Scientific Program

Joint Event
5th International Conference on
Green Chemistry and Technology

&

6th International Conference on
Environmental Chemistry and Engineering

July 24-26, 2017 Rome, Italy
Day 1 July 24, 2017

Olimpica 2

08:30-08:40 Opening Ceremony

Keynote Forum

Introduction

08:40-09:25
Title: Greener strategies for organics and nanomaterials: sustainable applications of magnetic nanocatalysts and modified graphitic carbon nitrides
Rajender S. Varma, Palacky University, Czech Republic and Cincinnati, USA

09:25-09:50
Title: Valorizing Lignin
Arthur Ragauskas, The University of Tennessee, USA

09:50-10:15
Title: Novel heterogeneous catalysts and processes for biomass derivatives transformations into fuels and chemicals
Marcelo E. Domine, Instituto de Tecnología Química (UPV - CSIC), Spain

10:15-10:40
Title: Ionically conducting materials as effective catalyst supports with potential implementations in emissions control catalysis
Ioannis V Yentekakis, Technical University of Crete, Greece

Networking & Refreshments 10:40-10:55 @ Foyer

Sessions: Green Catalysis | Green Synthesis/Reactions | Green Chemistry
Session Chair: Shuji Akai, Osaka University, Japan
Session Co-chair: Karine de Oliveira Vigier, University of Poitiers, France

Session Introduction

10:55-11:15
Title: Lipase-metal integrated catalysis for quantitative conversion of racemic alcohols into optically pure compounds
Shuji Akai, Osaka University, Japan

11:15-11:35
Title: Catalytic conversion of carbohydrates in the presence of choline chloride: Use of deep eutectic solvents
Karine de Oliveira Vigier, University of Poitiers, France

11:35-11:55
Title: Elucidation of the electronic structure of metal-oxo reactive species in porous media for the oxidation of methane and ethane
Konstantinos D. Vogiatzis, The University of Tennessee, USA

11:55-12:15
Title: Readily available homogeneous and heterogeneous catalysts for the cycloaddition of CO\textsubscript{2} to epoxides: A low carbon-footprint perspective
Valerio D' Elia, Vidyasirimedhi Institute of Science and Technology, Thailand

12:15-12:35
Title: A single enzymatic approach for deracemization of secondary alcohols
Musa M. Musa, King Fahd University of Petroleum and Minerals, Saudi Arabia

12:35-12:55
Title: Flow microreactors enables green chemistry approach for organolithium chemistry
Aiichiro Nagaki, Kyoto University, Japan

12:55-13:15
Title: Expanding the reaction space of aldolases using hydroxypyruvate as a nucleophilic substrate
Virgil Helaine, Université Clermont Auvergne, France

Group Photo

Lunch Break 13:15-14:00 @ Hotel Restuarant
**Sessions: Environmental Chemistry | Environmental Toxicology and Mutagenicity | Renewable Energy Sources and Storages**

**Session Chair:** Angelo Nacci, University of Bari, Italy  
**Session Co-chair:** Maria Michela Dell'Anna, Polytechnic University of Bari, Italy

