



## ENMIX WORKSHOP

European Nanoporous Materials Institute of Excellence

### FINAL PROGRAMME

FACULDADE DE ENGENHARIA DA UNIVERSIDADE DO PORTO – ROOM B032

	Thursday, 12 <sup>th</sup> September 2024	Friday, 13 <sup>th</sup> September 2024
08:30	Registration	
09:00	Opening Session	
09:15	<b>PL 1</b> João Rocha	<b>PL 3</b> Eleni Iliopoulou
09:30		
09:45		
10:00	<b>IL 1</b>	<b>IL 2</b>
10:15	Alexandre Ferreira	Petar Djinic
10:30	OC 1 ::: Susan Sen	OC 11 ::: Elias Klemm
10:50	<b>Coffee Break</b>	<b>Coffee Break</b>
11:00		
11:20	OC 2 ::: Aljaž Škrjanc	OC 12 ::: Coset Abreu Jauregui
11:40	OC 3 ::: Cristina Martínez	OC 13 ::: Samar Al Jitan
12:00	OC 4 ::: Pascal Dietzel	OC 14 ::: Nataša Novak Tušar
12:20	OC 5 ::: Monica Jimenez-Ruiz	OC 15 ::: Sofia Santos
12:40	OC 6 ::: Matthias Thommes	<b>Closing Session</b>
13:00	<b>Lunch</b>	<b>Lunch</b>
14:30	<b>PL 2</b> Atsushi Urakawa	
14:45		
15:00		
15:15	OC 7 ::: Stefano Cimino	
15:35	OC 8 ::: Luciana Lisi	
15:55	OC 9 ::: Edgar Stiven Duran Uribe	
16:15	OC 10 ::: José Luis del Río-Rodríguez	
16:35	<b>Poster Session &amp; Coffee Break</b>	
16:55		
17:15		
17:35		
20:30	<b>Dinner</b>	

PL: Plenary Lecture (45') • IL: Invite Lecture (30') • OC: Oral Communication (20') (including discussion)

08:30 – 09:00	<b>Registration</b>
09:00 – 09:15	<b>Opening Session</b>
<b>SESSION 1: Synthesis, Characterization and Separation Processes</b>	
09:15 – 10:00	Plenary Lecture 1 <b>João Rocha.</b> University of Aveiro, Portugal. <i>Zeolites and MOFs: Pore-Fectly Saving the World, One Pore at a Time</i>
10:00 – 10:30	Invited Lecture 1 <b>Alexandre Ferreira.</b> University of Porto, Portugal. <i>Cyclic Adsorption Processes: Bridging Fundamentals and Applications</i>
10:30 – 10:50	Oral Communication 1 <b>Susan Sen.</b> University of Bergen, Norway. <i>Porous and Robust Metal-Organoborane Framework</i>
<b>10:50 – 11:20</b>	<b>Coffee Break</b>
11:20 – 11:40	Oral Communication 2 <b>Aljaž Škrjanc.</b> National Institute of Chemistry, Ljubljana, Slovenia. <i>Why nickel dislikes ZIF-8: routes towards preparation of pure nickel zeolitic imidazolate frameworks</i>
11:40 – 12:00	Oral Communication 3 <b>Cristina Martínez.</b> Instituto de Tecnología Química, UPV-CSIC, Valencia, Spain. <i>The influence of additives derived from zeolite/LDH composites on catalytic cracking of heavy petroleum oils for light olefin production</i>
12:00 – 12:20	Oral Communication 4 <b>Pascal D. C. Dietzel.</b> University of Bergen, Norway. <i>Direct observation of the dehydration of a metal hydroxido cluster to a metal oxido cluster in a metal-organic framework</i>
12:20 – 12:40	Oral Communication 5 <b>Monica Jimenez-Ruiz.</b> Institut Laue-Langevin, Grenoble, France. <i>Understanding the Microscopic Mechanism for the Industrially Relevant Ethylene/Ethane Separation by Silver-Containing Molecular Sieves</i>
12:40 – 13:00	Oral Communication 6 <b>Matthias Thommes.</b> Institute of Separation Science & Technology, Friedrich-Alexander - University Erlangen-Nürnberg, Erlangen, Germany. <i>Assessment of Hydrophilicity/Hydrophobicity in Nanoporous Materials</i>
<b>13:00 – 14:30</b>	<b>Lunch</b>

**SESSION 2: Catalysis and Catalytic Processes**

- 14:30 – 15:15 Plenary Lecture 2  
**Atsushi Urakawa**. TU Delft, The Netherlands.  
*Playing with thermodynamics and kinetics in CO<sub>2</sub> conversion catalysis*
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- 15:15 – 15:35 Oral Communication 7  
**Stefano Cimino**. STEMS-CNR, Naples, Italy.  
*Sulfur Tolerance of Li-Ru/Al<sub>2</sub>O<sub>3</sub> Dual Function Material for the Integrated CO<sub>2</sub> Capture and Methanation*
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- 15:35 – 15:55 Oral Communication 8  
**Luciana Lisi**. Consiglio Nazionale delle Ricerche, Naples, Italy.  
*Effect of Pt load and Na addition to ZSM-5 for H<sub>2</sub> SCR of NO<sub>x</sub>*
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- 15:55 – 16:15 Oral Communication 9  
**Edgar Stiven Duran Uribe** Universidad de Alicante, Spain.  
*Nitroarene Hydrogenation Using Nitrogen and Phosphorus Co-doped Activated Carbon*
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- 16:15 – 16:35 Oral Communication 10  
**José Luis del Río-Rodríguez**. Instituto de Tecnología Química, Universitat Politècnica de València, Spain.  
*Influence of Heteroatom Doping on Heterogeneous Cobalt Catalysts for the One-Pot Synthesis of Benzimidazoles by Reductive Coupling of Dinitroarenes with Aldehydes in Water*

