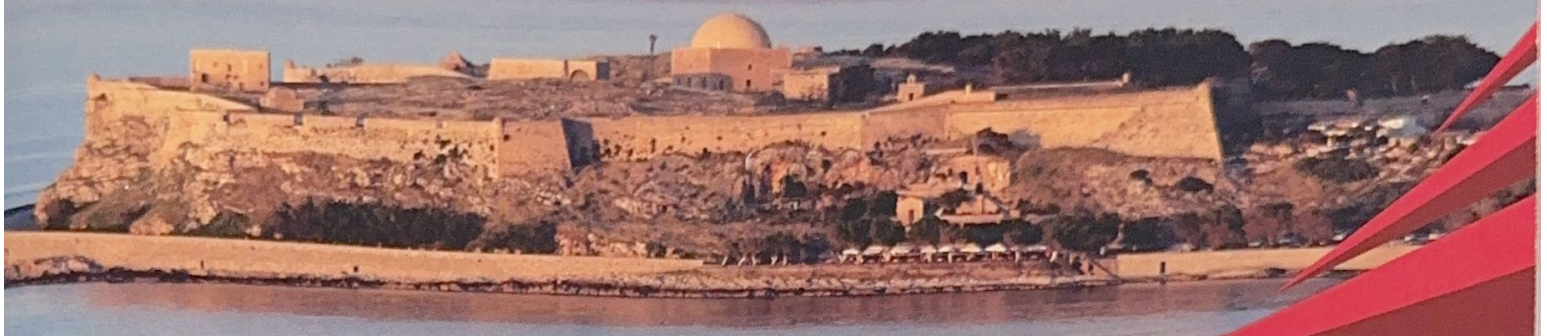
1st Mediterranean Conference on Porous Materials

MED PORE 23



PROGRAMME

17-19 May, 2023

Rethymno, Crete, Greece

www.medpore.eventsadmin.com

ORGANIZED BY

Department of Chemistry
University of Crete

MOHAMMED VI POLYTECHNIC UNIVERSITY

الجَمعيّة العِلميّة المَلكيّة
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ARISTOTLE UNIVERSITY OF THESSALONIKI

University of Cyprus
Department of Chemistry

Tuesday, May 16

18:00 - 20:00	**Registration**
19:00 - 20:00	**Welcome reception**

Wednesday, May 17

Room Megas Alexandros
Chair: Pantelis N. Trikalitis

09:00-09:10	**Welcome**
09:10-09:50	**Opening talk** **Prof. Omar Yaghi** Ultra-porous crystals for a changing planet
09:50-10:10	**3P Instruments, Diamond Sponsor** **Sebastian Ehrling** Investigating of an industrial adsorbent for Direct Air Capture by gas flow methods

	Room: Megas Alexandros Session A1 - Chair: Teresa J Bandosz	Room: Achilles Session B1 - Chair: Joumana Toufaily-Hamieh
10:10-10:30	**Angiolina Comotti** The dynamical world of metal-organic frameworks	**Invited Speaker** **Prof. Ali Trabolsi** Smart materials for drug delivery
10:30-10:50	**Charlotte Koschnick** Synthesis and real structure effects in Zr-Porphyrin-based MOFs	**Yizhou Yang** Interfacial synthesis of three-dimensional covalent organic framework films
10:50-11:15	**Coffee break**	
	Chair: Georges Mouchaham	Chair: José María Pedrosa
11:15-11:35	**Dominik Eder** Selective ligand removal as a poweful strategy towards advanced photocatalysts	**Matthias Thommes** Quantitative Assessment of Hydrophilicity/Hydrophobicity in Mesoporous silica by combining Adsorption, Liquid Intrusion and NMR-based techniques
11:35-11:55	**Anastasios Tasiopoulos** Fine tuning the hydrophobicity of a new Cu^{2+} 3-dimensional MOF through single - crystal coordinating ligand exchange transformations	**Hossein Kazemian** Green and facile synthesis of a novel biopolymer metal-organic-framework hybrid for a pH-controlled oral drug release system
11:55-12:15	**Julia Grüneberg** Towards 'Organic Zeolites' – Hybrid organic-inorganic frameworks from tetravalent silicate and aluminate tectons bridged by organic linkers	**Tania Hidalgo** Immune/Chemo-active nanoMOFs for anti-COVID multi-therapy