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
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| 14:00-14:20 | **Title:** An assessment of air quality in the surrounding holy places of Mecca, Saudi Arabia during Hajj  
**Haider A Khwaja,** University at Albany, USA |
| 14:20-14:40 | **Title:** Nanostructured materials for green catalysis  
**Angelo Nacci,** University of Bari, Italy |
| 14:40-15:00 | **Title:** Carbon-enhanced manufacturing and digitalization supporting cycle economy  
**Dominik Rohrmus,** Siemens AG, Germany  
**Title:** Catalytic activity and recyclability of polymer supported palladium or nickel nanoparticles in organic reactions in water  
**Maria Michela Dell'Anna,** Polytechnic University of Bari, Italy |
| 15:00-15:20 | **Title:** A novel mechanism for BPA-triggered hepatic steatosis  
**Sijun Dong,** Institute of Urban Environment - CAS, China  
**Title:** Electrochemical production of hydrogen using iron sulfur cluster  
**Khalaf M Alenezi,** University of Hail, KSA |
| 15:20-16:00 | **Title:** Heavy metals in seawater from Marmara sea, Istanbul  
**Gökberk Kara,** Marmara University, Turkey  
**Title:** Dosing of proper oxidizing agents pretreatment to Kalatuwawa water to reduce the Trihalomethane (THM) formation in drinking water  
**Jayalal L P R Wijesinghe,** National Water Supply and Drainage Board, Sri Lanka  
**Title:** Preparation of Yb\(^{3+}\) doped microspherical BiO\(_{1-x}\)I\(_{x}\) and its photocatalytic activity for the degradation of rhodamine B in water  
**Linping Zhang,** Donghua University, China  
**Title:** Removal of Carbon Dioxide and Sulphur Dioxide from flue gas streams using membrane gas–liquid contactor  
**Seyed Mojtaba Mirfendereski,** Beheshti University,Tehran, Iran  
**Title:** Assessment of Polynuclear Aromatic Hydrocarbons (PAHs) in local steak (suya) samples in Makurdi town, Benue State-Nigeria  
**Ubwa S T,** Benue State University, Nigeria  
**Title:** Using electrocoagulation to remove chloride and ammonium from reject brine treated by solvay process  
**Miada A Ali,** United Arab Emirates University, UAE |
| 16:15-16:35 | **Title:** Toward carbon fibers from single component kraft lignin systems: An application of green chemistry with forest biomaterials  
**Dimitris S. Argyropoulos,** North Carolina State University, USA |
| 16:35-16:55 | **Title:** C-H free metal-organic green catalysts  
**Sergiu. M. Gorun,** Seton Hall University, USA |
| 16:55-17:15 | **Title:** Preparation of Yb\(^{3+}\) doped microspherical BiO\(_{1-x}\)I\(_{x}\) and its photocatalytic activity for the degradation of rhodamine B in water  
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**Dimitris S. Argyropoulos,** North Carolina State University, USA  
**Title:** C-H free metal-organic green catalysts  
**Sergiu. M. Gorun,** Seton Hall University, USA 

