

AMPHITHEATRE LAVOISIER

MONDAY MORNING

8:30 – 9am: Inaugural Speech

9 – 9:45: Plenary Conference, Matthew Rosseinski

Porous materials and rotation about single bonds

10 – 10:30: Keynote 1, Dan Zhao

Porous Cages as Water Channels in Reverse Osmosis Membranes

COFFEE BREAK

11 – 11:20: Invited Lecture 1, Youssef Belmabkhout

Unveiling advanced Metal Organic Frameworks for adsorptive based gas/vapor separations with different degree of complexity

11:20 – 12:05: Oral presentations

11:25 Vanessa Martins (O1): An alternative method for the separation of C2/C3 hydrocarbons mixtures by pressure swing adsorption using the MOF MIL-100(Fe)

11:40 Ilich Ibarra (O3): Capture of H₂S and SO₂ in MOFs

11:55 Mickaele Bonneau (O5): Flexible Metal organic frameworks for C₃ hydrocarbon separation

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MONDAY MORNING

10 – 10:30am: Keynote 2, Takashi Uemura
Polymer Chemistry in Metal-Organic Frameworks

COFFEE BREAK

11 – 11:20: Invited Lecture 2, Nathalie Steunou
Design of porous composites by assembling MOFs with (bio)macromolecules or carbon based materials

11:20 – 12:05: Oral presentations

11:25 Kyle Bentz (O2): PolyMOFs: The hybridization of polymers and metal-organic frameworks
as a route towards thermally processable MOFs

11:40 Li Tao (O4): Interfacial Design towards MOF@Polymer and MOF@MOF Porous Composite Materials

11:55 Renhao Dong (O6): Interfacial Synthesis of 2D Conjugated Polymers: the Rise of Organic 2D Materials

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MONDAY AFTERNOON

2 – 2:45pm: Plenary Conference, Veronique Van Speybroeck

A molecular-level perspective into the properties and dynamic behavior of metal-organic frameworks

3 – 3:20: Invited Lecture 3, Kim Jelfs

Computational discovery of porous materials

3:20 – 4:05: Oral presentations

3:20 Gaël Donval (07): In silico synthesis of MOFs from first principles

3:35 Roberto Amabile (09): Colored Nets: a Reversible Representation for Frameworks' Heterogeneity

3:50 George Froudakis (011): A Universal Machine Learning algorithm for large-scale screening of MOFs

COFFEE BREAK

4:35 – 5:50: Oral presentations

4:35 Frederik Haase (O13): Synthesis of Porous Materials from Geometrically Frustrated Building Blocks

4:50 Javier Castells-Gil (O15): Titanium(IV)-Organic Frameworks for Applications of Environmental Relevance

5:05 Javier Lopez Cabrelles (O17): Chemical versatility in two-dimensional coordination polymers

5:20 Inhar Imaz (O19): Self-assembly of polyhedral metal-organic framework particles into threedimensional ordered superstructures

5:35 Norbert Stock (O21): Uncommon reaction conditions for the synthesis of new Zr-MOFs

5:50 Jan Demel (O23): The use of phosphinic acid based linkers for pore wall engineering in metal organic frameworks

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MONDAY AFTERNOON

3 – 3:20pm: Invited Lecture 4, Hana Bunzen

Fe₃O₄-MOF nanoparticle carrier for arsenic drugs in cancer therapy

3:20 – 4:05: Oral presentations

3:20 Simon Vornholt (O8): PolyMOFs: Evaluating and Understanding the Performance of MOF- Polymer Composites for Medical Device Applications

3:35 David Fairen-Jimenez (O10): Design of highly porous metal-organic frameworks for drug and gene Delivery

3:50 Moises Luzia Pinto (O12): Therapeutic Potential of Nitric Oxide Released by a Robust Ti-MOF Carrier

COFFEE BREAK

4:35 – 6: Oral presentations

4:35 Das Madhab C. (O14): Selective Gas Sorption and Proton Conduction by Water/Moisture Stable MOFs

4:50 Jeff St Amant (O16): MOF with high affinity for regulated light hydrocarbons

5:05 Thomas Bennett (O18): Pressure-Temperature Phase Diagrams of Metal-Organic Frameworks

5:20 Weijin Li (O20): High oxygen evolution activity of electrocatalysts derived from surfacemounted metal-organic frameworks

5:35 Wojciech Bury (O22): Non-Covalent Diamondoid Microporous Materials - selective separation of C₆-hydrocarbons

5:50 Min Tu (O24): Reversible Optical Writing and Data Storage in an Anthracene-Loaded Metal-Organic Framework

AMPHITHEATRE LAVOISIER

TUESDAY MORNING

8:30 – 9am: Plenary Conference, Omar Farha

Smart and Programmable Sponges: Design or Serendipity?

9:15 – 9:45: Industrial Presentation, Matthew Rosseinski

10 – 10:30: Keynote 3, Jorge Gascon

MOF and MOF-derived materials for sustainable catalytic applications

COFFEE BREAK

11 – 11:20: Invited Lecture 5, Christian Doonan

MOFs at the Biointerface

11:20 – 12:05: Oral presentations

11:25 Florian Wisser (O25): Multicomponent Microporous Polymers as Photosystems for Everlasting CO₂ Reduction

11:40 Xiaoyan Wang (O27): Covalent Organic Frameworks for Photocatalytic Hydrogen Evolution from Water

11:55 Richard Röß-Ohlenroth (O29): Organometallic MFU-4l(arge) metal-organic frameworks

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TUESDAY MORNING

10 – 10:30am: Keynote 4, Emilio Pardo

MOF-Driven Synthesis of Ultrasmall Metal Nanoclusters and their Unique Catalytic Activity