12:15-12:35	**Bassem Almaythalony** Three-membered ring structure in zeolitic imidazolate frameworks	**Theodore Lazarides** Synthesis and study of luminescent metal-organic frameworks: Sensing and white-light emission
12:35-12:55	**Lawson Glasby** Topological characterisation of MOFs in the Cambridge Structural Database (CSD)	**Giasemi Angeli** Continuous Breathing Rare-Earth MOFs Based on Hexanuclear Clusters with Gas Trapping Properties
12:55-14:30	**Lunch break***	
	Keynote Chair: Anastasios Tasiopoulos	
14:30-15:00	**Keynote Speaker** **Prof. Omar Farha** Myths vs. Reality: Smart and programmable sponges from basic science to implementation and commercialization	
	Room: Megas Alexandros **Session A2 - Chair: Anastasios Tasiopoulos**	**Room: Achilles** **Session B2 - Chair: Samir El Hankari**
15:00-15:20	**Gerasimos Armatas** Mesoporous Networks of Metal Chalcogenide Nanocrystals for Enhanced Photocatalytic Hydrogen Evolution	**Eleni Salonikidou** Utilization of (Bio)waste and commercial nanoporous activated carbons for the deep adsorptive desulfurization of diesel fuel
15:20-15:40	**Romy Ettlinger** Catch it – bind it – deactivate it: Metal-organic framework composites as active personal protective equipment	**Antonio Sepúlveda Escrbano** N-doped activated carbons from polymers - effect of steam activation conditions
15:40-16:00	**Anna Pnevskaya** Spectroscopic and DFT investigation of ethylene and 1-MCP binding sites in MOFs for food preservation technologies	**Laurent Perrier** Innovative hybrid materials for hydrogen storage
16:00-16:20	**Georges Mouchaham** Ti-MOFs as promising photocatalysts for H_2 production	
16:20-16:45	**Coffee break**	
	Chair: Pascal Van Der Voort	**Chair: Gerasimos Armatas**
16:45-17:05	**Jin Shang** Development of robust adsorbents with balanced binding affinity for ambient NO_2 adsorption	**Georgios Karanikolos** Development of cellulose-based composite adsorbents for CO_2 capture
17:05-17:25	**Calogero Giancarlo Piscopo** Activated carbon/Ni-MOF-74 composite with outstanding H_2S and NH_3 capture capacity	**Daniel Pereira** Understanding CO_2 sorption mechanisms in sustainable cellulose and chitosan aerogels

17:25-17:45	**Ali Al Shakhs** Modulator-directed synthesis of high density monolithic Zr-MOFs for exceptional volumetric hydrogen storage capacity	**Nitasha Habib** A novel IL/MOF/polymer mixed Matrix Membrane having Superior CO_2/N_2 Selectivity
17:45-18:05	**Alexandros Katsoulidis** Ordered mixed linker fcu Zr MOF with rhombohedral structure discovered by high-throughput synthesis	**Joeri Denayer** Intensification of CO_2 capture and separation with hybrid adsorbents for combined vacuum-temperature swing adsorption
	Keynote Chair: George Froudakis	
18:05-18:35	**Keynote Speaker:** **Prof. Mohamed Eddaoudi** MOF Chemistry: Design strategies to Applications	
18:35-20:00	**Poster Session 1**	
20:00	**Dinner***	

Lunch*

(*Available only for those having selected the all-inclusive package (accommodation and meals) of Aquila Rithymna Beach)

Dinner*

(*Available only for those having selected the all-inclusive package (accommodation and meals) of Aquila Rithymna Beach)