**Panel Discussion**

**Day 2 July 25, 2017**

**Olimpica 2**

**Keynote Forum**

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| 08:55-9:20  | **Title:** C-H free metal-organic green catalysts  
**Sergiu. M. Gorun,** Seton Hall University, USA |
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<th>Time</th>
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<th>Speaker</th>
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<tr>
<td>9:20-09:45</td>
<td>Sustainable production means rational entropy management</td>
<td>J. Michael Köhler,</td>
<td>Technical University of Ilmenau, Germany</td>
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<tr>
<td></td>
<td>Title: Novel macroporous cryogels with enhanced adsorption capability for the removal of Cu(II) ions from aqueous phase: Modeling, kinetics and recovery studies</td>
<td>Ufuk Yildiz,</td>
<td>Kocaeli University, Turkey</td>
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<tr>
<td>09:45-10:10</td>
<td>Networking &amp; Refreshments 10:10-10:25 @ Foyer</td>
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<tr>
<td>10:25-10:45</td>
<td>Title: Molecular simulations turn ‘green’: An integrated approach to accelerate the development of CO₂ capture solvents</td>
<td>Vassiliki-Alexandra Glezakou,</td>
<td>Pacific Northwest National Laboratory, USA</td>
</tr>
<tr>
<td></td>
<td>Title: Photo-detachable adhesives composed of photo-depolymerizable Poly(olefin sulfone)s</td>
<td>Takeo Sasaki,</td>
<td>Tokyo University of Science, Japan</td>
</tr>
<tr>
<td>10:45-11:05</td>
<td>Session Chair: Vassiliki-Alexandra Glezakou, Pacific Northwest National Laboratory, USA</td>
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<td></td>
<td>Session Co-chair: Takeo Sasaki, Tokyo University of Science, Japan</td>
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<tr>
<td>11:05-11:25</td>
<td>Title: Vanillin: A renewable and versatile platform chemical for sustainable polymers</td>
<td>Joseph F. Stanzione III,</td>
<td>Rowan University, USA</td>
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<td>11:25-11:45</td>
<td>Title: Hydrogen peroxide - oxidation reactions under microwave irradiation</td>
<td>Dariusz Bogdal,</td>
<td>Cracow University of Technology, Poland</td>
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<tr>
<td>11:45-12:05</td>
<td>Title: Supercritical fluid technology for greener processes</td>
<td>Youn-Woo Lee,</td>
<td>Seoul National University, Korea</td>
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<tr>
<td>12:05-12:25</td>
<td>Title: Graphene-based material for oil spill removal</td>
<td>Annalisa Pola,</td>
<td>Directa Plus SpA, Italy</td>
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<tr>
<td>12:25-12:45</td>
<td>Title: Chemical markers for the characterization of bioaerosol</td>
<td>Francesca Buiarelli,</td>
<td>University of Rome “La Sapienza”, Italy</td>
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<td>Group Photo</td>
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<td>Lunch Break 12:45-13:30 @ Hotel Restaurant</td>
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<tr>
<td>13:30-13:50</td>
<td>Title: Clean and sustainable liquid hydrogen storage materials</td>
<td>Chang Won Yoon,</td>
<td>Korea Institute of Science and Technology, Republic of Korea</td>
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<tr>
<td>13:50-14:10</td>
<td>Title: Challenges of green chemistry for value added products</td>
<td>Ahindra Nag,</td>
<td>Indian Institute of Technology, Kharagpur, India</td>
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<td>14:10-14:30</td>
<td>Title: Waste biomass derived aqueous extracts as alternative green solvent media for organic transformations</td>
<td>Diganta Sarma,</td>
<td>Dibrugarh University, India</td>
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<td>14:30-14:50</td>
<td>Title: Water quality of the Chelif river in the Mostaganem area (North-West of Algeria)</td>
<td>Batoul Benkaddour,</td>
<td>Mostaganem University, Algeria</td>
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<td>14:50-15:10</td>
<td>Title: Global atmospheric emissions of toxic heavy metals from anthropogenic sources under multi-scale regions</td>
<td>Hezhong Tian,</td>
<td>Beijing Normal University, China</td>
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<td>15:10-15:30</td>
<td>Title: Removal of oil hydrocarbons using the grass Panicum máximum and a bacterial consortium in contaminated soil</td>
<td>S M Contreras-Ramos,</td>
<td>CIATEJ, Mexico</td>
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<td>Workshop</td>
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<tr>
<td>15:30-16:20</td>
<td>Title: Sustainable processing of biomass and its derivatives</td>
<td>Marcelo E. Domine,</td>
<td>Instituto de Tecnología Química (UPV - CSIC), Spain</td>
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Networking & Refreshments 16:20-16:35 @ Foyer
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<tr>
<td>Dariusz Bogdal, Cracow University of Technology, Poland</td>
<td>Green synthesis of new chiral halogenated imines derived from Benzo[b]thiophene-2-carboxaldehyde</td>
<td>Universidad Autónoma de Puebla, Mexico</td>
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<tr>
<td>Ufuk Yildiz, Kocaeli University, Turkey</td>
<td>Green synthesis of chiral imines and their Zn(II) complexes</td>
<td>Universidad Autónoma de Puebla, Mexico</td>
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<tr>
<td>Andrea Moreno-Ceballos, Universidad Autónoma de Puebla, Mexico</td>
<td>Green synthesis of a chiral imine and its Pd(II) complex</td>
<td>Universidad Autónoma de Puebla, Mexico</td>
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<tr>
<td>John Sadat-Bernal, Universidad Militar Nueva Granada (UMNG), Colombia</td>
<td>Solvent-free mechnanochemical obtention of phenol-N-aminal aggregates</td>
