



# DECHEMA

Gesellschaft für Chemische Technik  
und Biotechnologie e.V.

## PROGRAMME

4 – 7 September 2022

International Congress Centre Dresden · Germany

# International Conference on Metal-Organic Frameworks and Open Framework Compounds

[www.dechema.de/MOF2022](http://www.dechema.de/MOF2022)



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# M<sup>OF</sup>2022

INTERNATIONAL CONFERENCE ON METAL-ORGANIC  
FRAMEWORKS AND OPEN FRAMEWORK COMPOUNDS

### Greeting by the Chairman

The world has changed dramatically since MOF2018. Due to COVID-19 many conferences were held online. The International MOF Conference in 2020 was one of the first online conferences attracting more than 980 participants. However, for progress in science direct discussions and exchange are essential, no matter if consensual or in controversy. After 4 years of planning, we are therefore more than happy to meet again in person and discuss the latest progress in the field of MOFs, COFs and other related porous framework materials, their characterisation and application in various fields. In recent years the contribution of MOFs and other framework materials to solve important societal questions has become more apparent, in particular addressing climate change and energy crisis. Significant advances in CO<sub>2</sub> capture, water harvesting, purification, gas separation etc. have led to exciting economic developments and the establishment of new business models.

MOFs and COFs emerge as electronic materials in batteries, capacitors, sensing and optical technologies. Advanced characterisation methods for in situ or defect analysis propel the field. The simulation and digitalisation of data has made great progress to predict and understand important properties in silico. Upscaling and industrialisation led to reduced cost of high performance materials for specific applications. Numerous start-ups advance the commercialisation in high-tech fields. Therefore, we look forward to an exciting week with excellent presentations from all over the world.

We hope that you enjoy the conference, discussions and your stay in the city of Dresden triggering new cooperation and exchange of novel ideas for advancing the field of metal-organic frameworks and open framework materials in future.

We thank all committee members and DECHEMA for their excellent support in organisation.

Stefan Kaskel  
on behalf of the organization committee



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## COMMITTEES / GENERAL INFORMATION

## COMMITTEES

## LOCAL ORGANISING COMMITTEE

Prof. Dr. Eike Brunner	Technical University Dresden/D
Dr. Hana Bunzen	University of Augsburg/D
Dr. Sara Espinoza	DECHEMA e.V. Frankfurt/D
Prof. Roland Fischer	Technical University Munich/D
Prof. Christoph Janiak	Heinrich-Heine Universität Düsseldorf/D
Prof. Stefan Kaskel	Technical University Dresden/D (Conference Chairman)
Dr. Dana Medina	Ludwig-Maximilians-Universität München (LMU)/D
Prof. Arne Thomas	Technical University Berlin/D

## INTERNATIONAL ADVISORY BOARD

Dr. Mark Allendorf	Sandia National Lab, Livermore/USA
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Prof. Christian Serre	ENS/ESPCI Paris/F
Prof. Natalia B. Shustova	University of South Carolina, Columbia/USA
Prof. Bo Wang	Beijing Institute of Technology/Tsinghua University/CN

## VENUE ADDRESS

International Congress Center Dresden (ICD)  
Ostra-Ufer 2  
01067 Dresden

## INTERNET ACCESS

WiFi access is available for free throughout the conference venue. As WiFi can be used by all participants, a loss of efficiency is possible.

Network: Mevent  
Password: MOF\_2022

## BOOK OF ABSTRACTS

A book of abstracts from all lectures and posters is available online for all participants of the meeting at [www.dechema.de/en/MOF2022\\_BOA](http://www.dechema.de/en/MOF2022_BOA) (from 1 September 2022)

## OFFICE HOURS CONFERENCE DESK

Sunday, 4 September	16:00 – 19:15
Monday, 5 September 2022	08:00 – 18:15
Tuesday, 6 September 2022	08:30 – 18:15
Wednesday, 7 September 2022	08:30 – 14:30

## ORGANISER

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## POSTER &amp; SOCIAL EVENTS

SUNDAY, 4 SEPTEMBER 2022

18:00 – 21:00

## WELCOME EVENT

Omar Yaghi will open the Welcome Event with his plenary lecture. After the lecture session, you are cordially invited to a reception with delicious food and cold drinks on the terrace. The view to the Elbe river and the historic city center of Dresden is even more magnificent during sunset.

Meet friends, colleagues and business partners and enjoy the get together for casual exchanges within the community.

The Welcome Reception is supported by Mosaic Materials.

MONDAY, 5 SEPTEMBER 2022

18:05 – 20:30

## POSTER PARTY I

Find out about the latest scientific results and discuss them with the authors of the posters. Enjoy the exchange of ideas with fellow researchers over a cold drink and snacks.

The authors are requested to be present at their poster(s) for discussion during the poster party.

TUESDAY, 6 SEPTEMBER

18:05 – 20:00

## POSTER PARTY II

Discuss some of the findings from the posters with their authors over a light dinner and cold drinks. The authors are requested to be present at their poster(s) for discussion during the poster party.

TUESDAY, 6 SEPTEMBER 2022

20:00 – 23:00

## MOF2022 PARTY

The MOF2022 Party will take place in the evening hours on the terrace floor (indoors & outdoors). Join us for a joyful evening with party music. Refreshing drinks will be available for free. Let's shake a leg on the dance floor!

## POSTER AWARDS

The best poster presentations will be selected for the poster awards.

There are two award categories, a „Best Poster Award“ for the best posters in general and a „Best Poster Award Innovative Industrial Application“.

There are three „Best Poster Awards“, sponsored by Micromeritics, Mosaic Materials and Nanomaterials. The best posters will be awarded with a prize of 500 € each. Additionally, the winners will receive a book voucher to the value of 150 € sponsored by Chemistry – A European journal by Wiley-VCH.

BASF and NuMat are sponsoring a poster prize of 500 € and 300 € for the best two posters showing an „Innovative Industrial Application“.

## PROGRAMME

## Friday, 2 September 2022

09:00 – 17:10	<b>YOUNG INVESTIGATORS SYMPOSIUM</b> TU Dresden
17:10	<b>Pizza Party and Paper Art by Alisson Martin</b> (Open End)

## Saturday, 3 September 2022

09:00 – 17:30	<b>YOUNG INVESTIGATORS SYMPOSIUM</b> TU Dresden
17:30	<b>Barbecue</b> (Open End)

## Sunday, 4 September 2022

16:00	<b>Registration/Check-In</b>
18:00	<b>WELCOME EVENT</b> Opening Speech
18:15	<b>EVENING LECTURE – Omar Yaghi</b>
19:00 – 21:00	<b>WELCOME RECEPTION</b> supported by Mosaic Materials



## PROGRAMME

## Monday, 5 September 2022

<i>Chair:</i>	<i>Stefan Kaskel</i>			
9:00	<b>OPENING/WELCOME ADDRESS</b>			
9:15	<b>PLENARY LECTURE - Paolo Falcaro</b>			
10:00	Coffee Break			
	Large Hall	Hall 4	Hall 5	Conference 1 (4 <sup>th</sup> Floor)
	<b>Metal-Organic Frameworks (COORNETs Workshop)</b>	<b>Catalysis</b>	<b>Environmental Applications</b>	<b>Towards Industrial Applications</b>
<i>Chairs:</i>	<i>Roland Fischer</i>	<i>Paolo Falcaro</i>	<i>George Shimizu</i>	<i>William Morris</i>
10:30	<b>KEYNOTE LECTURE</b> Takashi Uemura	Marco Ranocchiarì	<b>Invited Lecture</b> Elisa Barea	Shuji Ohsaki
10:45		Guojun Zhou	Sara Rojas Macías	Hannah E. Holmes
11:00	<b>Invited Lecture</b> Natalia Shustova	Georges Mouchaham	Jesus Ferrando Soria	Daniel Steitz
11:15	Pascal Van Der Voort	<b>KEYNOTE LECTURE</b> Jorge Gascon	Stefan Marx	Francesco Walenszus
11:30	Inhar Imaz		Mehrdad Asgari	A. Ken Inge
11:45	Sergio Carrasco	Nagaraja Mallaiah	Joseph Paul-Taylor	Benedikt Schrode
11:55	Hanna Boström	Makenzie Nord	Amin Koochaki	Marco Ranocchiarì
12:05	Lunch, Posters & Exhibition			
	<b>Novel Materials, Synthesis, Composites</b>	<b>Covalent Organic Frameworks</b>	<b>Topology and Defects</b>	<b>Adsorption</b>
<i>Chair:</i>	<i>Jorge Gascon</i>	<i>Rahul Banerjee</i>	<i>Sven Rogge</i>	<i>Guillaume Maurin</i>
13:05	Jonathan Foster	<b>KEYNOTE LECTURE</b> Zamora Felix	<b>Invited Lecture</b> Davide Proserpio	<b>Invited Lecture</b> Illich Ibarra
13:20	Jose Giner Planas		Lawson T. Glasby	Matthew Hill
13:35	Francesco Carraro	<b>Invited Lecture</b> Long Chen (Online Lecture)	<b>Invited Lecture</b> Andrew Goodwin	Matthew G. Cowan
13:50	Guillaume Bertrand	Ignacio Muñoz Alonso	Fernando Uribe-Romo	Ray Ozdemir
14:05	<b>Invited Lecture</b> Wei Zhang (Online Lecture)	Rinku Kushwaha	Isabel Abánades Lázaro	T. Grant Glover
14:20	Richard Röß-Ohlenroth	Abdul Khayum Mohammed	Sergio Tatay	Ana Pereira
14:30	Debobroto Sensharma	Marcos Martínez-Fernández	Emily Meekel	Tiago J. Ferreira
14:40	Coffee Break			
15:10	<b>Short Introduction of Exhibitors &amp; Sponsors</b>			
15:30	Early Career Award Ceremony			
<i>Chair:</i>	<i>Natalia Shustova</i>			
15:40	<b>PLENARY LECTURE - Hoi-Ri Moon</b>			
16:25	Room change (10 min)			
	<b>Metal-Organic Frameworks</b>	<b>Separation</b>	<b>Advanced Characterisation Techniques</b>	<b>Thin Films</b>
<i>Chairs:</i>	<i>Christoph Janiak</i>	<i>Alexander Knebel</i>	<i>Eike Brunner</i>	<i>Mark Allendorf</i>
16:35	<b>Invited Lecture</b> Ali Morsali	Zhaoqiang Zhang	<b>KEYNOTE LECTURE</b> George Shimizu supported by PROTO Manufacturing	Víctor Rubio-Giménez
16:50	Zhen Li	Phillip Milner		Jérôme Canivet
17:05	<b>Early Career Award Lecture</b> Nikita Hanikel	Daria Poloneeva	Timothy Easun	Jin Yeong Kim
17:20	Jia Min Chin	<b>Early Career Award Lecture</b> Ana Rita Nabais	Zehao Huang	Gregory N. Parsons
17:35	Manuel Tsotsalas		Volodymyr Bon	Zhiyong Wang
17:50	<b>Invited Lecture</b> Pingyun Feng (Online Lecture)	<b>KEYNOTE LECTURE</b> Wendy Queen	<b>Invited Lecture</b> Karena Chapman	Christopher Richardson
18:05	Sessions End			
18:05	<b>POSTER PARTY I</b>			
20:30	End of Conference Day I			

## PROGRAMME

## Tuesday, 6 September 2022

Chair:	Francois-Xavier Coudert			
9:00	PLENARY LECTURE – Xiaodong Zou			
9:45	Room Change (5 min)			
	Large Hall	Hall 4	Hall 5	Conference 1 (4 <sup>th</sup> Floor)
	Metal-Organic Frameworks	Towards Industrial Applications: Separation Processes	Modelling and Simulation at all Levels	Catalysis
Chairs:	Stefan Marx	Joaquin Silvestre Albero	Randall Snurr	Lauren Macreadie
9:50	KEYNOTE LECTURE Deanna D'Alessandro supported by Communications Chemistry	Invited Lecture Dan Zhao	François-Xavier Coudert	Philip M. Stanley
10:05		Min Liu	Sven M. J. Rogge	Amanda Morris
10:20	Stephane Petoud	Arnaud Henrotin	Joachim Sauer	Jérôme Canivet
10:35	Mingchao Wang	Paulo Carmo	KEYNOTE LECTURE Seda Keskin (Online Lecture)	Florian Wisser
10:50	Pantelis Trikalitis	William Morris		Gift Mehlena
11:05	Coffee Break			
	Membranes	Advanced Characterisation	Modelling and High Throughput Screening	Nanomaterials & Nanocomposites
Chairs:	Jérôme Canivet	Volodymyr Bon	Jack Evans	Christian Doonan
11:35	Dana Stone	KEYNOTE LECTURE Valentina Colombo	Invited Lecture Veronique Van Speybroeck	Invited Lecture Mark Allendorf
11:50	Osama Shekhah		Panagiotis Krokidas	Celia Castillo Blas
12:05	Zachary Smith	Stephanie Terruzzi	Randall Snurr	Nathalie Steunou
12:20	KEYNOTE LECTURE Guillaume Maurin	Jin-Chong Tan	Josh D. Littlefair	Philip Netzsch
12:35		Luca Braglia	Emmanuel Ren	Cheng-Hui Shen
12:50	Lunch, Poster Session & Exhibition			
	Covalent Organic Frameworks	Life Science	Switchability and Dynamics of functional flexible Metal-Organic Frameworks (ERC Amplipore Symposium)	Catalysis
Chairs:	Thomas Bein	Patricia Horcajada	Stefan Kaskel	Laura Gagliardi
14:00	KEYNOTE LECTURE Ke Chenfeng	Invited Lecture Mónica Giménez-Marqués	Hiroshi Sato	Erlend Aunan
14:15		Hana Bunzen	Sylvia L. Hanna	Lisa Van Emelen
14:30	Invited Lecture Rahul Banerjee	Ross S. Forgan	Simon Krause	Francesc X. Llabrés i Xamena
14:45	Andreas Schneemann	Tania Hidalgo	Jack Evans	Vitalie Stavila
15:00	Ignacio Munoz Alonso	Ruth Mandel	Sander Borgmans	Xiaoxin Ma
15:10	Roman Guntermann	Constantina Papatriantafyllopoulou	Samraj Mollick	Janine C. Baums
15:20	Coffee Break			
Chair:	Hana Bunzen			
15:50	PLENARY LECTURE – Laura Gagliardi			
16:35	Room Change (10 min)			
	Environmental Applications	Porous Molecular Solids, Molecular Cages	New Materials and Characterisation	Covalent Organic Frameworks and Beyond
Chairs:	Martin Schröder	Austin Evans	Valentina Colombo	Arne Thomas
16:45	Sabine Devautour-Vinot	Shuhei Furukawa	Chung-Wei Kung	Invited Lecture Thomas Bein
17:00	Lydia Gonzalez	Jiyeon Kim	Invited Lecture Christian Serre	Michael Traxler
17:15	Soumya Mukherjee	Kunyu Wang	Simona Sorbara	John Hoberg
17:30	KEYNOTE LECTURE Kumar Biradha	Arnau Carne Sanchez	Alexander Hoffman	Leisan Gilmanova
17:45		Alexandre Legrand	Zachary H. Davis	Pradip Pachfule
18:00	POSTER PARTY II			
20:00	MOF2022 PARTY			