Thursday, May 18

	Room Megas Alexandros **Keynote Chair: Konstantinos Triantafyllidis**	
09:00-09:30	**Keynote Speaker** **Prof. Mercouri G. Kanatzidis** Designing exotic sorbents for capturing uranium, technetium, and heavy metals	
	Room: Megas Alexandros **Session A3 - Chair: Angiolina Comotti**	**Room: Achilles** **Session B3 - Chair: Georgia Charalampopoulou**
09:30-09:50	**Yolanda Pérez** Lead-free halide perovskite@metal–organic framework composites as visible light-active photocatalysts	**Invited Speaker** **Prof. Martin Hartmann** Ultrasonic monitoring for In situ diagnostics of zeolite and MOF crystallization
09:50-10:10	**Nusik Gedikoğlu** Building new metal-organic frameworks from Iron-Thiolate Layers	**Dieter Plessers** Spectroscopic investigation of $[Cu\text{-}O\text{-}Cu]^{2+}$ and $[CuOH]^{+}$ sites in copper exchanged zeolites for selective oxidation of methane to methanol
10:10-10:30	**Emmanouil Manos** MOFs for removal of oxoanions from aqueous media	**Joao Rocha** Exploring the pore space: Applications of transition metal and lanthanide silicates and organic-inorganic hybrid materials
10:30-10:50	**Sachin Maruti Chavan** MOFSORBMET: MOFs for critical metals recovery and separation	**Niels De Witte** Zero-coverage adsorption of n-alkanes and 1-alkenes in all-silica small-pore zeolites
10:50-11:15	**Coffee break**	
	Chair: Alexandros Katsoulidis	**Chair: Giasemi Angeli**
11:15-11:35	**Nuno Gonçalves** 3D-printed bauxite-based inorganic polymers for the removal of multiple heavy metals and neutralization of acid mine drainage	**Matjaž Mazaj** Zeolites embedded in carbon foam monoliths as a high-performance CO_2 capture adsorbent

11:35-11:55	**Vassilios Binas** Highly Porous Thin-Layer g-C3N4 Nanosheets and composites with Enhanced photocatalytic properties	**Alexios Plessas** Synthesis and characterisation of MOF-COOHs for water remediation: Pre- and post-synthetic modification approach of amide ligands
11:55-12:15	**Timur Ashirov** Porous functional organic Polymers for advanced separation applications	**Husam Almassad** Environmentally adaptive MOF-based atmospheric water harvesting
12:15-12:35	**Idan Hod** Molecular manipulation of heterogeneous electrocatalytic CO_2 reduction using metal-organic frameworks	**Samir El Hankari** Metal–organic frameworks (MOFs)-based adsorption technology for phosphate recovery from water
12:35-15:00	**Lunch break***	
Parallel event	**Bruker - Gold Sponsor** **On-site demostration of the D8 Venture SC-XRD instrument at the University of Crete in Heraklion***	
	Keynote Chair: Kyle Cordova	
15:00-15:30	**Keynote Speaker:** **Prof. Mircea Dinca** Strange electronic and photophysical effects in MOFs	
	Room: Megas Alexandros **Session A4 - Chair: Kyle Cordova**	**Room: Achilles** **Session B4 - Chair: Volodymyr Bon**
15:30-15:50	**Teresa J Bandosz** Beyond adsorption: A big role of small pores in electrochemical processes	**Rachele Castaldo** Tuning the adsorption capacities of porous materials with hyper-crosslinked resins
15:50-16:10	**Catalina Biglione** Novel bismuth phosphonate IMDEA-Energy framework for proton conductivity	**Marina Ilkaeva** Solid-state NMR-assisted adsorption techniques for CO_2 capture assessment in porous sorbents
16:10-16:30	**José María Pedrosa** Enhancement of the intrinsic fluorescence of ZIF-8 via Post-synthetic cation exchange with Cd^{2+} and its use as optical sensor	**Thomas Glover** Diffusion of water in metal-organic frameworks
16:30-16:55	**Coffee break**	
	Chair: Thomas Glover	**Chair: Georgios Karanikolos**

16:55-17:15	**Helene Brault** The versatility of MOFs as a powerful tool to design luminescent thermometers	**Conor Cleeton** A process-level perspective on the impact of molecular force fields on the computational screening of MOFs for carbon capture
17:15-17:35	**Francisco García Moscoso** A luminescent terbium MOF embedded in PMMA transparent films for sensitive and selective detection of nitroaromatic explosives vapours	**Emily Bloch** Designing the functions grafted onto nanoporous silica for specific gas recovery: in silico molecular screening compared and contrasted with experimentation
17:35-17:55	**Pascal Van Der Voort** Covalent organic frameworks as metal-free photocatalysts	**Angelos Polyzoidis** Thermal switch based on an adsorption material in a heat pipe
	Keynote Chair: Karim Adil	
17:55-18:25	**Keynote Speaker** **Prof. Christian Serre** Green synthesis of robust but defective MOFs	
18:25-20:00	**Poster Session 2**	
20:00	**Gala Dinner**	

Reference:

* Free of charge booking is required. Please send email to maria@mitos.com.gr or visit the registration desk at the conference site, between May 16th-17th.