<td>Universidad Autónoma de Puebla, Mexico</td>
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<td>Jaime Ríos-Motta, Universidad Nacional de Colombia, Colombia</td>
<td>Green synthetic approaches for medium ring-sized and linear Benzylimidazolidine oligomers</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Chan Kyung Kim, Inha University, Korea</td>
<td>Prediction of cellulose dissolution in ionic liquids using molecular descriptors based QSAR model</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Sangseok Yu, Chungnam National University, South Korea</td>
<td>Two-dimensional inorganic electrode promoted electron transfer efficiency in transfer hydrogen reactions of carbon-carbon multiple bonds</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Ye Ji Kim, Sungkyunkwan University, Republic of Korea</td>
<td>Enhanced GABA production via protein complex of Pyrococcus horikoshii glutamate decarboxylase and Escherichia coli GABA transporter</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Soon Ho Hong, University of Ulsan, Korea</td>
<td>Ammonia borane as hydrogen storage material: Study of some of its clusters</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Ibrahim Ahmed Saleh, National Research Centre, Egypt</td>
<td>Manganese-salan complex immobilized on reduced graphene oxide: A recyclable catalyst for aerobic enantioselective epoxidation of olefins</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Hassan Hosseini-Monfared, University of Zanjan, Iran</td>
<td>Comparison of net GHG emissions between separated system and crop-swine integrated system in the North China Plain</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Zhejin Li, China Agricultural University, China</td>
<td>Dehydration of sugars from grape juice waste by Microwave Radiation</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Almudena Lorente, University of Castilla La Mancha (UCLM), Spain</td>
<td>Structure and Electrochemical properties of recycled active electrodes from spent lead acid battery and modified with different manganese dioxide contents</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Simona Rada, Technical University of Cluj-Napoca, Romania</td>
<td>Survey analysis of dental ceramic materials based on yttria oxide-stabilized zirconia</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Marius Rada, National Institute for R&amp;D of Isotopic and Molecular Technologies, Romania</td>
<td>Low-temperature hydrogenation of carbon dioxide to methanol using a homogeneous cobalt catalyst</td>
<td>Universidad Nacional de Colombia, Colombia</td>
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<td>Rauf Razzaq, Leibniz-Institute for Catalysis e.V. University of Rostock, Germany</td>
<td></td>
<td>Universidad Nacional de Colombia, Colombia</td>
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| EGCPP19 | Title: Metal-free aerobic oxidative coupling of thiols for synthesis of disulfides and sulfenamides  
Liting Yang, Zhengzhou University, China |
|---|---|
| EGCPP20 | Title: Ab initio calculation of structural and elastic properties of Mg$_2$Sn and Mg$_2$Pb compounds  
Yassine Chaouche, University of Larbi Tébessi, Algeria |
| EGCPP21 | Title: Efficient extraction and functionalization of cellulose nanocrystals through hydrochloric acid hydrolysis under hydrothermal conditions  
Miao Cheng, Donghua University, China |
| EGCPP22 | Title: Design and development of an advanced solar module for a cruiser vehicle  
Alberto Lucci, University of Bologna, Italy |
| EGCPP23 | Title: Using finite elements for improving the sustainability in ceramic processes  
Giuseppe Lucisano, University of Bologna, Italy |
| EGCPP24 | Title: Investigation of impact in biocomposites for application in solar vehicles  
Felipe Vannucchi de Camargo, University of Bologna, Italy |
| EGCPP25 | Title: Assessing the vulnerability of freshwater fish in Canada’s eastern boreal to climate change  
Michael van Zyll de Jong, Memorial University, Canada |
| EGCPP26 | Title: Hydrophobic sorption of the soil treated with giant Miscanthus-derived biochar as a function of aging period  
Seunghun Hyun, Korea University, South Korea |
| EGCPP27 | Title: Characteristics of bio-oil produced by the Pyrolysis of mixed waste tire and biomass  
Ozlem Onay, Anadolu University, Turkey |
| EGCPP28 | Title: Treatment of hazardous waste incineration plant effluent by novel hydrogels  
Ömer F Kemik, IZAYDAŞ, Turkey |
| EGCPP29 | Title: Lithium tetrathiafulvalene carboxylate assisted inductively coupled plasma mass spectrometry determination of total mercury in air particulate matter supported by electrochemical study of preservation effects  
Maja Budanovic, Nanyang Technology University, Singapore |
| EGCPP30 | Title: Biological nutrient removal: The effect of organic load  
Tea Širac, University of Zagreb, Croatia |
| EGCPP31 | Title: Numerical and experimental investigation of mixture uniformity and predicted performance of Urea-SCR system with vandium-based catalysts based NH3-Temperature programming desorption experiment  
Changhee LEE, Songwon University, South Korea |
| EGCPP32 | Title: Physicochemical and bacteriological analyses of water samples from hand dug wells in Lafia metropolis, Nasarawa State, Nigeria  
Abel Augustine, Federal University Lafia, Nigeria |
| EGCPP33 | Title: COX free hydrogen production for fuel cell applications using cobalt incorporated carbon supported material  
Aytak Mammadli, Gazi University, Turkey |
| EGCPP34 | Title: Development of a simple biogas digester as a source of renewable energy and sustainable livelihood  
Lamfu Fabrice Yengong, University of Buea, Cameroon |
| EGCPP35 | Title: Determination of residues levels of seven pesticides in tomatoes samples taken from three markets in Khartoum state  
Ahmed Hammad, University of Khartoum, Sudan |
Day 3 July 26, 2017