## PROGRAMME

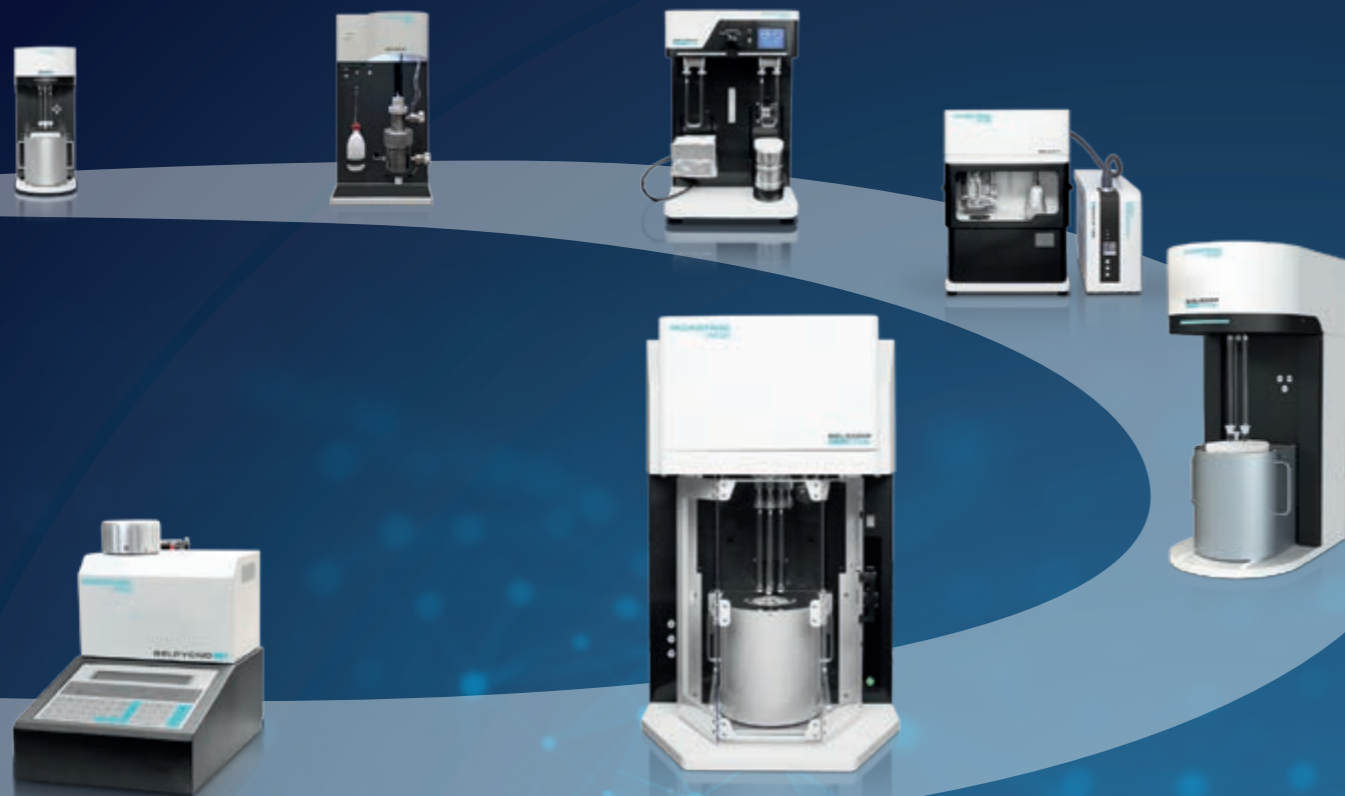
## Wednesday, 7 September 2022

Chair:	Wendy Queen			
9:00	PLENARY LECTURE – Thomas D. Bennett			
9:45	Room Change (5 min)			
	Large Hall	Hall 4	Hall 5	Conference 1 (4 <sup>th</sup> Floor)
	Surfaces and Life Science	Flexible Metal Organic Frameworks: Understanding, Characterization, and Application (FOR2433 Symposium)	Energy Storage and Conversion	Simulation, Digitization and Machine Learning
Chairs:	Ross Forgan	Takashi Uemura	Dan Zhao	Thomas Heine
9:50	KEYNOTE LECTURE Sebastian Henke	Larissa Shaper	Petko Petkov	Invited Lecture Sofia Calero
10:05		Irena Senkovska	Jiahao Ye	Syed Mohamad Moosavi
10:20	Erik Svensson Grape	Kornel Roztocki	Hideaki Ooe	Thomas Nicholas
10:35	Moisés Luzia Pinto	Chia-Her Lin	KEYNOTE LECTURE Ramanathan Vaidhyanathan (Online Lecture)	Kevin Maik Jablonka
10:50	Sneha Kumari	Mikhail Suyetin		George Froudakis
11:05	Coffee Break			
	Metal-Organic Frameworks	Conductivity	Novel Materials, Synthesis, Composites	MOF-derived Materials
Chairs:	Christian Serre	Shuhei Furukawa	Thomas Bennett	Andreas Schneemann
11:35	KEYNOTE LECTURE Dana Medina	Invited Lecture Dianne Xiao	Invited Lecture Aurelio Mateo-Alonso (Koke)	Invited Lecture Alexander Knebel
11:50		Sandro Wieser	Renhao Dong	Martijn de Koning
12:05	Invited Lecture Ashlee J. Howarth	Maarten Goesten	Dariusz Matoga	Hayden Salway
12:20	Stéphane Baudron	Kenji Okada	Jorge Albalad	Romy Ettlinger
12:35	Jacopo Andreo	Florian Mertens	Constanze Neumann	Luis Garzon-Tovar
12:45	Istvan Boldog	Catalina Biglione	Vincent Monnier	
12:55	Room Change (10 min)			
13:05	Announcement for MOF2024			
13:15	Poster Awards Ceremony			
13:25	PLENARY LECTURE – Susumu Kitagawa supported by Framergy			
14:10	Closing Remarks			
14:15	End of Conference			

## Thursday, 8 September 2022

09:00 – 16:00	INDUSTRY WORKSHOP Advanced Porous Materials and Membranes Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS
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# CHARACTERIZATION OF POROUS MATERIALS



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## Driving success through MOF innovation

novoMOF is a technology company in the field of advanced materials with a focus on production and commercialization of metal-organic frameworks (MOFs).

We are the strategic development partner for innovative market-leaders in the commercialization of MOF-based applications offering competitive solutions to global problems such as water scarcity, food waste, and carbon capture.



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## PROGRAMME

## Monday, 5 September 2022

Room: Large Hall

09:00 **OPENING / WELCOME ADDRESS**  
Chair: S. Kaskel, TU Dresden/D

09:15 **PLENARY LECTURE**  
**ZIF-based biocomposites: past, present, and future**  
P. Falcaro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A

10:00 Coffee Break

Room: Large Hall

## Metal-Organic Frameworks (COORNETS Workshop)

Chair: R. Fischer, TU München, Munich/D

10:30 **KEYNOTE LECTURE**  
**MOFs as Polymer Manufacturers**  
T. Uemura<sup>1</sup>; <sup>1</sup> The University of Tokyo, Tokyo/J

11:00 **Stimuli-Responsive MOFs with Dynamically-Controlled Optoelectronic Behavior**  
N. Shustova<sup>1</sup>; <sup>1</sup> University of South Carolina, Columbia, SC/USA

11:15 **Defect Engineering in UiO-66: hemilabile linkers and artificial cluster defects**  
P. Van Der Voort<sup>1</sup>; X. Feng<sup>2</sup>; <sup>1</sup> Ghent University, Ghent/B; <sup>2</sup> Dalian University of Technology, Dalian/CN

11:30 **Clip-off Chemistry: Synthesis by Disassembly of Reticular Materials**  
I. Imaz<sup>1</sup>; Y. Yunhui<sup>1</sup>; A. Broto<sup>1</sup>; B. Ortin<sup>1</sup>; D. Maspoch<sup>1</sup>; <sup>1</sup> Fudació Institut Català de Nanociència i Nanotecnologia, Bellaterra/E

11:45 **IMDEA-Energy Frameworks: the next-generation photocatalysts for water splitting**  
S. Carrasco<sup>1</sup>; P. Salcedo-Abraira<sup>1</sup>; E. Montero-Lanzuela<sup>2</sup>; M. Cabrero-Antonino<sup>2</sup>; S. Navalón<sup>2</sup>; H. García<sup>2</sup>; P. Horcajada<sup>1</sup>; <sup>1</sup> IMDEA Energy, Móstoles/E; <sup>2</sup> Instituto de Tecnología Química, Universitat Politècnica de València, Consejo Superior de Investigaciones Científicas (UPV-CSIC), Valencia/E

11:55 **How reproducible are the syntheses of Zr-porphyrin MOFs? An interlaboratory study**  
H. Boström<sup>1</sup>; <sup>1</sup> Max Planck Institut für Festkörperforschung, Stuttgart/D

12:05 Lunch, Posters & Exhibition

## Novel Materials, Synthesis, Composites

Chair: J. Gascon, King Abdullah University of Science and Technology, KAUST Catalysis Center, Thuwal/KSA

13:05 **Liquid Exfoliation of Layered Frameworks into Nanosheets for Sensing, Catalysis and Electronics Applications**  
J. Foster<sup>1</sup>; J. Nicks<sup>1</sup>; K. Sasitharan<sup>1</sup>; D. Ashworth<sup>1</sup>; <sup>1</sup> The University of Sheffield, Sheffield/UK

13:20 **Icosahedral Carborane-based MOFs: A new generation of ultra-high water stable materials**  
Z. Li<sup>1</sup>; L. Gan<sup>1</sup>; F. Teixidor<sup>1</sup>; C. Viñas<sup>1</sup>; J. Giner Planas<sup>1</sup>; <sup>1</sup> Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Bellaterra/E

13:35 **Hydrogen-Bonded Organic Frameworks Biocomposites**  
F. Carraro<sup>1</sup>; P. Wied<sup>1</sup>; B. Nidetzky<sup>1</sup>; C. Doonan<sup>2</sup>; P. Falcaro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A; <sup>2</sup> The University of Adelaide, Adelaide/AUS

13:50 **In depth exploration of MOFs photophysics and application toward new scintillating materials**  
G. H. V. Bertrand<sup>1</sup>; S. Mauree<sup>1</sup>; V. Villemot<sup>1</sup>; M. Hamel<sup>1</sup>; B. Sabot<sup>1</sup>; <sup>1</sup> Commissariat à l'Energie Atomique (CEA-LIST), Palaiseau/F

14:05 **Structurally Ordered Polymeric Architectures via Dynamic Covalent Synthesis**  
W. Zhang<sup>1</sup>; <sup>1</sup> University of Colorado, Boulder, Colorado/USA (Online Lecture)

14:20 **From Assembly of Metal Hydrogen-Bonded Organic Frameworks with Pre-Built Kuratowski SBUs towards Metal-Organic Framework Dyads**  
R. Röb-Ohlenroth<sup>1</sup>; D. Volkmer<sup>1</sup>; <sup>1</sup> Universität Augsburg, Augsburg/D

14:30 **SOFOUR-1-Zn: A Sulfate-Pillared Hybrid Ultramicroporous Material for Gas Separations**  
D. Sensharma<sup>1</sup>; D. O'Hearn<sup>1</sup>; A. Koochaki<sup>1</sup>; A. Bezrukov<sup>1</sup>; N. Kumar<sup>1</sup>; B. Wilson<sup>1</sup>; M. Vandichel<sup>1</sup>; M. Zaworotko<sup>1</sup>; <sup>1</sup> University of Limerick, Limerick/IRL

