

# CatScience & Materials Europe - Tentative Program

OCTOBER 02-04, 2024 | ADEIT- University of Valencia, Spain

DAY – 1, 02 October, 2024

08:00 - 09:00	<b>Registrations</b>
09:00-10:00	<b>Opening, Welcome and Announcements</b>
	<b>Plenary Talks</b>
10:00-10:30	<b>TBA</b> Nazario Martin, University Complutense of Madrid, Spain
10:30-11:00	<b>Electrocatalytic Refinery for Production of Fuels and Chemicals</b> Shi Zhang Qiao, The University of Adelaide, Australia
11:00 - 11:30	<b>Coffee Break</b>
11:30 - 12:00	<b>Hydrogen Generation by Water Electrolysis</b> Zhifeng Ren, University of Houston, USA
12:00 - 12:30	<b>Strain Catalysis for Hydrogen Cycles</b> Shaojun Guo, Peking University, China
12:30 - 13:00	<b>Emerging Energy Electrocatalysis for Rechargeable Batteries</b> Qiang Zhang, Tsinghua University, China
13:00 - 14:00	<b>Lunch Break</b>
14:00 - 14:30	<b>Functional Carbon Materials for Catalysis</b> Jieshan Qiu, Beijing University of Chemical Technology, China
14:30 - 15:00	<b>Narrow Bandgap Organic Acceptor Materials for Organic Solar Cells</b> Yongfang Li, Institute of Chemistry-ICCAS, Beijing, China
15:00 - 15:30	<b>Hysteresis Processes in Ionic, Electronic, and Biological Devices</b> Juan Bisquert, ITQ- Universitat Politecnica de Valencia, Spain
15:30 - 16:00	<b>Coffee Break</b>
16:00 - 16:30	<b>Impedance Matching Schemes and Designed Wave Absorption Spectrum</b> Ping Sheng, Associate at Cambridge University, UK
16:30 - 17:00	<b>Visible Light-Induced Asymmetric Radical Reactions Catalyzed by Chiral N,N'-Dioxide Metal Complexes (Online)</b> Xiaoming Feng, Sichuan University, Chengdu, China
17:00 Hrs Onwards	<b>Networking Cocktails</b>

DAY – 2, 03 October, 2024 - Room A

**Session: Electrocatalysis and Energy**

09:30-09:55	<b>Keynote Talk: Green Methods in the Synthesis of Organophosphorus Compounds with Potential Bioactivity</b> Gyorgy Keglevich, Budapest University of Technology and Economics, Hungary
09:55-10:15	<b>Invited Talk: Harvesting Thermal and Mechanical Energy from Environment for Catalytic Applications</b> Weishu Liu, Southern University of Science and Technology, China
10:15-10:35	<b>Invited Talk: Structural Evolution and CO<sub>2</sub> Electroreduction in Cu Doped Gold Nanoclusters</b> Sara Goberna Ferron, Valencia Polytechnic University, Spain