COFFEE BREAK

11 – 11:20: Invited Lecture 6, Wendy Lee Queen

The design of highly stable MOF/polymer composites for the extraction of metal ions from complex aqueous mixtures

11:20 – 12:05: Oral presentations

11:25 Thang Nguyen (O26): Study of Commercial Scale Synthesis of Metal-Organic Frameworks

11:40 José Puigmarti-Luis (O28): Shaping and unveiling pathway complexity in MOFs chemistry

11:55 Dylan Sherman (O30): Using Reversible Single Crystal-to-Single Crystal Cycloaddition to Controllably Induce Multifunctionality in MOFs

AMPHITHEATRE LAVOISIER

TUESDAY AFTERNOON

2 – 2:45pm: Plenary Conference, Dieter Schluter

2D polymers: Synthesis in single crystals and on water

3 – 3:20: Invited Lecture 7, Dana Medina

Switching On and Off Interlayer Correlations and Porosity in 2D Covalent Organic Frameworks

3:20 – 3:50: Oral presentations

3:20 Yue-Biao Zhang (031): Dynamic 3D Covalent Organic Frameworks

3:35 Ioannina Castano (033): Controlled Growth of Imine-Linked Two-Dimensional Covalent Organic Framework Nanoparticles

COFFEE BREAK

4:20 – 5:35: Oral presentations

4:20 Carmen Montoro (O35): Potential Application in Fuel Cells of Modified Imine-based Covalent Organic Frameworks

4:35 Pascal Van der Voort (O37): COFs and CTFs : alternatives for MOFs in adsorption and catalysis ?

4:50 Hiroshi Yamagishi (039): Thermally robust and self-healable porous molecular crystals

5:05 Ravishandar Babarao (041): Gas Adsorption and Separation in Slipped Covalent Organic Frameworks

5:20 Guy de Weireld (043): Metal Organic Framework for CO₂ capture from flue gases by Vacuum Pressure Swing Adsorption (VPSA) process

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TUESDAY AFTERNOON

3 – 3:20pm: Invited Lecture 8, Qingyuan Yang

Materials Genomics Methods for High-Throughput Construction and Screening of COFs and MOFs for Gas Storage and Separation

3:20 – 3:50: Oral presentations

3:20 **Lorenzo Donà (O32)**: Understanding and controlling the dielectric response of Metal Organic Frameworks

3:35 **Seda Keskin (O34)**: High-throughput Computational Screening of MOFs for Gas Separations

COFFEE BREAK

4:20 – 5:35: Oral presentations

4:20 **Miguel Ángel Andrés (O36)**: Metal-Organic Polyhedra ultrathin films: fabrication and applications

4:35 **Hiroshi Kajiro (O38)**: Carbon dioxide separation using a soft MOF, ELM-13 showing two-step gate adsorption at ambient condition using CO₂/N₂ mixed gas

4:50 **Raffaele Ricco (O40)**: Conversion of copper substrates into Metal-Organic Frameworks

5:05 **Volodymyr Bon (O42)**: Toward systematic ligand design criteria for inducing negative gas adsorption transitions

5:20 **Christoph Janiak (O44)**: Hydrophilicity tuning and shaping of MOFs for water sorption in heat transformation applications

AMPHITHEATRE LAVOISIER

WEDNESDAY MORNING

9 – 9:45am: Plenary Conference, Yong Chui

Design and Synthesis of Chiral Metal/Covalent Organic Frameworks

10 – 10:30: Keynote 5, Mark Allendorf

Soup to Nuts: MOFs for Production, Transport, and Storage of Fuels

COFFEE BREAK

11 – 11:20: Invited Lecture 9, Natalia B. Shustova

Photophysics and Electronic Structure of Metal-Organic Frameworks: Perspective and Applications

11:20 – 12:05: Oral presentations

11:25 Cara Doherty (O45): Protective Frameworks for Biomolecule Sensing Applications

11:40 Joel Cornelio (O47): Photophysical Properties of Multicomponent Metal-Organic Frameworks

11:55 Engelbert Redel (O49): SURMOF Based "Designer Solids" for Optics, Photonics and Light Related Energy Applications

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WEDNESDAY MORNING

10 – 10:30am: Keynote 6, Marco Daturi

Developing MOFs for air purification through in situ and operando spectroscopies

COFFEE BREAK

11 – 11:20: Invited Lecture 10, Melissa Reynolds

Environmental and Biological Applications of Metal Organic Frameworks

11:20 – 12:05: Oral presentations

11:25 Pascal G. Yot (O46): Cooperative Co-adsorption of Small Molecules in Metal Organic Frameworks Materials: the Role of Hydrogen Bonding

11:40 Charlotte Martineau (O48): A 3D-printed NMR insert to study porosity and gas diffusion in microporous ordered solids

11:55 Eike Brunner (O50): CNMR spectroscopy study of CO₂/CH₄ mixture adsorption by metal-organic frameworks: Does flexibility influence selectivity?

AMPHITHEATRE LAVOISIER

WEDNESDAY AFTERNOON

1:30 – 2pm: Oral Presentations

1:30 Felipe Gandara (051): Encoding metal-cation arrangements in metal-organic frameworks for programming the composition of electrocatalytically active multi-metal oxides

1:45 Antoine Tissot (053): Metal-Organic Frameworks - spin crossover complexes hybrid architectures for sensing applications

2:15 - 3: Plenary Conference, Stuart James

Porous Liquids – A new frontier for porous materials

3 – 30: Conclusions

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WEDNESDAY AFTERNOON

1:30 – 2pm: Oral presentations

1:30 Pascal G. Yot (052): How external pressure provokes the structural switching of flexible MOFs?

1:45 Yueting Sun (054): Exploring the Dynamic Mechanical Properties of MOFs: Liquid Intrusion
and Mechanical Stimuli