14:40 Coffee Break

## PROGRAMME

## Monday, 5 September 2022

Room: Large Hall

Chair: S. Kaskel, TU Dresden/D

15:10 Elevator Pitches Exhibitors & Sponsors

15:30 Early Career Award Ceremony

Chair: N. Shustova, University of South Carolina, Columbia/US C. Janiak, Heinrich-Heine-Universität, Düsseldorf/D

15:40 **PLENARY LECTURE**  
**Overcoming limitations of metal-organic frameworks: synthesis, properties, and application**  
H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK

Room: Large Hall

## Metal-Organic Frameworks

Chair: C. Janiak, Heinrich-Heine-Universität, Düsseldorf/D

16:35 **Liker Functionalization of Pillar-Layered Metal-organic Frameworks**  
A. Morsali<sup>1</sup>; <sup>1</sup> Tarbiat Modares University, Tehran/IR

16:50 **Unprecedented Carborane-driven efficient Antennae Effect in Luminescence Lanthanide Metal Organic Frameworks and Their Potential Application for Time-dependent Spectroscopic Barcoding**  
Z. Li<sup>1</sup>; R. Nunez<sup>2</sup>; F. Teixidor<sup>1</sup>; C. Vinas<sup>1</sup>; J. Giner Planas<sup>1</sup>; D. Ruiz-Molina<sup>2</sup>; C. Roscini<sup>2</sup>; M. Light<sup>3</sup>; E. Ruiz<sup>4</sup>; <sup>1</sup> Institut de Ciència de Materials de Barcelona/E; <sup>2</sup> Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC, and The Barcelona Institute of Science and Technology, Barcelona/E; <sup>3</sup> Department of Chemistry, University of Southampton, Highfield, Southampton /UK; <sup>4</sup> Departament de Química Inorgànica i Orgànica and Institut de Recerca de Química Teòrica i Computacional, Universitat de Barcelona/E

17:05 **Evolution of water structures in metal-organic frameworks for improved atmospheric water harvesting**  
N. Hanikel<sup>1</sup>; X. Pei<sup>1</sup>; S. Chheda<sup>2</sup>; H. Lyu<sup>1</sup>; W. Jeong<sup>2</sup>; J. Sauer<sup>3</sup>; L. Gagliardi<sup>4</sup>; O. Yaghi<sup>1</sup>; <sup>1</sup> University of California, Berkeley and Kavli Energy Nanoscience Institute, Berkeley/USA; <sup>2</sup> University of Minnesota, Minneapolis/USA; <sup>3</sup> Humboldt-Universität zu Berlin, Berlin/D; <sup>4</sup> University of Chicago, Chicago/USA

17:20 **Controlling MOF crystals across different length scales**  
J. Chin<sup>1</sup>; <sup>1</sup> Universität Wien, Vienna/A

17:35 **Design, Synthesis, and Application of MOF-Polymer Hybrid Materials**  
M. Tsotsalas<sup>1</sup>; <sup>1</sup> Karlsruher Institut für Technologie (KIT), Eggenstein-Leopoldshafen/D

17:50 **High-Performance MOF Materials for Gas Adsorption and Separation**  
P. Feng<sup>1</sup>; <sup>1</sup> University of California, Riverside/USA (Online Lecture)

Room: Exhibition Area

18:05 Poster Party I

20:30 End of Conference Day

## PROGRAMME

## Monday, 5 September 2022

Room: Large Hall

09:00 **OPENING / WELCOME ADDRESS**  
Chair: S. Kaskel, TU Dresden/D

09:15 **PLENARY LECTURE**  
**ZIF-based biocomposites: past, present, and future**  
P. Falcaro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A

10:00 Coffee Break

Room: Hall 4

## Catalysis

Chair: P. Falcaro, Graz University of Technology, Graz/A

10:30 **Adsorption-driven catalysis in metal-organic frameworks**  
M. Ranocchiari<sup>1</sup>; <sup>1</sup> Paul Scherrer Institut, Villigen/CH

10:45 **MOF catalysts incorporating transition metal ions at atomic level for energy-related applications**  
G. Zhou<sup>1</sup>; Z. Huang<sup>2</sup>; <sup>1</sup> Stockholm Universitet, Stockholm/S; <sup>2</sup> Stockholm Universty, Stockholm/S

11:00 **Heterometallic MOFs as sustainable catalysts for energy-related applications**  
G. Mouchaham<sup>1</sup>; R. Del Angel<sup>1</sup>; M. Daturi<sup>2</sup>; C. Serre<sup>1</sup>; <sup>1</sup> Institut des Matériaux Poreux de Paris, UMR 8004 CNRS-ENS-ESPCI, Paris/F; <sup>2</sup> Normandie Université, ENSICAEN, UNICAEN, CNRS, Laboratoire Catalyse et Spectrochimie, Caen/F

11:15 **KEYNOTE LECTURE**  
**Metal Organic Frameworks and their derived structures in photo(thermal)catalysts. Where are we and where are we heading?**  
J. Gascon<sup>1</sup>; <sup>1</sup> King Abdullah University of Science and Technology / KAUST Catalysis Center, Thuwal/SAR

11:45 **Rational Design of Functionalized Metal-Organic Frameworks for Catalytic Fixation of CO<sub>2</sub> From Air into Value-Added Chemicals**  
R. Das<sup>1</sup>; C. M. N. Mallaiah<sup>1</sup>; <sup>1</sup> Department of Chemistry, Indian Institute of Technology Ropar, Punjab/ IND

11:55 **The Influence of Metal Nodes in Designing Cooperative Photocatalytic Metal-Organic Frameworks**  
M. Nord<sup>1</sup>; K. Stylianou<sup>1</sup>; <sup>1</sup> Oregon State University, Corvallis, OR/USA

12:05 Lunch, Posters & Exhibition

Room: Hall 4

## Covalent Organic Frameworks

Chair: R. Banerjee, Indian Institute of Science Education and Research, Kolkata/IND

13:05 **KEYNOTE LECTURE**  
**From imine-based covalent organic frameworks design to their processability and applications**  
F. Zamora<sup>1</sup>; <sup>1</sup> Universidad Autonoma de Madrid, Madrid/E

13:35 **2D Conjugated Organic Frameworks**  
L. Chen<sup>1</sup>; <sup>1</sup> Jilin University, Changchun/CN

13:50 **Highly Crystalline and Fully Conjugated 3D Cyclo-octatetrathiophene-Based Covalent Organic Frameworks as Bulk and Thin Film Materials**  
D. Bessinger<sup>1</sup>; S. Reuter<sup>1</sup>; I. Muñoz Alonso<sup>1</sup>; D. Medina<sup>1</sup>; T. Bein<sup>1</sup>; <sup>1</sup> University of Munich (LMU), Department of Chemistry and Center for NanoScience (CeNS), Munich/D

14:05 **Exceptional Capacitance Enhancement of a Non-Conducting COF through Potential-Driven Chemical Modulation via Redox Electrolyte**  
R. Kushwaha<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research, Pune, Pune/IND

14:20 **Solvent-Influenced Fragmentations in Free-Standing Three-Dimensional Covalent Organic Framework Membranes**  
A. Mohammed<sup>1</sup>; <sup>1</sup> Khalifa University, Abdu Dhabi/UAE

14:30 **Covalent Organic Frameworks as Electrocatalysts for the Oxygen Reduction Reaction**  
M. Martínez-Fernández<sup>1</sup>; J. Segura Castedo<sup>1</sup>; <sup>1</sup> UCM, Madrid/E

14:40 Coffee Break

## PROGRAMME

## Monday, 5 September 2022

Room: Large Hall

Chair: S. Kaskel, TU Dresden/D

15:10 Elevator Pitches Exhibitors & Sponsors

15:30 Early Career Award Ceremony

Chair: N. Shustova, University of South Carolina, Columbia/US

15:40 **PLENARY LECTURE**  
**Overcoming limitations of metal-organic frameworks: synthesis, properties, and application**  
H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK

Room: Hall 4

## Separation

Chair: A. Knebel, Friedrich Schiller University Jena, Otto Schott Institute of Materials Research, Jena/D

16:35 **Rational Design of Pore Chemistry within Ultramicroporous Metal-Organic Frameworks for Efficient Acetylene Capture and Purification**  
Z. Zhang<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP

16:50 **Separating Fluorinated Molecules via Well-Defined Interactions in Metal-Organic Frameworks**  
P. Milner<sup>1</sup>; <sup>1</sup> Cornell University, Ithaca/USA

17:05 **Toward Liquid Phase Processable Metal-Organic Frameworks**  
D. Poloneeva<sup>1</sup>; S. Datta<sup>1</sup>; A. Knebel<sup>2</sup>; L. Garzon-Tovar<sup>1</sup>; M. Eddaoudi<sup>1</sup>; A. Bavykina<sup>1</sup>; J. Gascon<sup>1</sup>; <sup>1</sup> King Abdullah University of Science and Technology, Thuwal/SAR; <sup>2</sup> Friedrich Schiller University Jena, Jena/D

17:20 **Azo-functionalized Porous Organic Polymers as fillers in iongel membranes for CO<sub>2</sub> separation**  
A. Nabais<sup>1</sup>; J. Crespo<sup>1</sup>; L. Tomé<sup>1</sup>; L. Neves<sup>1</sup>; <sup>1</sup> LAQV/ REQUIMTE, Department of Chemistry, NOVA School of Science and Technology, FCT NOVA, Universidade NOVA de Lisboa, Caparica/P

17:35 **KEYNOTE LECTURE**  
**The Design of MOF Composites for Gas and Liquid Separations**  
W. Queen<sup>1</sup>; <sup>1</sup> EPFL Valais, Sion/CH

Room: Exhibition Area

18:05 Poster Party I

20:30 End of Conference Day



## Monday, 5 September 2022

Room: Large Hall

09:00 **OPENING / WELCOME ADDRESS**  
Chair: S. Kaskel, TU Dresden/D

09:15 **PLENARY LECTURE**  
**ZIF-based biocomposites: past, present, and future**  
P. Falcaro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A

10:00 Coffee Break

Room: Hall 5

## Environmental Applications

Chair: G. Shimizu, University of Calgary, Calgary/CDN

10:30 **MOF Materials for Applications in Agriculture**  
M. Fandzloch<sup>1</sup>; L. González<sup>2</sup>; F. Carmona<sup>2</sup>; J. Navarro<sup>2</sup>; C. Maldonado<sup>2</sup>; E. Barea<sup>2</sup>; <sup>1</sup> Institute of Low Temperature and Structural Research, Wrocław/PL; <sup>2</sup> University of Granada, Granada/E

10:45 **Metal-Organic Frameworks in the elimination of Emerging Contaminants: from the bench to natural environments**  
S. Rojas Macías<sup>1</sup>; A. Arenas Vivo<sup>2</sup>; A. Torres<sup>2</sup>; V. Dato<sup>2</sup>; A. Rodríguez Diéguez<sup>1</sup>; P. Horcajada<sup>2</sup>; <sup>1</sup> University of Granada, Granada/E; <sup>2</sup> IMDEA Energy Institute, Móstoles/E

11:00 **Structuration of Metal-Organic Framework Technologies for Water Remediation: Toward Sustainable Aquatic Ecosystems**  
J. F. Soria<sup>1</sup>; C. Negro<sup>1</sup>; E. Pardo<sup>1</sup>; R. Bruno<sup>2</sup>; D. Armentano<sup>2</sup>; <sup>1</sup> Molecular Science Institute (ICMol), Valencia/Spain; <sup>2</sup> Università della Calabria, Cosenza/Italy

11:15 **MOFs for Carbon Capture**  
S. Marx<sup>1</sup>; O. Ghaffari Nik<sup>2</sup>; P. Hovington<sup>2</sup>; G. Shimizu<sup>3</sup>; <sup>1</sup> BASF SE, Ludwigshafen/D; <sup>2</sup> Svante Inc., Burnaby/CDN; <sup>3</sup> University of Calgary/CDN

11:30 **Understanding the functionality of metal-organic frameworks in chemical separation and conversion applications**  
M. Asgari<sup>1</sup>; W. Queen<sup>2</sup>; D. Fairen-Jimenez<sup>1</sup>; <sup>1</sup> University of Cambridge, CAMBRIDGE/UK; <sup>2</sup> EPFL, Sion/CH

11:45 **Pest Control with Metal-Organic Frameworks**  
J. Paul-Taylor<sup>1</sup>; G. Shearer<sup>1</sup>; T. Düren<sup>1</sup>; W. Hughes<sup>2</sup>; J. Spencer<sup>2</sup>; A. Burrows<sup>1</sup>; <sup>1</sup> University of Bath/UK; <sup>2</sup> University of Sussex, Brighton/UK

11:55 **Computational Study on Water from Air Capture by 2D Metal Organic Frameworks**  
A. Koochaki<sup>1</sup>; S. Javannikkhah<sup>1</sup>; S. Darwish<sup>1</sup>; S. Wang<sup>1</sup>; V. Gascón-Pérez<sup>1</sup>; M. Zaworotko<sup>1</sup>; M. Vandichel<sup>1</sup>; <sup>1</sup> University of Limerick, Limerick/IRL

12:05 Lunch, Posters & Exhibition

Room: Hall 5

## Topology and Defects

Chair: S. M. J. Rogge, Ghent University, Ghent/B

13:05 **Analysis of MOFs underlying nets with ToposPro: occurrences and entanglements**  
D. Proserpio<sup>1</sup>; E. Alexandrov<sup>2</sup>; V. Blatov<sup>2</sup>; <sup>1</sup> Università degli studi di Milano, Milano/I; <sup>2</sup> Samara Polytech, Samara/RUS