16:35 – 17:35

Poster Session &amp; Coffee Break

20:30

Dinner ::: O Comercial Restaurant - Palácio da Bolsa

**SESSION 3: Electrocatalysis & Photocatalysis**

09:15 – 10:00	Plenary Lecture 3 <b>Eleni Iliopoulou.</b> CPERI/CERTH, Thessaloniki, Greece. <i>Methane pyrolysis: Unlocking the potential for CO<sub>x</sub>-free Hydrogen Production</i>
10:00 – 10:30	Invited Lecture 2 <b>Petar Djinovic.</b> National Institute of Chemistry, Ljubljana, Slovenia. <i>Visible light assisted CO<sub>2</sub> valorization to CO over metal@oxide semiconductor photocatalysts</i>
10:30 – 10:50	Oral Communication 11 <b>Elias Klemm.</b> University of Stuttgart, Germany. <i>Electrocatalysis Under Confinement: CO<sub>2</sub>-Reduction with Molecular Catalysts Immobilized on Ordered Mesoporous Carbons</i>
10:50 – 11:20	<b>Coffee Break</b>
11:20 – 11:40	Oral Communication 12 <b>Coset Abreu Jauregui.</b> University of Alicante, Spain. <i>Surface Chemistry and Photodegradation: Insights into Heteroatom-Mediated Catalysis</i>
11:40 – 12:00	Oral Communication 13 <b>Samar Al Jitan.</b> University of Antwerp, Belgium. <i>Photocatalytic conversion of CO<sub>2</sub> to methanol using copper oxide and vanadium oxide co-deposited on titania nanotubes</i>
12:00 – 12:20	Oral Communication 14 <b>Nataša Novak Tušar.</b> National Institute of Chemistry, Ljubljana, Slovenia. <i>Nanoporous Materials for Fenton-like and Photo-Fenton-like Water Cleaning via Heterogeneous Catalysis</i>
12:20 – 12:40	Oral Communication 15 <b>Sofia G. G. Santos.</b> University of Porto, Portugal. <i>Green Fabrication of Carbon-Coated Macrostructured Catalysts with Sodium Alginate Assistance</i>
12:40 – 13:00	Closing Session

**13:00 – 14:30****Lunch**

P1	Empowering the gas desulfurization efficiency of carbon materials through incorporating active inorganic phases	Meriem Abid
P2	Gas-phase simulated moving bed for methane and nitrogen separation using maxsorb extrudates	Rafael Osório Marques Dias
P3	Grignard Surface Modification: Insights Into The Modification Mechanism And Surface Properties	Femi Rose Tharakan
P4	Analysis of the flowrate effect on the continuous adsorption of diclofenac using carbon nanotubes functionalized with Fe nanoparticles	Heloisa Pereira de Sá Costa
P5	Synthesis of graphene oxide and clay-based nanocomposite for adsorption of emerging pharmaceutical contaminants in water	Nickolly Bukkyo Vieira Serafim
P6	3D-printed Hybrid Monolith for CO <sub>2</sub> Capture	Ana Jorge Meireles Pereira
P7	Mechanochemistry and ZIFs; facile functionalisation of porous frameworks for CO <sub>2</sub> capture	Aljaž Škrjanc
P8	Novel microporous zinc-based MOF for selective CO <sub>2</sub> capture	Klara Klemenčič
P9	Hydrogenation of CO <sub>2</sub> to hydrocarbons with multimetallic carbon catalysts	Mariana Felgueiras
P10	Innovative carbon:Al <sub>2</sub> O <sub>3</sub> composite support for catalysts to CO <sub>2</sub> Hydrogenation to Methanol	Ana Rita Nunes Querido
P11	Use of Oxidised Activated Carbon as Metal-Free Catalyst to Obtain Substituted Anilines	Edgar Stiven Duran Uribe
P12	Palladium and Platinum hydrides as catalysts for enyne cycloisomerization reaction and advanced solid state nmr spectroscopy	Erik Jasper Wimmer
P13	Catalytic Hydrogenation for PFAS Removal	Catarina da Cunha Lopes
P14	Development of 3D printed carbon-based macrostructures through direct ink writing	José Ricardo Monteiro Barbosa
P15	Self-Supporting Films and Powders of Ordered Mesoporous Carbon based on Tailored Polyether Templates for Application in Electrocatalysis under Confinement	Patricia Sonnenberg
P16	Toward High-rate Carbon-based Supercapacitors: New Insights into Tuning Multimodal Mesoporosity in Hierarchical Porous Carbons	Mohammed Saleem Subrati Yadulla
P17	Degradation of pollutants in industrial effluents using ozonation reaction over Fe-catalysts	Ouissal Assila
P18	Proton-Electron Transfer From Well-Defined Molecular Hydrogen Donors To Metal Oxides	Osman Bunjaku