

# FINAL PROGRAMME

International Conference on

# CATALYSIS-2024

## Catalysis and Chemical Engineering


September 23-25, 2024 | WEBINAR



 [Catalysis2024@xpertsmeetings.info](mailto:Catalysis2024@xpertsmeetings.info)

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Bengaluru, 560001

## Day 1 | September 23, 2024

**Time Zone: Beijing, Asia (GMT+8)**

**09:00-09:10 Opening Ceremony**

### Plenary & Keynote Session

09:10-09:50	P	<b>Title: Single Atom Catalysts for Catalytic Water Purification</b> Xiaoguang Duan, The University of Adelaide, Australia
09:50-10:30	P	<b>Title: Creating a Sustainable Supply Chain Using Carbon Dioxide Through Adsorption and Catalysis</b> Chunshan Song, Chinese University of Hong Kong, Hong Kong
10:30-11:10	P	<b>Title: TBA</b> Jun Chen, University of Wollongong, Australia
11:10-11:50	P	<b>Title: Solar Hydrogen Production at Scale by Water Splitting</b> Jae Sung Lee, Ulsan National Institute of Science and Technology (UNIST), South Korea
11:50-12:30	P	<b>Title: TBA</b> Jae-Jin Shim, Yeungnam University, South Korea
12:30-13:10	P	<b>Title: TBA</b> Sibudjing Kawi, National University of Singapore, Singapore
13:10-13:40	k	<b>Title: Step-Designable Electrochemical Technology with Alternating Potentials for Pre-treatment of Antibiotic Production Wastewater</b> Cai Junzhuo, Sichuan Agricultural University, China
13:40-14:10	k	<b>Title: TBA</b> Johannessen Bernt, University of Wollongong, Australia

### Invited Session

14:10-14:35	I	<b>Title: Geochemically-inspired CO<sub>2</sub> Reduction with Carbohydrates via Hot Water as Catalyst for Net-Zero Emission Processes</b> Yang Yang, Shanghai Jiao Tong University, China
14:35-15:00	I	<b>Title: Molecular Thermal Motion Energy Harvesters and Their Potential Applications</b> Yucheng Luan, East Eight Energy Co.Ltd, China
15:00-15:25	I	<b>Title: Carbon-Efficient Conversion of Synthesis Gas to Linear <math>\alpha</math>-Olefins by a Highly Active Phase-Pure <math>\chi</math>-iron-Carbide Catalyst</b> Zhuowu Men, National Institute of Clean-and-Low-Carbon Energy, China
15:25-15:50	I	<b>Title: Conjugated Main-Group Chiral Macrocycles with Circularly Polarized Luminescence and Open-Shell Character</b> Pangkuan Chen, Beijing Institute of Technology, China
15:50-16:15	I	<b>Title: Various Catalytic Approaches for CO<sub>2</sub> Conversion</b> Ziyi Zhong, Guangdong Technion Israel Institute, China
16:15-16:40	I	<b>Title: Effect of C/SiC Anisotropic Thermal Conductivity on Regenerative Cooling of Combined-Cycle Engine</b> Xing Sun, Northwestern Polytechnical University, China
16:40-17:05	I	<b>Title: In Situ Electropolymerizing toward Porous Nanofilms of Cobalt Porphyrin and its Cu Tandem Catalyst for Electrochemical CO<sub>2</sub> Reduction</b> Xunjin Zhu, Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University
17:05-17:30	I	<b>Title: Study on Iron-Silica Interaction Over Precipitated Fe/Cu/K/SiO<sub>2</sub> Fischer-Tropsch Synthesis Catalyst</b> Hai Chang, National Institute of Clean-and-Low Carbon Energy (NICE), China
17:30-17:55	I	<b>Title: TBA</b> Hyoung-il Kim, Yonsei University, South Korea
17:55-18:20	I	<b>Title: Physicochemical Properties and Mechanistic Study of Praseodymium Oxide Supported on Alumina in Methanation of Carbon Dioxide</b> Salmiah Jamal Mat Rosid, Universiti Sultan Zainal Abidin, Malaysia