13:20 **Topological characterisation of MOFs in the Cambridge Structural Database (CSD)**  
L. Glasby<sup>1</sup>; J. Cole<sup>2</sup>; P. Moghadam<sup>1</sup>; <sup>1</sup> The University of Sheffield/UK; <sup>2</sup> Cambridge Crystallographic Data Centre, Cambridge/UK

13:35 **Porosity from frustration in a procrystalline MOF**  
A. Goodwin<sup>1</sup>; <sup>1</sup> University of Oxford/UK

13:50 **Edge-1-transitive multivariate frameworks as substitutional solid solutions: Crystals with predictable structure, variable composition, and tunable properties**  
F. J. Uribe-Romo<sup>1</sup>; J. T. Bryant<sup>1</sup>; D. C. Fairchild<sup>1</sup>; K. R. Langlois<sup>1</sup>; W. J. Newsome<sup>1</sup>; G. S. Mohammad-Pour<sup>1</sup>; <sup>1</sup> Department of Chemistry, and REACT: Renewable Energy and Chemical Transformations Cluster, University of Central Florida, Orlando/USA

14:05 **Coordination modulation of Metal-Organic Frameworks for defect-controlled multivariate structures for enhanced applications**  
I. Abánades Lázaro<sup>1</sup>; G. Mínguez Espallargas<sup>1</sup>; <sup>1</sup> University of Valencia, Paterna/E

14:20 **Synthetic control of correlated disorder in UiO-66 frameworks**  
S. Tatay<sup>1</sup>; N. Almora-Barrios<sup>1</sup>; N. M. Padial<sup>1</sup>; J. Castells Gil<sup>1</sup>; C. Martí-Gastaldo<sup>1</sup>; <sup>1</sup> Universitat de València, Paterna/E

14:30 **Exploring the Zn-1,3-BDC MOF phase space: interplay conformational degrees of freedom and torsion angle**  
E. G. Meekel<sup>1</sup>; A. L. Goodwin<sup>1</sup>; <sup>1</sup> University of Oxford/UK

14:40 Coffee Break

## Monday, 5 September 2022

Room: Large Hall

Chair: S. Kaskel, TU Dresden/D

15:10 Elevator Pitches Exhibitors & Sponsors

15:30 Early Career Award Ceremony

Chair: N. Shustova, University of South Carolina, Columbia/US

15:40 **PLENARY LECTURE**  
**Overcoming limitations of metal-organic frameworks: synthesis, properties, and application**  
H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK

Room: Hall 5

## Advanced Characterisation Techniques

Chair: E. Brunner, TU Dresden, Dresden/D

16:35 **KEYNOTE LECTURE**  
**Derisking a MOF for Practical Carbon Capture**  
J.-B. Lin<sup>1</sup>; T. T. T. Nguyen<sup>2</sup>; R. Vaidhyanathan<sup>1</sup>; J. Burner<sup>3</sup>; J. M. Taylor<sup>1</sup>; H. Durekova<sup>3</sup>; F. A. Roger<sup>5</sup>; K. Mah<sup>1</sup>; O. Ghaffari-Nik<sup>5</sup>; S. Marx<sup>6</sup>; N. Fylstra<sup>1</sup>; S. Iremonger<sup>1</sup>; K. Dawson<sup>1</sup>; P. Sarkar<sup>2</sup>; P. Hovington<sup>5</sup>; A. Rajendran<sup>2</sup>; T. K. Woo<sup>3</sup>; G. K. H. Shimizu<sup>1</sup>; <sup>1</sup> Dept. of Chemistry, Univ Calgary, Calgary, Alberta/CDN; <sup>2</sup> Dept. of Chemical and Materials Engineering, Univ Alberta, Edmonton/CDN; <sup>3</sup> Dept. of Chemistry and Biomolecular Science, Univ Ottawa, Ottawa/CDN; <sup>4</sup> Dept. of Materials Engineering, Luleå Univ Technology, Luleå/SVE; <sup>5</sup> Svante Inc., Vancouver/CDN; <sup>6</sup> BASF SE, Ludwigshafen am Rhein/D

17:05 **Dynamic Behaviours of Metal-Organic Frameworks and their Guests**  
T. Easun<sup>1</sup>; <sup>1</sup> Cardiff University, Cardiff/UK

17:20 **Analysis of MOF Single-Nanocrystals by Three-Dimensional Electron Diffraction: Structure and Beyond**  
Z. Huang<sup>1</sup>; <sup>1</sup> Stockholm University, Stockholm/S

17:35 **Mechanistic understanding of guest-induced flexibility in MOFs: A long journey from the synchrotron to the laboratory**  
V. Bon<sup>1</sup>; S. Kaskel<sup>2</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D; <sup>2</sup> Technische Universität Dresden, Dresden/D

Room: Exhibition Area

18:05 Poster Party I

20:30 End of Conference Day

## Monday, 5 September 2022

Room: Large Hall

09:00 **OPENING / WELCOME ADDRESS**

Chair: S. Kaskel, TU Dresden/D

09:15 **PLENARY LECTURE****ZIF-based biocomposites: past, present, and future**  
P. Falcaro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A

## 10:00 Coffee Break

Room: Conference 1 (4<sup>th</sup> Floor)**Towards Industrial Applications**

Chair: J. Silvestre Albero, University of Alicante, Alicante/E

10:30 **Control of Aggregate Structure of Flexible MOF Granules and its Adsorption Properties**S. Ohsaki<sup>1</sup>; A. Teranishi<sup>1</sup>; H. Nakamura<sup>1</sup>; S. Watano<sup>1</sup>; <sup>1</sup> Osaka Prefecture University, Osaka/J10:45 **Manufacturing advanced MOF contactors**H. Holmes<sup>1</sup>; <sup>1</sup> Georgia Institute of Technology, Atlanta/USA11:00 **Process integration of metal-organic frameworks: market-driven prototyping success**C. Toft<sup>1</sup>; A. Chomiak<sup>1</sup>; D. Steitz<sup>1</sup>; <sup>1</sup> novoMOF AG, Zofingen/CH11:15 **Investigation of Industrial Adsorbents for Direct Air Capture by Gas Flow Methods**F. Walenszus<sup>1</sup>; R. Eschrich<sup>1</sup>; C. Blum<sup>2</sup>; S. Ehrling<sup>1</sup>; <sup>1</sup> 3P Instruments GmbH & Co. KG, Leipzig/D; <sup>2</sup> 3P Instruments GmbH & Co. KG, Paderborn/D11:30 **Polyphenol building units as linkers for green and stable MOFs**E. Svensson Grape<sup>1</sup>; J. Flores<sup>2</sup>; T. Hidalgo<sup>3</sup>; E. Martínez-Ahumada<sup>2</sup>; A. Gutiérrez-Alejandre<sup>2</sup>; I. Ibarra<sup>2</sup>; P. Horcajada<sup>3</sup>; A. Inge<sup>1</sup>; <sup>1</sup> Stockholm University, Stockholm/S; <sup>2</sup> Universidad Nacional Autónoma de México, Mexico City/MEX; <sup>3</sup> IMDEA Energy, Madrid/E11:45 **Optimized XRD measurement configurations for porous materials with XRDynamic 500**B. Schrode<sup>1</sup>; A. O. F. Jones<sup>1</sup>; M. Kremer<sup>1</sup>; T. Müller<sup>1</sup>; B. Pühr<sup>1</sup>; P. Vir<sup>1</sup>; <sup>1</sup> Anton Paar GmbH, Graz/A11:55 **Addressing the industrial challenges of heterogeneous Suzuki reactions with MOFs catalysts**D. Cartagena<sup>1</sup>; J. van Bokhoven<sup>1</sup>; M. Ranocchiari<sup>1</sup>; S. Bachmann<sup>2</sup>; K. Püntener<sup>2</sup>; <sup>1</sup> Paul Scherrer Institut (PSI), Villigen PSI/CH; <sup>2</sup> F. Hoffmann-La Roche Ltd., Basel/CH

## 12:05 Lunch, Posters &amp; Exhibition

Room: Conference 1 (4<sup>th</sup> Floor)**Adsorption**

Chair: G. Maurin; University of Montpellier, Montpellier/F

13:05 **Chemically stable supra molecular candidates for the capture of SO<sub>2</sub> and H<sub>2</sub>S: from the oxidation of SO<sub>2</sub> to the unusual formation of polysulfides**I. Ibarra<sup>1</sup>; <sup>1</sup> Universidad Nacional Autónoma de México, Mexico City/MEX13:20 **Reversible Oxygen Sorption in MOFs**M. Hill<sup>1</sup>; K. Suzuki<sup>2</sup>; L. Melag<sup>2</sup>; A. Sutton<sup>3</sup>; <sup>1</sup> CSIRO and Monash University, Melbourne/AUS; <sup>2</sup> Monash University, Clayton/AUS; <sup>3</sup> CSIRO, Clayton/AUS13:35 **An upper bound visualization of design trade-offs in adsorbent materials for gas separations**A. Elashkar<sup>1</sup>; G. Hedley<sup>1</sup>; S. Edens<sup>1</sup>; O. Qazvini<sup>2</sup>; S. Telfer<sup>3</sup>; M. Cowan<sup>1</sup>; <sup>1</sup> University of Canterbury, Christchurch/NZ; <sup>2</sup> University of Alberta, Alberta/CDN; <sup>3</sup> Massey University, Palmerston North/NZ13:50 **Activation Temperature Effects on the Adsorption of Acetylene by Iron-Based Metal-Organic Frameworks for Space Exploration**G. Day<sup>1</sup>; C. Ybanez<sup>1</sup>; K. Ozdemir<sup>1</sup>; J. Ornstein<sup>1</sup>; <sup>1</sup> framergy, Inc., College Station/USA14:05 **Binary CO<sub>2</sub>/H<sub>2</sub>O Adsorption on Amine-Functionalized UiO-66 MOFs**A. Hernandez<sup>1</sup>; R. Impastato<sup>1</sup>; M. Hossain<sup>1</sup>; B. Rabideau<sup>1</sup>; T. Glover<sup>1</sup>; <sup>1</sup> University of South Alabama, Mobile/USA14:20 **Shaping of ZIF-8 and MIL-53(Al) adsorbents for CH<sub>4</sub>/N<sub>2</sub> separation**A. Pereira<sup>1</sup>; A. Ferreira<sup>1</sup>; A. Rodrigues<sup>1</sup>; A. Ribeiro<sup>1</sup>; M. Regufe<sup>1</sup>; <sup>1</sup> Faculty of Engineering of University of Porto, Porto/P14:30 **Structure of Ionic Liquids and its Impact in the Sorption Capacity and Selectivity Performance of IL@MOF Materials**T. J. Ferreira<sup>1</sup>; B. A. Moura<sup>1</sup>; L. M. Esteves<sup>1</sup>; T. O. Carvalho<sup>1</sup>; P. M. Reis<sup>1</sup>; J. M. S. S. Esperança<sup>1</sup>; I. A. A. C. Esteves<sup>1</sup>; <sup>1</sup> Universidade NOVA de Lisboa, LAQV/Requimte, Caparica/P

## 14:40 Coffee Break

## Monday, 5 September 2022

Room: Large Hall

Chair: S. Kaskel, TU Dresden/D

15:10 **Elevator Pitches Exhibitors & Sponsors**15:30 **Early Career Award Ceremony**

Chair: N. Shustova, University of South Carolina, Columbia/US

15:40 **PLENARY LECTURE****Overcoming limitations of metal-organic frameworks: synthesis, properties, and application**  
H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROKRoom: Conference 1 (4<sup>th</sup> Floor)**Thin Films**