Lunch*

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Friday, May 19

	Room Megas Alexandros **Keynote Chair: Theodore Steriotis**	
09:00-09:30	**Keynote Speaker** **Prof. Stefan Kaskel** In situ methodologies for responsive Metal-Organic Frameworks	
	Room: Megas Alexandros **Session A5- Chair: Theodore Steriotis**	**Room: Achilles** **Session B5 - Chair: Emmanouil Manos**
09:30-09:50	**Michael Hirscher** Flexible metal-organic frameworks for hydrogen isotope separation	**Satoshi Watanabe** Mechanism of CO_2 capacity reduction of layered MOF (ELM-11) caused by water adsorption
09:50-10:10	**Homare Arima** Shaping of flexible metal–organic frameworks and less distinct gate adsorption caused by restricted volume expansion	**Nataliia Smyk** Sorption-spectroscopic determination of chromium (VI) and chromium (III) in waters
10:10-10:30	**Volodymyr Bon** Mechanistic understanding of guest-induced framework flexibility by in situ PXRD	**Wacław Makowski** Recent advances in characterization of porous materials using quasi-equilibrated thermodesorption of volatile compounds
10:30-10:50	**Mariana Sardo** Assessing the dynamics of adsorbed CO_2 species in Covalent Organic Frameworks via solid-state NMR methods	**Panagiotis Krokidas** An evolutionary algorithm for the design of functionalized materials for separation membranes
10:50-11:15	**Coffee break**	
	Chair: Bassem Almaythalony	**Chair: Theodore Lazarides**
11:15-11:35	**Yue-Biao Zhang** Dynamic covalent organic frameworks	**Helen Paola Toledo Jaldin** Zn-MOF doped with La(III) and Tb(III) for fluorescent sensing of parathion by luminescence sensing
11:35-11:55	**Anita Justin** Post-synthetic Impregnation of amines in MOF pores for Post-combustion carbon capture	**Abigail Lister** New metal-organic framework synthesis methods for optimised chemiresistive gas sensors
11:55-12:15	**Sabine Devautour-Vinot** MOFs for indoor contaminant capture and detection: a hybrid experimental-computational strategy	**Alexandre Narcizo da Silva** Production of residual activated carbon and their application in the adsorption of phenol and gallic acid

12:15-12:35	**Mahmoud Abdelnaby** Covalent functionalization of UiO-66 analog metal-organic framework with aliphatic amine for the direct air capture	**EL Mehdi Moumen** Synthesis of stable and environmentally friendly MOF for phosphate adsorption from water
12:35-12:55	**Prasenjit Das** The Effect of pore functionality in multicomponent covalent organic frameworks for stable long-term H2 production'	**Bogdan Protsenko** Vibrational spectra supported by machine learning algorithms as a quantitative tool for zeolite structures
12:55-14:30	**Lunch break***	
	Keynote Chair: Youssef Belmabkhout	
14:30-15:00	**Keynote Speaker** **Prof. Wendy Queen** Strategies for post-synthetic MOF modification to enhance their performance in gas and liquid separations	
	Room: Megas Alexandros **Session A6 - Chair: Youssef Belmabkhout**	**Room: Achilles** **Session B6 - Chair: Mahmoud Abdelnaby**
15:00-15:20	**Anish Varghese** Unraveling the potential of metal- and MOF-doped carbonaceous adsorbents for selective hydrogen storage at ambient temperature	**Bartosz Mazur** Use of the NVT + ghost swap method for efficient prediction of water adsorption isotherm
15:20-15:40	**Agata Łamacz** Methanol synthesis over metal-organic frameworks	**Anastasios Gkotzias** Free energy simulations of carbon nanoparticles crossing immiscible solvents
15:40-16:00	**Utku Burgun** The effect of pyrolysis temperature and plasma treatment on ZIF-67 based catalysts for fischer tropsch synthesis	**Kedar Jivrakh** 3D-printed, zeolite X coated gyroid polymer scaffolds for CO2 capture
16:00-16:20	**Khaled Hassanein Sayed Ahmed** Immobilization of metallated porphyrin as molecular catalyst in UiO-66 type MOFs for selective carbon dioxide electroreduction	
16:20-16:45	**Awards & Concluding remarks of MEDPore23**	

Lunch*

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