Olimpica 2

Sessions: Green Synthesis | Green Manufacturing | Green Chemistry

Session Chair: Ettigounder Ponnusamy, Millipore Sigma, USA
Session Co-chair: Antonio Zuorro, Sapienza University of Rome, Italy

Session Introduction

9:00-9:20
Title: DOZN – A quantitative green chemistry evaluator
Ettigounder Ponnusamy, Millipore Sigma, USA

9:20-9:40
Title: Production of silver nanoparticles by spent coffee grounds extracts
Antonio Zuorro, Sapienza University of Rome, Italy

9:40-10:00
Title: Asymmetric synthesis of potential biologically active new heterocyclic analogs of (s)-a-alanine containing 3,4-substituted 5-thioxo-1,2,4-triazoles in the side-chain radical
Hayarpi M. Simonyan, Yerevan State University, Armenia

10:00-10:20
Title: Innovative green routes to noble metal nanoparticles
Magda Blosi, Institute of Science and Technology for Ceramics, Italy

10:20-10:40
Title: Efficient method for the synthesis of novel enantiomerically enriched derivates of propargylglycine
Anna F. Mkrtchyan, Yerevan State University, Armenia

Networking & Refreshments 10:40-10:55 @ Foyer

10:55-11:15
Title: Micro/nano-architecture assisted electrochemistry on electrode materials Bioinspired by butterfly wings
Tongxiang Fan, Shanghai Jiaotong University, China

11:15 - 11:35
Title: Ultrasound and microwaves assisted synthesis of molecules with antiquorum sensing activity
Alicia Reyes-Arellano, National Polytechnic Institute, Mexico

11:35-11:55
Title: Mimetic peptides based on promiscuous enzyme as asymmetric catalyst in Aldol and Michael reactions
Saadi Bayat, Tofigh Daru Research and Engineering Company, Iran

Sessions: Renewable Sources | Non-thermal Activation Methods | Valorisation of Waste into Chemicals

Session Chair: Detlef Schmiedl, Fraunhofer Institute for Chemical Technology, Germany
Session Co-chair: Manuel García-Perez, Washington State University, USA

Session Introduction

11:55-12:15
Title: Potential deconstruction of recycled wood, structural features of isolated lignin and ways to activate it for material applications
Detlef Schmiedl, Fraunhofer Institute for Chemical Technology, Germany

12:15-12:35
Title: Bio-oil refineries: Challenges and opportunities
Manuel García-Perez, Washington State University, USA

12:35-12:55
Title: Use of clays and clay wastes as artificial pozzolans in eco-cement manufacture: A review
Siline Mohammed, University of M’sila, Algeria

12:55-13:15
Title: Research on antidote of cyanide poison(sodium & hydrogencyanide) known as Sodasulphanecoblamin
Salako Olatunji, FIIRO & ACS Chemistry Ambassador, Nigeria

Lunch Break 13:15-14:00 @ Hotel Restaurant

Young Researchers Forum

14:00-14:15
Title: Synthesis of a stable iron oxide nanoparticles in ionic base fluid for photo-thermal conversion applications
Ehsan Nourafkan, University of Leeds, UK

14:15-14:30
Title: Biomass nitrogen-enriched pyrolysis for nitrogen-doped carbon materials of supercapacitors
Wei Chen, Huazhong University of Science and Technology, China
Title: Green design of lock-and-key affinity devices to address API purification challenges
Raquel Viveiros, Universidade NOVA de Lisboa, Portugal
Title: Valorization of lignocellulosic biomass and production of biofuel precursors under microwave radiation
Almudena Lorente, University of Castilla La Mancha (UCLM), Spain
Title: Chemoslective hydrodehalogenation and high efficiency birch reduction using two-dimensional inorganic electrode dicalcium nitride ([Ca₂N]⁺·e⁻) as a reducing agent
Byung Il You, Sungkyunkwan University, Republic of Korea
Title: The new class of green material: Two-dimensional electride [Ca₂N]⁺·e⁻
Ye Ji Kim, Sungkyunkwan University, Republic of Korea
Title: Phytoremediation of heavy metal-polluted aquatic ecosystem (olege lagoon) by water hyacinth (eichhornia crassipes [mart.] solms) and the socio-ecological implications
Isreal Ugochukwu Oshiojum, Lagos State University, Nigeria
Title: Reusable cobalt-phthalocyanine in water: Efficient catalytic aerobic oxidative coupling of thiol to synthesize organosulfur compounds
Bingxin Yuan, Zhengzhou University, China
Title: Removal of a tar analogue from synthetic fuel gas using a non-thermal plasma dielectric barrier discharge reactor
Faisal Saleem, Newcastle University, UK
Title: Design and elaboration of MV₂O₆ nanomaterial with different synthesis methods: Impact on structure and catalytic properties
Khadija Khallouk, Université de Montpellier, France

Networking & Refreshments 16:30-16:45 @Foyer
Panel Discussion
Closing Ceremony