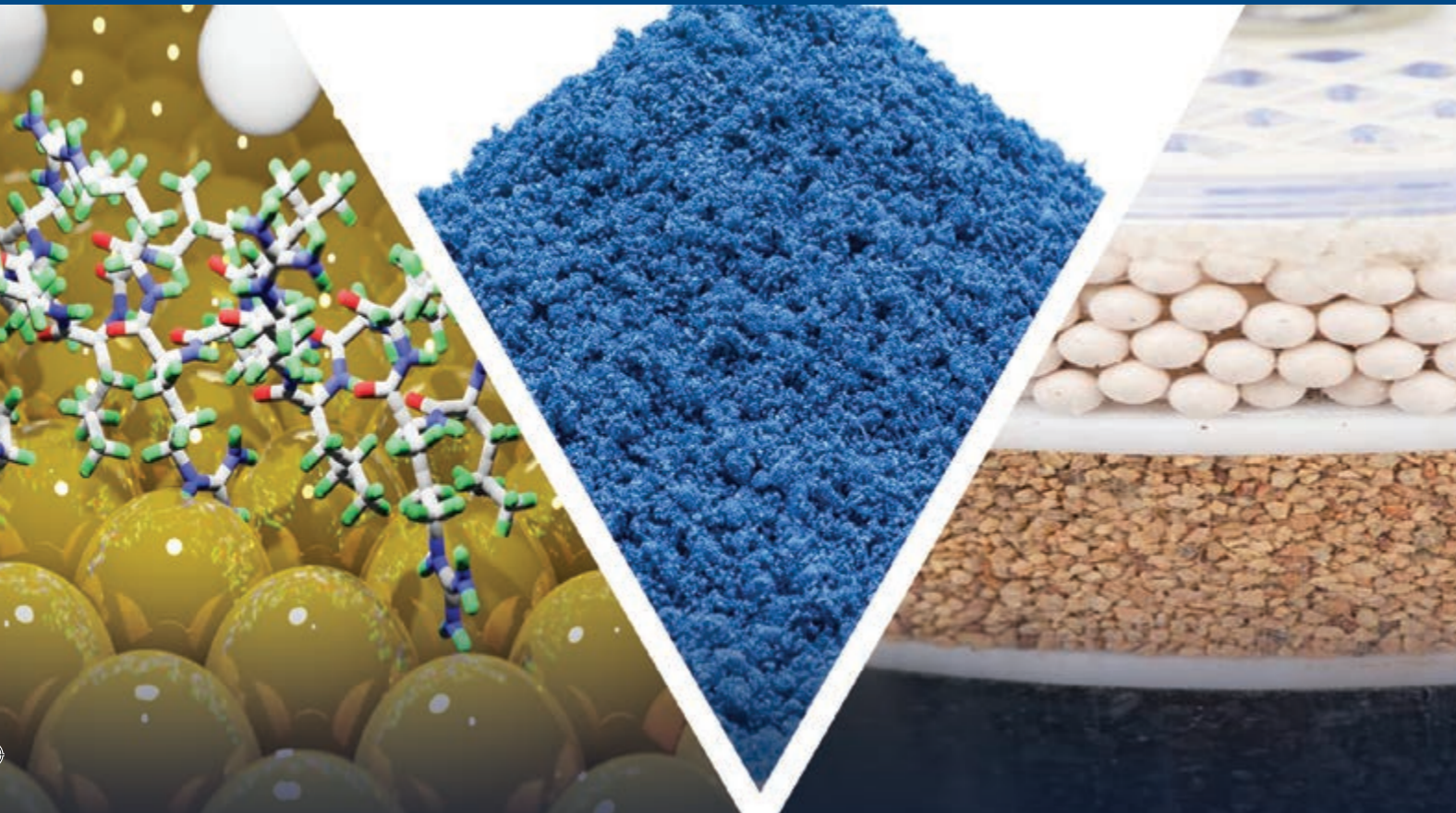
Chair: M. Allendorf, Sandia National Lab, Livermore/US

16:35 **Chemical vapor deposition and high-resolution patterning of highly conductive two-dimensional coordination polymer nanofilms**V. Rubio-Giménez<sup>1</sup>; M. Wang<sup>2</sup>; G. Arnauts<sup>1</sup>; M. Tietze<sup>1</sup>; D. Kravchenko<sup>1</sup>; R. Dong<sup>2</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> KU Leuven, Centre for Membrane Separations, Adsorption, Catalysis and Spectroscopy for Sustainable Solutions, Leuven/B; <sup>2</sup> TU Dresden/D16:50 **ALD-Grown ZIF-8 Thin Films : Mechanism Insight Leads to Push Beyond the Current Thickness Limit**V. Perrot<sup>1</sup>; A. Roussey<sup>2</sup>; A. Benayad<sup>1</sup>; M. Veillerot<sup>1</sup>; F. Ricoul<sup>1</sup>; V. Jousseume<sup>1</sup>; E. Quadrelli<sup>3</sup>; J. Canivet<sup>3</sup>; C. Mellot-Draznieks<sup>4</sup>; A. Sole-Daura<sup>4</sup>; <sup>1</sup> Univ Grenoble Alpes, CEA LETI, Grenoble/F; <sup>2</sup> Univ Grenoble Alpes, CEA LITEN, Grenoble/F; <sup>3</sup> CPE Lyon -CNRS- Université of Lyon-, Villeurbanne/F; <sup>4</sup> Collège de France Paris, Paris/F17:05 **Tunable Two-Dimensional Alignments of Metal-organic Frameworks in Polymer Films**J. Kim<sup>1</sup>; K. Barcus<sup>2</sup>; S. Cohen<sup>2</sup>; <sup>1</sup> Seoul National University, Seoul/ROK; <sup>2</sup> University of California, San Diego, San Diego/USA17:20 **Mechanisms during rapid sorption-vapor synthesis of high-performance catalytic MOF-polymer and MOF-fabric composites**G. Parsons<sup>1</sup>; S. Morgan<sup>1</sup>; G. Peterson<sup>2</sup>; <sup>1</sup> North Carolina State University, Raleigh/USA; <sup>2</sup> US Army Combat Capabilities Development Command, Aberdeen Proving Ground/USA17:35 **Directional Charge Transport in Oriented Semiconducting 2D Conjugated Metal-Organic Framework Films**Z. Wang<sup>1</sup>; X. Feng<sup>1</sup>; R. Dong<sup>2</sup>; <sup>1</sup> Max Planck Institute of Microstructure Physics, Halle/D; <sup>2</sup> TU Dresden/D17:50 **Reactive Printing for Controlled Crystallization-Deposition and the Spatial Functionalization of Metal-Organic Framework Films**F. Al-Ghazzawi<sup>1</sup>; L. Conte<sup>1</sup>; P. Wagner<sup>1</sup>; C. Richardson<sup>1</sup>; <sup>1</sup> University of Wollongong, Wollongong/AUS

Room: Exhibition Area

18:05 **Poster Party I**20:30 **End of Conference Day**

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## PROGRAMME

Tuesday, 6 September 2022

Room: Large Hall

Chair: F.-X. Coudert, PSL Research University - CNRS - Institut de Recherche de Chimie, Paris/F

09:00	<b>PLENARY LECTURE</b> <b>The Impacts of Advanced Electron Diffraction Techniques for Structural Elucidation of Metal-Organic Frameworks and Covalent Organic Frameworks</b> X. Zou, Stockholm University, Stockholm/S
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Room: Large Hall

## Metal Organic Frameworks

Chair: S. Marx, BASF SE, Ludwigshafen/D

09:50	<b>KEYNOTE LECTURE</b> <b>Photo-mechano-electrochemically active MOFs</b> D. D'Alessandro <sup>1</sup> ; <sup>1</sup> The University of Sydney, Sydney/AUS (Online Lecture) supported by Communications Chemistry
10:20	<b>Lanthanide-Based Metal-Organic Frameworks as Platforms for the Creation of Near-Infrared Emitting Bioanalytical Imaging Agents</b> S. Petoud <sup>1,2</sup> ; S. V. Eliseeva <sup>1</sup> ; G. Collet <sup>1</sup> ; P. F. Muldoon <sup>2</sup> ; T.-Y. Lu <sup>2</sup> ; C. Liu <sup>2</sup> ; C. Besnard <sup>3</sup> ; N. L. Rosi <sup>2</sup> ; <sup>1</sup> Center for Molecular Biophysics, CNRS, Orleans/FR; <sup>2</sup> Department of Chemistry, University of Pittsburgh, Pittsburgh/USA; <sup>3</sup> Laboratory of Crystallography, University of Geneva/CH
10:35	<b>Surface-Modified Phthalocyanine-Based 2D Conjugated MOF Films for Polarity-Selective Chemiresistive Sensing</b> M. Wang <sup>1</sup> ; Z. Zhang <sup>1</sup> ; S. Mannsfeld <sup>1</sup> ; X. Feng <sup>1</sup> ; R. Dong <sup>1</sup> ; <sup>1</sup> Technische Universität Dresden, Dresden/D
10:50	<b>Flexible Rare Earth MOFs with Intriguing Continuous Breathing Behavior: Functionalization and Properties</b> P. Trikalitis <sup>1</sup> ; G. Angeli <sup>1</sup> ; E. Loukopoulos <sup>1</sup> ; C. Tsangarakis <sup>1</sup> ; <sup>1</sup> University of Crete, Heraklion/GR
11:05	Coffee Break

Room: Large Hall

## Membranes

Chair: J. Canivet, Université Claude Bernard, Lyon/F

11:35	<b>Forming metal organic framework glasses within porous alumina supports to produce defect free membranes for gas separations</b> D. Stone <sup>1</sup> ; S. Morgan <sup>2</sup> ; N. Harvey-Reid <sup>1</sup> ; B. Howard <sup>1</sup> ; T. Bennett <sup>3</sup> ; P. Kruger <sup>1</sup> ; G. Parsons <sup>2</sup> ; M. Cowan <sup>1</sup> ; <sup>1</sup> University of Canterbury, Christchurch/NZ; <sup>2</sup> North Carolina State University (NCSU), Raleigh/USA; <sup>3</sup> Department of Materials Science & Metallurgy, University of Cambridge, Cambridge/UK
11:50	<b>MOFs-based membranes for hydrocarbons separation</b> O. Shekhah <sup>1</sup> ; <sup>1</sup> King Abdullah University of Science and Technology (KAUST), Thuwal/SAR
12:05	<b>The role of defects in UiO-66-NH<sub>2</sub> on gas separation membrane performance</b> Z. Smith <sup>1</sup> ; J. Teesdale <sup>1</sup> ; M. Lee <sup>1</sup> ; R. Lu <sup>1</sup> ; <sup>1</sup> MIT, Cambridge/USA
12:20	<b>KEYNOTE LECTURE</b> <b>Computationally-Assisted Advances in MOF Mixed Matrix Membranes</b> G. Maurin <sup>1</sup> ; <sup>1</sup> University of Montpellier, Montpellier/F
12:50	Lunch, Poster & Exhibiton

## PROGRAMME

Tuesday, 6 September 2022

Room: Large Hall

## Covalent Organic Frameworks

Chair: T. Bein, Ludwig-Maximilians-Universität München, Munich/D

14:00	<b>KEYNOTE LECTURE</b> <b>Hydrogen-bonded Crosslinked Organic Frameworks (HCOFs)</b> C. Ke <sup>1</sup> ; <sup>1</sup> Dartmouth College, Hanover/USA
14:30	<b>Porous Covalent Organic Nanotubes and Toroids: A Carbon Nanotube Analogue</b> R. Banerjee <sup>1</sup> ; <sup>1</sup> Indian Institute of Science Education and Research Kolkata, MOHANPUR/ NADIA/IND
14:45	<b>Covalent-Organic Frameworks Based on Inorganic Heterocycles</b> A. Schneemann <sup>1</sup> ; <sup>1</sup> Technische Universität Dresden, Dresden/D
15:00	<b>Large Pore Photoactive Covalent Organic Frameworks Constructed from Donor-Acceptor BDT-Backbones</b> S. Reuter <sup>1</sup> ; D. Medina <sup>1</sup> ; A. Weis <sup>1</sup> ; T. Bein <sup>1</sup> ; <sup>1</sup> Ludwig-Maximilians-Universität München (LMU), München/D
15:10	<b>Donor-Acceptor Triphenylamine-Based Covalent Organic Frameworks</b> R. Guntermann <sup>1</sup> ; D. Helminger <sup>1</sup> ; L. Frey <sup>1</sup> ; D. Medina <sup>1</sup> ; T. Bein <sup>1</sup> ; <sup>1</sup> Fakultät für Chemie und Pharmazie, LMU München/D
15:20	Coffee Break

Room: Large Hall

Chair: H. Bunzen, University of Augsburg/D

15:50	<b>PLENARY LECTURE</b> <b>Engineering MOF functionality using high-throughput data and computational modeling</b> L. Gagliardi <sup>1</sup> ; <sup>1</sup> University of Chicago, Chicago/USA
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Room: Large Hall

## Environmental Applications

Chair: M. Schröder, The University of Manchester, Manchester/UK

16:45	<b>MOFs for indoor contaminant capture and detection: a cooperative computational-experimental screening approach</b> P. Iacomini <sup>1</sup> ; E. Gulcay <sup>1</sup> ; S. Devautour-Vinot <sup>1</sup> ; G. Rioland <sup>2</sup> ; G. Maurin <sup>1</sup> ; <sup>1</sup> CNRS, ENSCM, UM, Montpellier/F; <sup>2</sup> Centre National d'Etudes Spatiales, Toulouse/F
17:00	<b>Dual Removal and Selective Recovery of Phosphorous Compounds from Water by Zr-based MOFs</b> L. González <sup>1</sup> ; F. Carmona <sup>1</sup> ; N. Padial <sup>2</sup> ; J. Navarro <sup>1</sup> ; E. Barea <sup>1</sup> ; C. Maldonado <sup>1</sup> ; <sup>1</sup> University of Granada, Granada/E; <sup>2</sup> Instituto de Ciencia Molecular (ICMol), Universitat de Valencia, Valencia/E
17:15	<b>Metal-organic adsorbents enable water decontamination from persistent and mobile organic compounds</b> S. Mukherjee <sup>1</sup> ; N. Ilić <sup>2</sup> ; J. Drewes <sup>2</sup> ; R. Fischer <sup>2</sup> ; <sup>1</sup> University of Limerick, Limerick/IRL; <sup>2</sup> Technical University of Munich, Garching/D
17:30	<b>KEYNOTE LECTURE</b> <b>Metal-Organic Frameworks as Heterogeneous Catalysts for Water Splitting and CO<sub>2</sub> Fixation</b> K. Biradha <sup>1</sup> ; <sup>1</sup> Indian Institute of Technology Kharagpur/IND

Room: Exhibition Area

18:00 Poster Party II

Room: Terrace Floor

20:00 MOF2022 PARTY (20:00-23:00)

## PROGRAMME

Tuesday, 6 September 2022

Room: Large Hall

Chair: F.-X. Coudert, PSL Research University - CNRS - Institut de Recherche de Chimie, Paris/F

