

Early Career Symposium on Advanced Molecular Materials

#ECSAMM

Marh 27th - 28th 2025

ICMol - Assembly
Hall



Organized by



Sponsors



Committee

ECSAMM



Isabel Abánades Lázaro

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Matteo Andrea Lucherelli

ICMol-UV



Joaquín Soriano López

ICMol-UV

Invited Speakers



Sara Goberna Ferron
(ITQ) - Marie Curie Fellow



Arnau Carné Sánchez
(ICN2)- Ramón y Cajal



Marcileia Zanatta
(UJI) - Junior Leader
La Caixa

Program Sessions

Session 1.a *Materials for Energy Applications*

Session 1.b *Molecular Spin Science and Technology
Materials and Processes for Electronics
Advances in Metal-Organic Frameworks
Sustainability and Environment*

Session 2.a *2D Materials*

Session 2.b *Molecular Biomaterials: Structure, Organization, and Function
Sustainability and Environment
Advances in Metal-Organic Frameworks*

Session 3.a *Advances in Metal-Organic Frameworks*

Session 3.b *Advances in Metal-Organic Frameworks*



**View program on
the website**

Program



ECS AMM
Early Career Symposium on
Advanced Molecular Materials

March 27th

14:00 - 15:00 Registration

15:00 - 15:15 Opening session

15:15 - 15:45 Invited Talk

Sara Goberna Ferrón | **Single-Atom Electrocatalysts on Tailored Supports for Energy Applications**

15:45 - 16:00

Rita Belén Cevallos Toledo | NIR-activated cooperative sensitization upconversion in EOS-Yb lake doped latex nanoparticles

16:00 - 16:15

Youssra Diouane | Exploring High-Entropy Layered Hydroxides in Oxygen Evolution Reaction Catalysis

16:15 - 16:30

Alejandro Cortés Villena | Perovskite-BODIPY Nanohybrids for Light-Driven Applications

16:30 - 16:45

Cristina Madrona Maqueda | Antimony intercalation compounds as Na-ion battery anodes

16:45 - 17:00 Break

17:00 - 17:15

José Troya Martínez | Tuning Magnetic and Quantum Properties in Oxalate- and Anilate-Based Coordination Networks

17:15 - 17:30

Carlos David Prado Socorro | Ion-Mediated Organic Memristors: Tuning Memory and Dynamics for Neuromorphic Computing

17:30 - 17:45

Thibaut Le Huec | Hybrid MOF-on-MOF Heterostructures for Enhanced Photocatalytic Water Splitting under Solar Light

17:45 - 18:00

Beatriz Meana Baamonde | An in-depth study on photo-induced decarboxylative borylation

18:00 - 18:15

Noura Aflak | Copper(I) catalyst supported on magnetic polyvinylpyrrolidone polymer composite: an efficient recyclable catalyst for sustainable synthesis of 1,2,3-triazoles in green conditions

18:15 - 19:30 Poster session & networking / COCTEL

SESSION 1. A

SESSION 1. B

09:00 - 09:30 Registration

09:30 - 10:45 Invited Talk

Marcileia Zanatta | **From Air to Value: Strategies for Capturing and Transforming CO₂**

10:00 - 10:15

Varghese Alapatt | Highly polarized single photon emitter from intrinsic localized excitons in a 2D semiconductor/magnet van der Waals heterostructure

10:15 - 10:30

Filippo Mione | Thin layer interference effects on optical properties of layered Bil₂

10:30 - 10:45

José Joaquín Pérez Grau | Ferroelectric field effect in 2D multiferroic heterostructures

10:45 - 11:00

Yuliia Petrenko | Heteroleptic triazole-based complexes featuring abrupt spin transitions and structural symmetry breaking

11:00 - 11:05 **Clara Miranda Pérez** | Programmable magnetic hysteresis in orthogonally-twisted 2D CrSBr magnets via stacking engineering

11:05 - 11:10 **Luuk Muris** | Deriving relation between structural properties and vibrational spectra for layered hydroxides

11:10 - 11:15 **Pradyumna Bawankule** | Exploring in-plane ferroelectricity in β' -In₂Se₃

11:15 - 11:45 Coffee break

11:45 - 12:00

Julia Requena Ramírez | Carbon Nano-Onions in Nanomedicine: Illuminating New Frontiers in Cancer Therapy

12:00 - 12:15

Shoaib Azeem | Chemical design of Au@MnFe PBA nanoparticles for pH responsive Drug Release

12:15 - 12:30

Pablo Navarro Madramany | Next-Generation Molecular Biomaterials: Nanozymes Replicating Superoxide Dismutase Function

12:30 - 12:45

Mónica Gutiérrez Salazar | Photoswitchable peptides as models to study membrane protein folding and insertion

12:45 - 13:00

Mateo Calle Velásquez | Perfusion-induced ATR-FTIR spectroscopy as a tool to characterize antimicrobial peptide LAH4 in fully hydrated membranes

13:00 - 13:05 **Elianny Da Silva Marin** | Synthesis of a TiO₂ photocatalyst for H₂ production by water splitting and its application in the catalytic hydrogenation of levulinic acid

13:05 - 13:10 **Ginebra Sánchez García** | Influence of hydrodynamic conditions on anodized TiO₂ photoelectrocatalysts used for N₂O mitigation

13:10 - 13:15 **Carmen Rosales Martínez** | Tuning the electronic properties of Zr UiO-66 through defect-functionalised multivariate modulation

13:15 - 15:00 Lunch break

SESSION 2.A

SESSION 2.B

Flash

Flash

14:45 - 15:00 Registration

15:00 - 15:30 Invited Talk

Arnau Carné Sánchez | **Metal-Organic Polyhedra: Porous Nanoparticles with Molecular Reactivity**

15:30 - 15:45

Clara Chinchilla | Structural Control of Photoconductivity in a Flexible Titanium-Organic Framework

15:45 - 16:00

Eloy Pablo Gómez de Oliveira | Tailoring CO₂ Photoreduction through Local Cluster Distortion in Titanium Frameworks

16:00 - 16:15

Sonia Martínez-Giménez | Synthesis of reo UiO-66

16:15 - 16:45 Coffee break

16:45 - 16:50 **Guillermo Gómez Tenés** | Click-Enabled Recognition of Chiral Drugs in Reticular Frameworks

16:50 - 16:55 **Víctor Carratalá Muñoz** | Synthetic Amino Acids for Programming Adaptable Response in Pyrazolate Frameworks

16:55 - 17:10

Sergio Ruiz Gamarra | Unlocking novel topologies via supermolecular building layer approach for gas separation

17:10 - 17:25

Gerardo Ripoll | MUV-23: Flexibility and Stability in a Heterometallic Pd-Fe Framework

17:25 - 17:40

Jesus Antonio Cases Díaz | New synthetic approaches for protein encapsulation to protect and control biomolecule performance

17:40 - 18:00 Closing remarks and awards

18:00 - 19:30 Poster Exhibition & networking

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SESSION 3.A

SESSION 3.B

Flash