<b>10:35-10:55</b>	<b>Invited Talk: Innovative Soft Templating Techniques for Catalyst Synthesis in Anion Exchange Membrane Water Electrolysis</b> Francisco Jose Fernandez Carretero, Tecnalia, Spain
<b>10:55-11:25</b>	<b>Coffee Break</b>
<b>11:25-11:45</b>	<b>Invited Talk: Exploring Innovations in Ethylene/CO Polymerisation through DFT Calculations: Advancing Sustainable Polymer</b> Lucia Caporaso, University of Salerno, Italy
<b>11:45-12:05</b>	<b>Invited Talk: Rational Design of Electrocatalysts for Maximizing CO<sub>2</sub> Electrolysis Performance (Online)</b> Thuy Duong Nguyen Phan, National Energy Technology Laboratory (NETL), USA
	<b>Session: Photocatalysis</b>
<b>12:05-12:25</b>	<b>Invited Talk: Metal Organic Framework Based Photocatalysts for the Generation of Fuels</b> Amarajothi Dhakshinamoorthy, Valencia Polytechnic University, Spain
<b>12:25-12:45</b>	<b>Invited Talk: Cement Based Materials Containing Recycled TiO<sub>2</sub> for Photocatalytic Applications</b> Manuel Melero, I2CON, Spain
<b>12:45-13:05</b>	<b>Invited Talk: Influence of Surface Microstructures and Molecules on Dynamic Wetting</b> Yaerim Lee, The University of Tokyo, Japan
<b>13:05 -14:00</b>	<b>Lunch Break</b>
<b>14:00-14:20</b>	<b>Invited Talk: Organic Resin and Inorganic Fiberglass Recovery form Wind Turbine Blades using Pyrolysis Technology</b> Samy Yousef, Kaunas University of Technology, Lithuania
<b>14:20-14:35</b>	<b>Calcined Titanium based Organic Framework Supported RuO<sub>x</sub> Nanoparticles as Photocatalyst for Solar-Assisted CO<sub>2</sub> Methanation via Sabatier Reaction</b> Marta Gonzalez Fernandez, Universitat Politecnica de Valencia, Spain
	<b>Session: Catalytic Materials &amp; Mechanisms and Physical Chemistry</b>
<b>14:35-14:55</b>	<b>Invited Talk: High Temperature Vacuum Temperature programmed Desorption as a New Characterization Method for Catalytic Materials</b> Takeharu Yoshii, Tohoku University, Japan
<b>14:55-15:15</b>	<b>Invited Talk: Exploring Ionic Liquid Materials for CO<sub>2</sub> Capture and Utilization: A Journey of Innovation</b> Marta Corvo, NOVA University Lisbon, Portugal
<b>15:15-15:35</b>	<b>Invited Talk: Development of Portable NMR to Diagnosis Malaria in Human Subject</b> Manish Gupta, University of Adelaide, Australia
<b>15:35-16:05</b>	<b>Coffee Break</b>
<b>16:05-16:25</b>	<b>Invited Talk: Surface Chemical Properties of Interstellar Grains. Insights from Quantum Chemical Simulations</b> Albert Rimola, Universitat Autònoma de Barcelona (UAB), Spain
<b>16:25-16:40</b>	<b>Classification of Adsorbed Hydrocarbons Based on Bonding Configurations of the Adsorbates and Surface Site Stabilities (Online)</b> Shyama Charan Mandal, Stanford University, USA
<b>16:45-17:40</b>	<b>Poster Presentations</b>
	<b>TBA</b> Victor Oestreicher, Tecnalia, Spain
	<b>Effect of Cerium Content and Calcination Temperature on the Catalytic Performance of Mg<sub>4</sub>Al<sub>2</sub>-xCe<sub>x</sub>-HT Systems in the n-Butanol Oxidation Reaction</b> Faiza Sahraoui, University of Science and Technology Houari Boumediene (USTHB), Algeria

<b>Functional Gel Oxalate and Co-precipitation Methods for Methanol and DME Production over Bifunctional CuZnZr-CBV3024E Catalyst</b>
Samira Ebrahimian, Monash University, Australia
<b>Oxidation of the Prothioconazole Fungicide Using a Catalyst Based on Niobium Oxide Dispersed Over PET Waste Activated Carbon</b>
Cinthia C. Oliveira, Federal University of Minas Gerais, Brazil
<b>Modified Polyoxomolybdate as a Catalyst for the Photodegradation of Polluting Molecules in Water</b>
Luiz C. A. Oliveira, Federal University of Minas Gerais, Brazil
<b>Biodiesel Synthesis from Date Seed Oil Using Camel Dung as a Novel Green Catalyst: An Experimental Investigation</b>
Raiedhah A. Alsaiaia, Najran University, Saudi Arabia