09:00	<b>PLENARY LECTURE</b> <b>The Impacts of Advanced Electron Diffraction Techniques for Structural Elucidation of Metal-Organic Frameworks and Covalent Organic Frameworks</b> X. Zou, Stockholm University, Stockholm/S
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Room: Hall 4

## Towards Industrial Applications: Separation Processes

Chair: J. Silvestre-Albero, University of Alicante, Alicante/E

09:50	<b>Polycrystalline Metal-Organic Framework Membranes for Liquid Separations</b> D. Zhao <sup>1</sup> ; <sup>1</sup> National University of Singapore, Singapore/SGP
10:05	<b>Postcombustion Carbon Capture Using Polymer&amp;MOF Thin Film Composite Membranes</b> M. Liu <sup>1</sup> ; <sup>1</sup> University of British Columbia, Vancouver, BC/CDN
10:20	<b>CO<sub>2</sub> Capture VPSA Pilot Unit using MIL-160(Al) and MIL-91(Ti): experimental and simulations study</b> A. Henrotin <sup>1</sup> ; N. Heymans <sup>1</sup> ; S. Nandi <sup>2</sup> ; F. Nouar <sup>2</sup> ; G. Mouchaham <sup>2</sup> ; C. Serre <sup>2</sup> ; G. De Weireld <sup>1</sup> ; <sup>1</sup> Université De Mons, Mons/B; <sup>2</sup> Institut des Matériaux Poreux de Paris, ENS, ESPCI, PSL University, Paris/F
10:35	<b>Adsorption Processes for Monomer Recovery from Industrial Vent Gases in MIL-100(Fe)</b> P. Carmo <sup>1</sup> ; A. Ribeiro <sup>1</sup> ; A. Rodrigues <sup>1</sup> ; A. Ferreira <sup>1</sup> ; <sup>1</sup> Faculdade de Engenharia - Universidade do Porto, Porto/P
10:50	<b>Deploying metal-organic frameworks in commercial products: Challenges, lessons learned, and future opportunities</b> W. Morris <sup>1</sup> ; <sup>1</sup> NuMat Technologies, Skokie/USA
11:05	Coffee Break

Room: Hall 4

## Advanced Characterisation

Chair: V. Bon, TU Dresden, Dresden/D

11:35	<b>KEYNOTE LECTURE</b> <b>X-ray 'eyes' for the description of unprecedented details in MOFs adsorption and catalytic processes</b> V. Colombo <sup>1</sup> ; <sup>1</sup> Università degli Studi di Milano, Milano/I
12:05	<b>Elucidation of CO<sub>2</sub> adsorption process in multivariate bis-pyrazolate based Fe(III) MOFs through HR-PXRD</b> S. Terruzzi <sup>1</sup> ; R. Vismara <sup>2</sup> ; T. Grell <sup>1</sup> ; S. Galli <sup>2</sup> ; J. Navarro <sup>3</sup> ; V. Colombo <sup>1</sup> ; <sup>1</sup> Università degli Studi di Milano, Milano/I; <sup>2</sup> Dipartimento di Scienza e Alta Tecnologia, Università dell'Insubria, Como/I; <sup>3</sup> Universidad de Granada, Granada/E
12:20	<b>Unravelling the Fundamental Mechanical Properties of 3D MOF Crystals and 2D Nanosheets Beyond the Elastic Limits</b> J. Tan <sup>1</sup> ; <sup>1</sup> University of Oxford, Oxford/UK
12:35	<b>Catching the Reversible Formation and Reactivity of Surface Defective Sites in HKUST-1 by means of In situ AP-NEXAFS</b> L. Braglia <sup>1</sup> ; F. Tavani <sup>2</sup> ; S. Mauri <sup>1</sup> ; E. Raju <sup>3</sup> ; A. Tofoni <sup>2</sup> ; V. Colombo <sup>4</sup> ; P. D'Angelo <sup>2</sup> ; P. Torelli <sup>1</sup> ; <sup>1</sup> CNR-IOM, Basovizza (Trieste)/I; <sup>2</sup> Università di Roma "La Sapienza", Rome/I; <sup>3</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe/D; <sup>4</sup> Università degli Studi di Milano, Milano/I
12:50	Lunch, Poster & Exhibiton

## PROGRAMME

Tuesday, 6 September 2022

Room: Hall 4

## Life Science

Chair: P. Horcajada, IMDEA Energy Institute, Móstoles/E

14:00	<b>Biohybrid MOFs: boosting the delivery of active bioentities</b> M. Giménez-Marqués <sup>1</sup> ; K. Caamaño <sup>1</sup> ; J. Cases Díaz <sup>1</sup> ; B. Lozano-Torres <sup>1</sup> ; <sup>1</sup> Instituto de Ciencia Molecular (ICMol), Universitat de Valencia, Paterna/E
14:15	<b>Metal-organic frameworks for application in magnetic resonance imaging</b> H. Bunzen <sup>1</sup> ; D. Jirak <sup>2</sup> ; <sup>1</sup> Universität Augsburg, Augsburg/D; <sup>2</sup> Institute for Clinical and Experimental Medicine, Prague/CZ
14:30	<b>Optimizing MOF-Based Drug Delivery Through Novel Synthetic and Analytical Techniques</b> R. Forgan <sup>1</sup> ; <sup>1</sup> University of Glasgow, Glasgow/UK
14:45	<b>Governing the intestinal crossing of Metal-Organic Frameworks: an ex vivo &amp; in vivo study</b> S. Rojas <sup>1</sup> ; T. Hidalgo <sup>2</sup> ; Z. Luo <sup>3</sup> ; D. Ávila <sup>4</sup> ; A. Laromaine <sup>3</sup> ; P. Horcajada <sup>5</sup> ; <sup>1</sup> Univ. of Granada / IMDEA Energy Institute, Granada / Móstoles-Madrid/E; <sup>2</sup> IMDEA Energy, Móstoles, Madrid, Spain/E; <sup>3</sup> Institut de Ciència de Materials de Barcelona, Barcelona/E; <sup>4</sup> Complutense Univ. of Madrid, Madrid/E; <sup>5</sup> IMDEA Energy Institute, Móstoles-Madrid/E
15:00	<b>Biocompatible Metal-Organic Frameworks for the Storage and Therapeutic Delivery of Hydrogen Sulfide</b> R. Mandel <sup>1</sup> ; F. Chen <sup>1</sup> ; J. Woods <sup>1</sup> ; E. Chen <sup>1</sup> ; J. Lee <sup>2</sup> ; T. Runčevski <sup>3</sup> ; M. Keane <sup>1</sup> ; P. Lotlikar <sup>1</sup> ; J. Kim <sup>1</sup> ; J. Hsu <sup>1</sup> ; J. Fuentes-Rivera <sup>1</sup> ; J. Wilson <sup>1</sup> ; P. Milner <sup>1</sup> ; <sup>1</sup> Cornell University, Ithaca/USA; <sup>2</sup> Korea Institute of Science and Technology (KIST), Seoul /ROK; <sup>3</sup> Southern Methodist University, University Park/USA
15:10	<b>NUIG MOFs: A Family of MOFs with Extraordinary Drug Delivery Properties</b> C. Papatriantafyllou <sup>1</sup> ; <sup>1</sup> National University of Ireland Galway, Galway/IRL
15:20	Coffee Break

Room: Large Hall

Chair: H. Bunzen, University of Augsburg/D

15:50	<b>PLENARY LECTURE</b> <b>Engineering MOF functionality using high-throughput data and computational modeling</b> L. Gagliardi <sup>1</sup> ; <sup>1</sup> University of Chicago, Chicago/USA
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Room: Hall 4

## Porous Molecular Solids, Molecular Cages

Chair: A. Evans, University of Florida, Gainesville/USA

16:45	<b>Metal-organic cage assemblies for gel engineering</b> Z. Wang <sup>1</sup> ; A. Legrand <sup>1</sup> ; M. Tsang <sup>1</sup> ; E. Sanchez-Gonzalez <sup>1</sup> ; J. Troyano <sup>1</sup> ; S. Furukawa <sup>1</sup> ; <sup>1</sup> Kyoto University, Kyoto/J
17:00	<b>Zr-Based Metal-Organic Polyhedra as Advanced Functional Porous Platform</b> D. Nam <sup>1</sup> ; J. Kim <sup>1</sup> ; E. Hwang <sup>1</sup> ; J. Nam <sup>1</sup> ; H. Jeong <sup>1</sup> ; T. Kwon <sup>1</sup> ; W. Choe <sup>1</sup> ; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
17:15	<b>Coordination-Cage-Based Supramolecular Frameworks for Efficient Enantioseparation</b> K. Wang <sup>1</sup> ; H. Zhou <sup>1</sup> ; <sup>1</sup> Texas A&M University College Station/USA
17:30	<b>Surface Functionalization and Assembly of Rh(II)-based Metal-Organic Polyhedra (MOPs)</b> A. Carne Sanchez <sup>1</sup> ; L. Hernández-López <sup>2</sup> ; A. Khabotov <sup>2</sup> ; I. Imaz <sup>2</sup> ; S. Furukawa <sup>3</sup> ; D. Maspoch <sup>2</sup> ; <sup>1</sup> ICN2 - Institut Català de Nanociència i Nanotecnologia / Consejo Superior de Investigaciones Científicas (CSIC), Barcelona/E; <sup>2</sup> ICN2 - Institut Català de Nanociència i Nanotecnologia / Consejo Superior de Investigaciones Científicas (CSIC), Barcelona/E; <sup>3</sup> iCeMS, Kyoto University, Kyoto/J
17:45	<b>Stimuli-responsive gelation of linked metal-organic cages using pH and light</b> A. Legrand <sup>1</sup> ; S. Furukawa <sup>1</sup> ; <sup>1</sup> Kyoto University, Kyoto/J

Room: Exhibition Area

18:00	Poster Party II
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Room: Terrace Floor

20:00 MOF2022 PARTY (20:00-23:00)

## Tuesday, 6 September 2022

Room: Large Hall

Chair: F.-X. Coudert, PSL Research University - CNRS - Institut de Recherche de Chimie, Paris/F

09:00	<b>PLENARY LECTURE</b> <b>The Impacts of Advanced Electron Diffraction Techniques for Structural Elucidation of Metal-Organic Frameworks and Covalent Organic Frameworks</b> X. Zou, Stockholm University, Stockholm/S
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Room: Hall 5

## Modelling and Simulation at all Levels

Chair: R. Snurr; Northwestern University, Evanston/USA

09:50	<b>Systematic exploration of framework materials properties: combining multi-scale modelling and machine learning</b> F. Coudert <sup>1</sup> ; <sup>1</sup> PSL University / CNRS, Paris/F
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10:05	<b>Instilling flexibility in rigid MOFs through strain field engineering: A case study on crumple zones to relieve stress in UiO-66</b> S. Rogge <sup>1</sup> ; S. Borgmans <sup>1</sup> ; V. Van Speybroeck <sup>1</sup> ; <sup>1</sup> Ghent University, Zwijnaarde/B
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10:20	<b>Beyond IAST- Predicting Adsorption Selectivities for Mixtures from Pure Gas Isotherms</b> J. Sauer <sup>1</sup> ; A. Kundu <sup>1</sup> ; K. Sillar <sup>2</sup> ; <sup>1</sup> Humboldt Universität zu Berlin, Berlin/D; <sup>2</sup> University of Tartu, Tartu/EST
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10:35	<b>KEYNOTE LECTURE</b> <b>Computational Modeling of MOFs: From Design to Applications</b> S. Keskin <sup>1</sup> ; <sup>1</sup> Koç University, Istanbul/TR (Online Lecture)
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11:05	Coffee Break
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Room: Hall 5

## Modelling and High Throughput Screening

Chair: J. Evans, The University of Adelaide, Adelaide, AUS

11:35	<b>Towards modeling spatiotemporal processes in metal-organic frameworks</b> V. Van Speybroeck <sup>1</sup> ; <sup>1</sup> Ghent University, Zwijnaarde/B
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11:50	<b>Towards the Structure-Diffusivity Correlation in Zeolitic-Imidazolate Frameworks (ZIFs) with a Data Mining Strategy</b> P. Krokidas <sup>1</sup> ; S. Karozis <sup>1</sup> ; S. Moncho <sup>2</sup> ; G. Giannakopoulos <sup>1</sup> ; E. Brothers <sup>2</sup> ; M. Kainourgiakis <sup>1</sup> ; I. Economou <sup>2</sup> ; T. Steriotis <sup>1</sup> ; <sup>1</sup> National Centre for Scientific Research „Demokritos“, Agia Paraskevi, Athens/GR; <sup>2</sup> Texas A&M University at Qatar, Doha/Q
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12:05	<b>Accelerating the Discovery of MOFs with Targeted Band Gaps and Other Properties using Open Databases, Cheminformatics, and Data Science</b> A. Rosen <sup>1</sup> ; B. Bucior <sup>1</sup> ; N. Bobbitt <sup>1</sup> ; K. Shi <sup>1</sup> ; J. Notestein <sup>1</sup> ; R. Snurr <sup>1</sup> ; <sup>1</sup> Northwestern University, Evanston/USA
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12:20	<b>On the Exceptional Negative Compressibility of Zeolitic Imidazolate Frameworks (ZIFs) and Potential Applications</b> J. Littlefair <sup>1</sup> ; M. Tortora <sup>2</sup> ; P. Zajdel <sup>3</sup> ; A. Lowe <sup>4</sup> ; M. Chorążewski <sup>4</sup> ; J. Leão <sup>5</sup> ; G. Jensen <sup>5</sup> ; M. Bleuel <sup>5</sup> ; A. Giacomello <sup>2</sup> ; C. Casciola <sup>2</sup> ; S. Meloni <sup>1</sup> ; Y. Grosu <sup>6</sup> ; <sup>1</sup> University of Ferrara, Ferrara/I; <sup>2</sup> Sapienza University of Rome, Rome/I; <sup>3</sup> University of Silesia, Chorzów/PL; <sup>4</sup> University of Silesia, Katowice/PL; <sup>5</sup> NIST Center for Neutron Research, Gaithersburg/USA; <sup>6</sup> CIC energiGUNE, Vitoria-Gasteiz/E
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12:35	<b>Microscopic origins of the xenon/krypton separation in MOFs</b> E. Ren <sup>1</sup> ; F.-X. Coudert <sup>2</sup> ; P. Guilbaud <sup>3</sup> ; <sup>1</sup> CEA, DES, ISEC, DMRC, Univ. Montpellier - Institut de Recherche de Chimie Paris, Paris/FR; <sup>2</sup> Chimie ParisTech - PSL Research University - CNRS - Institut de Recherche de Chimie Paris, Paris/FR; <sup>3</sup> CEA, DES, ISEC, DMRC, University of Montpellier, Paris/FR
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12:50	Lunch, Poster & Exhibiton
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## Tuesday, 6 September 2022