**End of Day 1**

09:00-09:10		Opening Ceremony
09:10-09:35	I	<b>Title: O-coordinating Ligands in Iron-Catalyzed Cross-Coupling Reactions</b> Elwira Bisz, University of Opole, Poland
09:35-10:00	I	<b>Title: Enhanced Activity of Bulky N-heterocycliccarbenes in Nickel-NHC Catalyzed C-O Bond Activation</b> Marlena Kardela, University of Opole, Poland
10:00-10:25	I	<b>Title: New Silver and Gold Complexes with Multidentate N-heterocyclic Carbenes. Synthesis, Analysis and Catalytic Properties</b> Katarzyna Halikowska-Tarasek, University of Opole, Poland
10:25-10:50	I	<b>Title: Synthesis, Characterization and Catalytic Properties of New Silver and Palladium Complexes with Unsymmetrical N-Heterocyclic Carbenes</b> Pamela Podchorodecka, University of Opole, Poland
10:50-11:15	I	<b>Title: Assisted Photocatalysis for Environmental Applications and Valorization of Biomass</b> Chantal Guillard, Claude Bernard University, France
11:15-11:40	I	<b>Title: Coupling Electrochemical Advanced Oxidation and Sorption for Water Treatment</b> Meritzell Vila-Fontes, University of Barcelona, Spain
11:40-12:05	I	<b>Title: High Catalytic Activity of Metal Complexes: a Structural Insight into Metal Ion Coordination Geometries</b> Valentina Migliorati, Sapienza University of Rome, Italy
12:05-12:30	I	<b>Title: Kinetics of Hydrogen-Oxygen Catalytic Recombination Reaction at Ambient Temperature and at Low Amount of Oxygen</b> Mazzeo Leone, Campus Bio-Medico University, Italy
12:30-12:55	I	<b>Title: Modeling a H<sub>2</sub>/CH<sub>4</sub> Membrane Separation Unit in a Promising Power-to-Methane concept</b> Alice Bertino, Campus Bio-Medico University, Italy
12:55-13:35	P	<b>Title: Electro- and Photocatalysis of Energy Relevant Processes</b> Gross Zeev, Israel Institute of Technology, Israel
13:35-14:15	P	<b>Title: The Charge Transfer Mechanism on a Cobalt-Polyoxometalate-TiO<sub>2</sub> Photoanode for Catalytic Water Oxidation in Acid</b> Hill Craig L, Emory University, USA
14:15-14:45	K	<b>Title: TBA</b> Sambur Justin, Colorado State University, USA
14:45-15:25	p	<b>Title: A Binary Neodymium Catalyst For the Polymerization of Lactones</b> Stefan Mihaela C, University of Texas at Dallas, USA
15:25-15:50	I	<b>Title: The Mechanism of the Poisonous Organic Halides Disposal Under the Catalytic Influence of the Vitamin B12</b> Tudor spataru, Columbia University, USA
15:50-16:15	I	<b>Title: TBA</b> Huiqing Zhou, Boston College, USA
16:15-16:40	I	<b>Title: Metallic Silver Nanoparticles as Efficient Photocatalysts to Convert H<sub>2</sub>O<sub>2</sub> in Hydroxyl Radicals for Organic Pollutant Degradation in Water</b> Julien Mahy, University of Liège, Belgium
16:40-17:05	I	<b>Title: The Catalytic Role of Copper-Layered Double Hydroxide: a Combined Computational and Experimental Approach for Methanol Oxidation</b> Emiliano Laudadio, Marche Polytechnic University, Italy
17:05-17:30	I	<b>Title: PSA System Simulation Downstream of Methanation Reactors for direct SNG Integration into existing Natural Gas Grid</b> Vincenzo Piemonte, Campus Bio-Medico University, Italy
17:30-18:10	P	<b>Title: TBA</b> Ram Gupta, Pittsburg State University, USA
18:10-18:50	P	<b>Title: Entropy-Maximized Materials for Catalysis Applications</b> Sheng Dai, University of tennessee, USA

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