<b>DAY – 2, 03 October, 2024 - Room B</b>	
<b>Plenary Talk</b>	
<b>09:30-10:00</b>	<b>Design and Synthesis of Nanomaterials for Biomedical and Energy Applications (Online)</b> Jackie Y. Ying, King Faisal Specialist Hospital & Research Centre, Saudi Arabia
<b>Session: Novel Materials for Energy and Biomedical Applications</b>	
<b>10:00-10:25</b>	<b>Keynote Talk: Narrow Bandgap Organic Acceptor Materials for Organic Solar Cells</b> Xiaojun Li, ICCAS, Beijing, China
<b>10:25-10:50</b>	<b>Keynote Talk: Nanostructured Optical Materials for Energy and Biosensing Applications</b> Alicia de Andrés, ICMM-CSIC, Spain
<b>10:50-11:25</b>	<b>Coffee Break</b>
<b>11:25-11:50</b>	<b>Keynote Talk: Development of Graphene-Reinforced Magnesium Metal Matrix Composites for Biodegradable Bone Implants</b> Yuncang Li, RMIT University, Australia
<b>11:50-12:10</b>	<b>Invited Talk: Acoustic Materials for Improving Ultrasound Imaging</b> Vicente Romera Garcia, Polytechnic University of Valencia, Spain
<b>12:10-12:30</b>	<b>Low-Energy Ion Irradiation</b> Ivan Kruhlov, National University of Lviv, Ukraine
<b>12:30-12:50</b>	<b>TBA</b> Leonardo Stella, University of Birmingham, UK
<b>12:50-13:05</b>	<b>TBA</b> Hab. Andrzej Suchocki, Institute of Physics, Polish Academy of Sciences, Poland
<b>13:05 -14:00</b>	<b>Lunch Break</b>
<b>Session: Advanced Functional Materials and Characterization</b>	
<b>14:00-14:20</b>	<b>Invited Talk: Cat States in Irradiated Two-Dimensional Electron Systems</b> Jesus Inarrea, Universidad Carlos III de Madrid, Spain
<b>14:20-14:40</b>	<b>Invited Talk: Synthesis and Characterization of Fe-Based Oxides</b> Rocío Ranchal, Universidad Complutense de Madrid, Spain
<b>14:40-15:00</b>	<b>Invited Talk: Study of the Contact Behaviour of Mandrel Oxide Tribo-Layers in the Tube Piercing Process</b> Alberto Murillo Marrodain, University of Deusto, Spain
<b>15:00-15:20</b>	<b>Invited Talk: Titanium-Based Laminates Made using Blended Elemental Powder Metallurgy: Microstructure and Mechanical Behavior (Online)</b> Sergey Prikhodko, University of California, USA

15:20-15:35	TBA
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15:35-16:05	Coffee Break
	<b>Session: AI and Computational Strategies in Materials Science</b>
16:05-16:25	<b>Invited Talk: First Principles Formulation of the Local Functionalization over Time in Two-Dimensional Materials</b>
	Angel Luis Alvarez Castillo, Universidad Rey Juan Carlos, Spain
16:25-16:45	<b>Invited Talk: Perovskite Nanohybrid Materials for Optoelectronic and Sensing Applications</b>
	Pedro Atienzar, Polytechnic University of Valencia, Spain
16:45-17:40	<b>Poster Presentations</b>

<b>DAY – 3, 04th, October, 2024 - Room A</b>	
	<b>Plenary Speaker</b>
09:30-10:00	<b>Metal Organic Frameworks as Photocatalysts for the Production of Solar Fuels</b>
	Hermenegildo Garcia, Instituto Universitario de Tecnologia Quimica (CSIC-UPV), Universitat Politecnica de Valencia, Spain
10:00-10:25	<b>Keynote Talk: Multimetallic Nitrides: Novel, Convenient Synthesis and Electrocatalytic Performance in Water Oxidation Conditions</b>
	Jose Ramon Galan Mascaros, Institute of Chemical Research of Catalonia, Spain
10:25-10:50	<b>Keynote Talk: Iron Catalysis and their Applications in Synthesis of <math>\pi</math> - Functional Materials (Online)</b>
	Rui Shang, The University of Tokyo, Japan
10:50-11:10	Coffee Break
	<b>Session: Catalytic reaction engineering</b>
11:10-11:30	<b>Invited Talk: Chemoenzymatic cascade reaction for the synthesis of high value products</b>
	Ryszard Ostaszewski, Institute of Organic Chemistry PAS, Poland
11:30-11:50	<b>Invited Talk: Kinetics and Thermodynamics of in situ combustion process in the presence of oil soluble catalysts: The impact of ligand selection on combustion front stabilization</b>
	Khelkhal M.A, Kazan Federal University, Russia
11:50-12:10	<b>Invited Talk: Mechanochemically tailoring oxygen vacancy to enhance persulfate activation for water decontamination</b>
	Hanxiao Chen, Wuhan University, China
12:10-12:30	<b>Invited Talk: Coal fly ash and acid mine drainage based Fe BEA catalysts for the Friedel Crafts alkylation of benzene</b>
	Leslie Petrik, University of the Western Cape, Republic of South Africa
12:30-12:45	<b>Innovative Flow-Cascade Process for Amino-Ester Production from Biomass Platform Molecules</b>
	Carlos Moriana Herraiz, Universitat Politecnica de Valencia, Spain
12:45-13:00	Closing