Room: Hall 5

## Switchability and Dynamics of functional flexible Metal-Organic Frameworks (ERC Amplipore Symposium)

Chair: S. Kaskel, TU Dresden, Dresden/D

14:00	<b>[2]Catenane-based flexible porous crystals</b> H. Sato <sup>1</sup> ; <sup>1</sup> RIKEN Center for Emergent Matter Science, Wako-shi, Saitama/J
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14:15	<b>Discovery of Spontaneous De-Interpenetration Through Charged Point-Point Repulsions</b> S. Hanna <sup>1</sup> ; <sup>1</sup> Northwestern University, Evanston/USA
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14:30	<b>Pore dynamics via framework-embedded molecular motors</b> S. Krause <sup>1</sup> ; <sup>1</sup> Max-Planck-Institute for Solid State Research, Stuttgart/D
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14:45	<b>Lessons from searching porous materials for isotope-selective hydrogen separation and future opportunities for flexible adsorbents</b> J. Evans <sup>1</sup> ; <sup>1</sup> The University of Adelaide, Adelaide/AUS
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15:00	<b>Exploring the phase stability in interpenetrated diamondoid covalent organic frameworks</b> S. Borgmans <sup>1</sup> ; S. Rogge <sup>1</sup> ; J. De Vos <sup>1</sup> ; V. Van Speybroeck <sup>1</sup> ; <sup>1</sup> Ghent University, Zwijnaarde/B
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15:10	<b>Photoswitchable MOF Composites for Smart Glass Applications</b> S. Mollick <sup>1</sup> ; <sup>1</sup> University of Oxford, Oxford/UK
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15:20	Coffee Break
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Room: Large Hall

Chair: H. Bunzen, University of Augsburg/D

15:50	<b>PLENARY LECTURE</b> <b>Engineering MOF functionality using high-throughput data and computational modeling</b> L. Gagliardi <sup>1</sup> ; <sup>1</sup> University of Chicago, Chicago/USA
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Room: Hall 5

## New Materials and Characterisation

Chair: V. Colombo, Università degli Studi di Milano, Milano/I

16:45	<b>Chemically robust metal-organic framework-based materials for electrochemical applications</b> T. Chang <sup>1</sup> ; W. Ho <sup>1</sup> ; C. Shen <sup>1</sup> ; C. Kung <sup>1</sup> ; <sup>1</sup> National Cheng Kung University, Tainan/RC
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17:00	<b>Is hydrophobicity a prerequisite for the capture of Volatile Organic Compounds?</b> C. Serre <sup>1</sup> ; <sup>1</sup> Ecole Normale Supérieure, Paris/F
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17:15	<b>Hydrophobicity and dielectric properties across an isostructural family of MOFs: a duet or a duel?</b> S. Sorbara <sup>1</sup> ; S. Mukherjee <sup>2</sup> ; R. Fischer <sup>2</sup> ; P. Macchi <sup>1</sup> ; <sup>1</sup> Politecnico di Milano, Milano/I; <sup>2</sup> Technical University of Munich, Munich/D
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17:30	<b>Unfolding the terahertz spectrum of soft porous crystals: rigid unit modes and their impact on phonon properties</b> A. Hoffman <sup>1</sup> ; J. Wieme <sup>1</sup> ; I. Senkowska <sup>2</sup> ; A. Krylov <sup>3</sup> ; S. Kaskel <sup>2</sup> ; V. Van Speybroeck <sup>1</sup> ; <sup>1</sup> Ghent University, Zwijnaarde/B; <sup>2</sup> Dresden University of Technology, Dresden/D; <sup>3</sup> Federal Research Center KSC SB RAS, Krasnoyarsk/RUS
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17:45	<b>Solid-State NMR Investigation of Mixed-Metal (Al,Ga)-MIL-53</b> Z. Davis <sup>1</sup> ; E. Borthwick <sup>1</sup> ; C. Rice <sup>1</sup> ; G. Bignami <sup>1</sup> ; R. Morris <sup>1</sup> ; S. Ashbrook <sup>1</sup> ; <sup>1</sup> University of St Andrews, St Andrews/UK
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Room: Exhibition Area

18:00	Poster Party II
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Room: Terrace Floor

20:00	MOF2022 PARTY (20:00-23:00)
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## Tuesday, 6 September 2022

Room: Large Hall

Chair: F.-X. Coudert, PSL Research University - CNRS - Institut de Recherche de Chimie, Paris/F

09:00	<b>PLENARY LECTURE</b> <b>The Impacts of Advanced Electron Diffraction Techniques for Structural Elucidation of Metal-Organic Frameworks and Covalent Organic Frameworks</b> X. Zou, Stockholm University, Stockholm/S
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Room: Conference 1 (4<sup>th</sup> Floor)

## Catalysis

Chair: L. Macreadie, University of Sydney, Sydney/AUS

09:50	<b>Molecular catalyst metal-organic framework nanoreactors for solar fuel production</b> P. Stanley <sup>1</sup> ; B. Rieger <sup>1</sup> ; J. Warnan <sup>1</sup> ; R. Fischer <sup>1</sup> ; <sup>1</sup> Technical University Munich, Garching/D
10:05	<b>Redox Hopping Water Oxidation Catalysis by Metal Organic Frameworks</b> A. Morris <sup>1</sup> ; <sup>1</sup> Virginia Tech, Blacksburg, VA, USA/USA
10:20	<b>Prediction of superior enantioselectivity within a MOF</b> J. Canivet <sup>1</sup> ; <sup>1</sup> Université Claude Bernard Lyon, Villeurbanne/F
10:35	<b>Finding the Sweet Spot of Photocatalysis – Case Studies using Covalent Triazine Frameworks</b> F. Wisser <sup>1</sup> ; <sup>1</sup> Universität Regensburg, Regensburg/D
10:50	<b>Carbon dioxide utilisation using chemical and biological catalysts confined in MOF cages</b> G. Mehlana <sup>1</sup> ; <sup>1</sup> Midlands State University, Gweru/ZW
11:05	Coffee Break

Room: Conference 1 (4<sup>th</sup> Floor)

## Nanomaterials, Nanocomposites

Chair: C. Doonan, The University of Adelaide, Adelaide/AUS

11:35	<b>Using Nanoconfinement to Alter Thermodynamics and Kinetics of Metastable Metal Hydrides</b> M. Allendorf <sup>1</sup> ; V. Stavila <sup>2</sup> ; B. Lotsch <sup>3</sup> ; Y. Cho <sup>4</sup> ; E. Cho <sup>4</sup> ; B. Wood <sup>5</sup> ; A. Schneemann <sup>6</sup> ; <sup>1</sup> Sandia National Laboratories, Livermore, CA/USA; <sup>2</sup> Sandia National Laboratories, Livermore/USA; <sup>3</sup> Max-Planck-Institut für Festkörperforschung, Stuttgart/D; <sup>4</sup> Korea Advanced Institute of Science and Technology, Daejeon/ROK; <sup>5</sup> Lawrence Livermore National Laboratory, Livermore/USA; <sup>6</sup> Technische Universität Dresden, Dresden/D
11:50	<b>Metal-organic framework crystal - inorganic glass composites</b> C. Castillo Blas <sup>1</sup> ; <sup>1</sup> University of Cambridge, Department of Material Science & Metallurgy, Cambridge/UK
12:05	<b>Design of MOF/gelatin hydrogel composites mediated by coacervation process for the capture of volatile organic compounds</b> S. Biswas <sup>1</sup> ; M. Haouas <sup>1</sup> ; A. Saad <sup>1</sup> ; C. Livage <sup>1</sup> ; C. Sicard <sup>1</sup> ; E. Dumas <sup>1</sup> ; N. Steunou <sup>1</sup> ; C. Freitas <sup>2</sup> ; A. Al Mohtar <sup>2</sup> ; M. Pinto <sup>2</sup> ; <sup>1</sup> Institut Lavoisier de Versailles, UVSQ, Versailles/F; <sup>2</sup> Instituto Superior Técnico, Universidade de Lisboa/P
12:20	<b>Synthesis and Characterisation of Zeolite-MOF-Hybrid Materials</b> P. Netzsch <sup>1</sup> ; R. Ettliger <sup>1</sup> ; R. Morris <sup>1</sup> ; <sup>1</sup> University of St Andrews, St Andrews/UK
12:35	<b>Growth of redox-active cerium-based metal-organic framework nanocrystals on carbon nanotubes for electrochemical charge storage</b> C. Shen <sup>1</sup> ; C. Chuang <sup>1</sup> ; Y. Gu <sup>1</sup> ; W. Ho <sup>1</sup> ; Y. Song <sup>1</sup> ; Y. Chen <sup>1</sup> ; Y. Wang <sup>1</sup> ; C. Kung <sup>1</sup> ; <sup>1</sup> National Cheng Kung University, Tainan City, Taiwan/RC
12:50	Lunch, Poster & Exhibiton

## Tuesday, 6 September 2022

Room: Conference 1 (4<sup>th</sup> Floor)

## Catalysis

Chair: L. Gagliardi, University of Chicago, Chicago/USA

14:00	<b>Challenges in the development of bioinspired copper-incorporated Zr-MOFs toward catalysis</b> E. Aunan <sup>1</sup> ; G. Deplano <sup>2</sup> ; M. Signorile <sup>2</sup> ; S. Bordiga <sup>2</sup> ; U. Olsbye <sup>1</sup> ; K. Lillerud <sup>1</sup> ; <sup>1</sup> University of Oslo/N; <sup>2</sup> University of Turin/I
14:15	<b>Heterogeneously catalyzed electrophilic amination of simple arenes: a comparison of catalyst supports</b> L. Van Emelen <sup>1</sup> ; N. Van Velthoven <sup>1</sup> ; V. Lemmens <sup>1</sup> ; A. Bugaev <sup>2</sup> ; O. Usoltsev <sup>2</sup> ; S. Smolders <sup>1</sup> ; D. De Vos <sup>1</sup> ; <sup>1</sup> KU Leuven, Centre for Membrane Separations, Adsorption, Catalysis and Spectroscopy for Sustainable Solutions, Leuven/B; <sup>2</sup> The Smart Materials Research Institute, Rostov-on-Don/RUS
14:30	<b>Conversion of levulinic acid into chemicals: Highly selective direct ketalization over UiO-66</b> A. Rapeyko <sup>1</sup> ; M. Ródenas <sup>1</sup> ; F. Llabrés i Xamena <sup>1</sup> ; <sup>1</sup> Consejo Superior de Investigaciones Científicas, Universitat Politècnica de València, Valencia/E
14:45	<b>Highly-active immobilized catalysts for reversible hydrogen storage in polyalcohols</b> V. Stavila <sup>1</sup> ; <sup>1</sup> Sandia National Laboratories, Livermore, CA/USA
15:00	<b>Understanding the Conversion of Alkali-treated Metal Organic Frameworks for Electrocatalytic Oxygen Evolution Reaction</b> X. Ma <sup>1</sup> ; J. Warnan <sup>2</sup> ; R. Fischer <sup>2</sup> ; <sup>1</sup> Technical University of Munich, Muechen/D; <sup>2</sup> Technical of university of Munich, Muechen/D
15:10	<b>Ru-Polyphosphines as Catalysts for base-free CO<sub>2</sub> Activation</b> J. Baums <sup>1</sup> ; P. Hausoul <sup>1</sup> ; R. Palkovits <sup>1</sup> ; <sup>1</sup> RWTH Aachen University, Aachen/D
15:20	Coffee Break

Room: Large Hall

Chair: H. Bunzen, University of Augsburg/D

15:50	<b>PLENARY LECTURE</b> <b>Engineering MOF functionality using high-throughput data and computational modeling</b> L. Gagliardi <sup>1</sup> ; <sup>1</sup> University of Chicago, Chicago/USA
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Room: Conference 1 (4<sup>th</sup> Floor)

## Covalent Organic Frameworks and Beyond

Chair:

