Research & Development Center, Saudi Arabia

**Speaker Slots Available**

**Poster Presentations**

**Title: Heteropoly acid supported on silica catalyst for dehydration of methanol to dimethyl ether**

Rawan Al-Faze, University of Liverpool, United Kingdom

**Title: Solution plasma synthesis of catalytic carbon composite materials for oxygen reduction reaction**

Takahiro Ishizaki, Shibaura Institute of Technology, Japan

**Title: Oxidative desulfurization of diesel fuel catalyzed by carbon-supported polyoxometalates**

Reem Ghubayra, University of Liverpool, United Kingdom

**Title: Application of Catalytic Hydrogenation in the Synthesis of hydroxylated Pillar[5] arene-based Amphiphiles**

Abdirahman A. Mohamad, University of Kuwait, Kuwait

**Title: Research of natural remediation of the subsurface contaminated with petroleum products**

Olena Shpak, The Institute of Geological Sciences of the NASU, Ukraine

**Title: Catalytic CO oxidation by Fe doped penta-graphene: A density functional study**

Wenliang Li, Northeast Normal University, China

**Title: Synthesis of nitrogen-doped nanocarbons by solution plasma process using cyano-aromatic molecules for catalyst of oxygen reduction reaction**

Ai Serizawa, Shibaura Institute of Technology, Japan

**Title: Diethylaminoethyl cellulose (DEAE-C): A catalyst for applications in heterocyclic synthesis**

Karzan K Aljaf, University of Pavia, Italy

**Title: Catalytic impact of Red Mud and metal oxides on the upgrading of fast pyrolysis vapour of biomass**

Jyoti Gupta, Xi'an Jiaotong-Liverpool University, China

**Title: Cobalt aluminate-modified alumina as a carrier for cobalt in Fischer-Tropsch synthesis**

Yan Liu, Chinese Academy of Sciences, China

**Title: Supported ruthenium catalysts for epoxidation of alkene under solvent-free conditions**

Raiedhah Alsaiani, Najran University, Saudi Arabia

**Title: Solid-state NMR study of Y zeolite modified with boron**

Jessyka Padilla, Universidad Industrial de Santander, Colombia

**Title: Effect of Ni<sub>x</sub>MWCNTs<sub>5-x</sub> on the Microstructural Evolution and Hydrogen Storage Properties of Mg(BH<sub>4</sub>)<sub>2</sub>**

Ying Wu, China Iron & Steel Research Institute Group, China

**Title: Gas-phase hydrotreatment reactions of 2,5-Dimethylfuran using bifunctional Metal-Acid Catalysts**

Hanan. A. Althikrallah, University of Liverpool, United Kingdom

**Title: Oxidative dehydrogenation of ethane to ethylene over VO<sub>x</sub>/ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts**

Saad Dahlab University Blida, Algeria



**Title: Activation of peroxymonosulfate by magnetic nitrogen-doped graphene for the degradation of organic pollutants in water**

Qilong Xie, Chinese Academy of Sciences, China

**Title: Wastewater treatment potential of moringa stenopetala over moringa olifera as a natural a coagulant, an antimicrobial agent and heavy metal**

Asaminew Abiyu, Donghua University, China

**Title: Comparison of two Ba-faujasite adsorbents for separation of xylene isomers**

Mohammad Reza Khosravi-Nikou, Petroleum University of Technology, Iran

**Title: Fatty acid methyl ester analysis of olive oil degraded by pseudomonas fluorescens and enzymatic characterisation of the lipase**

Popoola Bukola Margaret, Ajayi Crowther University, Nigeria

**Title: Activation of CO on Cobalt catalyst supported on Al<sub>2</sub>O<sub>3</sub>: Promoted by Ru**

Dekui Sun, Chinese Academy of Sciences, China

**Title: Diverse structures based on heptanuclear co cluster from 0D to 3D metal organic framework: Magnetism and application in batteries**

Xiaoying Zhang, Northeast Normal University, China

**Title: A mechanistic investigation into N-heterocyclic carbene (NHC) catalyzed umpolung of ketones and benzonitriles: is the cyano group better than the classical carbonyl group for the addition of NHC?**

Haiyan Yuan, Northeast Normal University, China

**Selective production of nitrogen containing compounds via a modified Fischer-Tropsch process**

Danielle Goho, University of Cape Town, South Africa

**Title: Intensification of electrochemical parameters by stimulated modification of molten chloride electrolytes structure**

O.M. Shabanov, Dagestan State University, Russia

**Title: Preparation of block-stereoblock copolymers of polycaprolactone and polylactic acid by zinc catalysts**

Lilach Gold Pogrebezky, Tel Aviv University, Israel

**Title: Surface property-activity relations of Co/Sn oxide nanocatalysts evaluated using a model reaction: Surface characterization study**

Ndzondelelo Bingwa, University of Johannesburg, South Africa

**Title: Selective catalysis reduction of NO by NH<sub>3</sub> over Co/Cr-Ce catalysis at mid-low temperature**

Zhihang Chen, South China Institute of Environmental Science, China

**Title: Palladium nanocatalyst supported on chitosan and its catalytic performance in Suzuki- Miyaura coupling reactions**

Hamad M. Al-Matar, University of Kuwait, Kuwait

**Title: Eosin Y catalyzed difunctionalization of styrenes using O<sub>2</sub> and CS<sub>2</sub>: a direct access to 1,3-oxathiolane-2-thiones**

Arvind Kumar Yadav, University of Allahabad, India

**Poster Slots Available**

## E-Poster Presentations

**Title: CFD simulation of crude petroleum boiling process inside reboilers**

Alon Davidy, Heat Transfer Researcher, Israel

**Title: Chemoselective Transfer Hydrogenation of Multifunctional Nitro Compounds Catalyzed by Silver Nanoparticles: A Facile Synthetic Methodology towards Dihydroquinoxalin-2-ones**

Domna Iordanidou, Aristotle University of Thessaloniki, Greece

**Title: Stereocontrolled Biocatalytic Reductions of Carbonyl Compounds**

Ioulia Smonou, University of Crete, Greece

**Title: The 3-axis portable filament winding machine embedded with wireless technology**

Ma Quanjin, Universiti Malaysia Pahang, Malaysia

**E-Poster Slots Available**



**We wish to meet you @ CAT - 2019**  
**During September 16-18, 2019 in London, UK**

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