16:45	<b>Optoelectronic Processes in Covalent Organic Frameworks</b> T. Bein <sup>1</sup> ; <sup>1</sup> Ludwig-Maximilians-Universität München, München/D
17:00	<b>Acridine-Functionalized Covalent Organic Frameworks (COFs) as Photocatalysts for Metallaphotocatalytic C–N Cross-Coupling</b> M. Traxler <sup>1</sup> ; S. Gisbertz <sup>2</sup> ; P. Pachfule <sup>1</sup> ; S. Reischauer <sup>2</sup> ; J. Schmidt <sup>1</sup> ; J. Roeser <sup>1</sup> ; J. Rabeah <sup>3</sup> ; B. Pieber <sup>2</sup> ; A. Thomas <sup>1</sup> ; <sup>1</sup> TU Berlin/D; <sup>2</sup> Max Planck Institute for Colloids and Interfaces, Potsdam/D; <sup>3</sup> Leibniz Institut für Katalyse e.V., Rostock/D
17:15	<b>Self-assembling, modifiable, two-dimensional covalent organic frameworks enabling functional group modification and their applications.</b> K. Kirkham <sup>1</sup> ; E. Fretland <sup>1</sup> ; B. Parkinson <sup>1</sup> ; J. Hoberg <sup>2</sup> ; <sup>1</sup> University of Wyoming, Laramie/USA; <sup>2</sup> University of Wyoming, Laramie, Wy/USA
17:30	<b>Chemically stable carbazole-based imine Covalent Organic Frameworks with acidochromic response for humidity control applications</b> L. Gilmanova <sup>1</sup> ; V. Bon <sup>1</sup> ; S. Kaskel <sup>1</sup> ; <sup>1</sup> Technische Universität Dresden, Dresden/D
17:45	<b>Functionalized Covalent Organic Frameworks (COFs) for Photocatalytic Hydrogen Generation</b> P. Pachfule <sup>1,2</sup> ; L. Sagurna <sup>2</sup> ; J. Roeser <sup>2</sup> ; M. Traxler <sup>2</sup> ; A. Thomas <sup>2</sup> ; <sup>1</sup> Department of chemical, biological & macro-molecular sciences, S. N. Bose National Centre for Basic Sciences, Kolkata/IND; <sup>2</sup> Department of chemistry and functional Materials, Technical University Berlin/D

Room: Exhibition Area

18:00	Poster Party II
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Room: Terrace Floor

20:00 MOF2022 PARTY (20:00-23:00)

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## PROGRAMME

## Wednesday, 7 September 2022

Room: Large Hall

Chair: W. Queen, École Polytechnique Fédéral de Lausanne (EPFL), Lausanne/CH

09:00	<b>PLENARY LECTURE</b> <b>Looking Beyond Crystallinity in Metal-Organic Frameworks</b> T. Bennett <sup>1</sup> ; <sup>1</sup> University of Cambridge, Cambridge/UK
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Room: Large Hall

## Surfaces and Life Science

Chair: R. Forgan, University of Glasgow, Glasgow/UK

09:50	<b>KEYNOTE LECTURE</b> <b>The beauty of non-crystallinity and disorder: Challenges and opportunities for MOFs</b> S. Henke <sup>1</sup> ; <sup>1</sup> TU Dortmund, Dortmund/D
10:20	<b>Adsorption and photodegradation of pharmaceutical pollutants by a robust and plant-derived zirconium MOF</b> E. Svensson Grape <sup>1</sup> ; A. Chacón <sup>2</sup> ; A. Jaworski <sup>1</sup> ; M. Nero <sup>1</sup> ; S. Rojas <sup>2</sup> ; T. Willhammar <sup>1</sup> ; P. Horcajada <sup>2</sup> ; A. Inge <sup>1</sup> ; <sup>1</sup> Stockholm University, Stockholm/S; <sup>2</sup> IMDEA Energy, Madrid/E
10:35	<b>PCL-MOF composites with improved nitric oxide delivery and stability</b> M. Luzia Pinto <sup>1</sup> ; <sup>1</sup> Instituto Superior Tecnico, Lisbon/P
10:50	<b>Use of Zeolitic Imidazolate Frameworks for Mechanical Protection of Liposomes for Application in Biolistic Delivery of Vaccines</b> S. Kumari <sup>1</sup> ; Y. Wijesundara <sup>1</sup> ; F. Castro <sup>1</sup> ; T. Howlett <sup>1</sup> ; I. Trashi <sup>1</sup> ; J. Gassensmith <sup>1</sup> ; <sup>1</sup> University of Texas at Dallas, Richardson/USA

11:05 Coffee Break

Room: Large Hall

## Metal-Organic Frameworks

Chair: C. Serre, Ecole Normale Supérieure, Paris/F

11:35	<b>KEYNOTE LECTURE</b> <b>Metal-catecholate Frameworks — Structure and Properties</b> D. Medina <sup>1</sup> ; <sup>1</sup> LMU München, Munich/D
12:05	<b>Exploring the Complex Structural Landscape and Potential Applications of Rare-Earth Metal–Organic Frameworks</b> A. Howarth <sup>1</sup> ; V. Quezada-Novoa <sup>1</sup> ; H. Titi <sup>2</sup> ; <sup>1</sup> Concordia University, Montreal/CDN; <sup>2</sup> McGill University, Montreal/CDN
12:20	<b>Ionothermal synthesis of MOFs in deep eutectic solvents</b> R. Maia <sup>1</sup> ; M. Teixeira <sup>1</sup> ; B. Louis <sup>2</sup> ; S. Baudron <sup>1</sup> ; <sup>1</sup> UMR 7140 University of Strasbourg - CNRS, Strasbourg/F; <sup>2</sup> ICPEES (CNRS UMR 7515 / University of Strasbourg), Strasbourg/F
12:35	<b>Dean flow impact on microfluidic synthesis: the case study of ZIF-8</b> J. Andreo <sup>1</sup> ; X. Yu <sup>1</sup> ; T. Burg <sup>2</sup> ; S. Wuttke <sup>1</sup> ; <sup>1</sup> BCMaterials, Leioa/E; <sup>2</sup> T.U. Darmstadt, Darmstadt/D
12:45	<b>Pd/(Fe<sub>3</sub>O<sub>4</sub>)-on-nanoZIFs from ionic liquids: a synthetic paradigm for metal nanoparticles on nanoparticulated MOF composites</b> O. Koikolainen <sup>1</sup> ; L. Sondermann <sup>2</sup> ; I. Boldog <sup>2</sup> ; C. Janiak <sup>2</sup> ; <sup>1</sup> Institut für Anorganische Chemie und Strukturchemie, Düsseldorf/D; <sup>2</sup> Heinrich-Heine-Universität Düsseldorf/D

Room: Large Hall

Chair: S. Kaskel, TU Dresden, Dresden/D

13:00	<b>Announcement of MOF 2024</b>
13:15	<b>Poster Awards Ceremony</b>

Chair: K. Ozdemir, framergy Inc., College Station/USA

13:25	<b>PLENARY LECTURE</b> <b>Prospects for Porous Coordination Polymers/Metal-Organic Frameworks as a Soft Porous Crystal</b> S. Kitagawa <sup>1</sup> ; <sup>1</sup> Kyoto University, Kyoto/J
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14:10 Closing Remarks

## PROGRAMME

## Wednesday, 7 September 2022

Room: Large Hall

Chair: W. Queen, École Polytechnique Fédéral de Lausanne (EPFL), Lausanne/CH

09:00	<b>PLENARY LECTURE</b> <b>Looking Beyond Crystallinity in Metal-Organic Frameworks</b> T. Bennett <sup>1</sup> ; <sup>1</sup> University of Cambridge, Cambridge/UK
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Room: Hall 4

Flexible Metal Organic Frameworks:  
Understanding, Characterization, and Application (FOR2433 Symposium)

Chair: T. Uemura, The University of Tokyo, Tokyo/J

09:50	<b>Simulation of MOF Nanocrystallites: Understanding Phase Transitions of Flexible MOFs</b> L. Schaper <sup>1</sup> ; R. Schmid <sup>1</sup> ; <sup>1</sup> Ruhr Universität Bochum, Bochum/D
10:05	<b>Switchability and related phenomena in DUT-8 MOFs</b> I. Senkovska <sup>1</sup> ; L. Abylgazina <sup>1</sup> ; S. Ehrling <sup>1</sup> ; M. Maliuta <sup>1</sup> ; V. Romaka <sup>1</sup> ; V. Bon <sup>1</sup> ; S. Kaskel <sup>1</sup> ; <sup>1</sup> Technische Universität Dresden/D
10:20	<b>Mechanistic understanding of flexible platform JUK-8: potential applications and chemical control of properties</b> K. Roztocki <sup>1</sup> ; <sup>1</sup> Adam Mickiewicz University, Poznań/PL
10:35	<b>Rapid structural transformation and modification as superhydrophobic MOF with mesopore and high surface area</b> C. Lin <sup>1</sup> ; <sup>1</sup> National Taiwan Normal University, Taipei City/RC
10:50	<b>Memory Nanodevice Based on Zn-MOF-74: A Molecular Dynamics Study</b> M. Suyetin <sup>1</sup> ; <sup>1</sup> Karlsruhe Institute of Technology, Institute of Nanotechnology, Karlsruhe/D

11:05 Coffee Break

Room: Hall 4

## Conductivity

Chair: S. Furukawa, Kyoto University, Kyoto/J

11:35	<b>Conjugated metal–organic nanostructures: Exploring new dimensions</b> D. Xiao <sup>1</sup> ; <sup>1</sup> University of Washington, Seattle, WA/USA
11:50	<b>Investigating the impact of linker length on the thermal conductivity in metal-organic frameworks</b> S. Wieser <sup>1</sup> ; T. Kamencek <sup>1</sup> ; R. Schmid <sup>2</sup> ; N. Bedoya-Martínez <sup>3</sup> ; E. Zojer <sup>1</sup> ; <sup>1</sup> Graz University of Technology, Graz/A; <sup>2</sup> Ruhr Universität Bochum, Bochum/D; <sup>3</sup> Materials Center Leoben, Leoben/A
12:05	<b>Topological Charge Carriers in Stacked Metal-Organic Frameworks</b> M. Goesten <sup>1</sup> ; L. Schoop <sup>2</sup> ; <sup>1</sup> Aarhus University, Aarhus/DK; <sup>2</sup> Princeton University, Princeton/USA
12:20	<b>Anisotropic in-plane thermal conductivity of free-standing metal organic framework oriented film</b> K. Okada <sup>1</sup> ; S. Hirouchi <sup>1</sup> ; S. Kawahara <sup>1</sup> ; A. Fukatsu <sup>1</sup> ; M. Takahashi <sup>1</sup> ; <sup>1</sup> Osaka Prefecture University, Osaka/J
12:35	<b>Temperature Dependent Conductive AFM Investigations on Various Paddle-Wheel-SBU Containing MOF Materials</b> F. Mertens <sup>1</sup> ; D. Steinbach <sup>1</sup> ; S. Gersdorf <sup>1</sup> ; A. Lißner <sup>1</sup> ; B. Störr <sup>1</sup> ; <sup>1</sup> Technische Universität Bergakademie Freiberg, Freiberg/D
12:45	<b>Promising MOF based electrolytes for proton exchange membrane fuel cells</b> C. Biglione <sup>1</sup> ; P. Salcedo-Abraira <sup>1</sup> ; T. Perez Prior <sup>2</sup> ; N. Ureña <sup>2</sup> ; F. Salles <sup>3</sup> ; A. Várez <sup>2</sup> ; P. Horcajada <sup>1</sup> ; <sup>1</sup> IMDEA Energy, Móstoles/E; <sup>2</sup> Universidad Carlos III de Madrid, Leganés/E; <sup>3</sup> Institut Charles Gerhardt Montpellier, Montpellier/F

Room: Large Hall

Chair: S. Kaskel, TU Dresden, Dresden/D

13:00	<b>Announcement of MOF 2024</b>
13:15	<b>Poster Awards Ceremony</b>

Chair: K. Ozdemir, framergy Inc., College Station/USA

13:25	<b>PLENARY LECTURE</b> <b>Prospects for Porous Coordination Polymers/Metal-Organic Frameworks as a Soft Porous Crystal</b> S. Kitagawa <sup>1</sup> ; <sup>1</sup> Kyoto University, Kyoto/J
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14:10 Closing Remarks

## PROGRAMME

## Wednesday, 7 September 2022

Room: Large Hall

Chair: W. Queen, École Polytechnique Fédéral de Lausanne (EPFL), Lausanne/CH

09:00	<b>PLENARY LECTURE</b> <b>Looking Beyond Crystallinity in Metal-Organic Frameworks</b> T. Bennett <sup>1</sup> ; <sup>1</sup> University of Cambridge, Cambridge/UK
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Room: Hall 5

## Energy Storage and Conversion

Chair: D. Zhao, National University of Singapore, Singapore/SGP

09:50	<b>Electronic properties of 2D conjugated metal-organic frameworks based on phthalocyanine fragments - first principle modeling.</b> P. Petkov <sup>1</sup> ; T. Heine <sup>2</sup> ; R. Dong <sup>2</sup> ; X. Feng <sup>2</sup> ; <sup>1</sup> University of Sofia, Sofia/BG; <sup>2</sup> TU Dresden, Dresden/D
10:05	<b>Improved performance of triboelectric nanogenerator by introducing ZIF-71 MOF as a hydrophobic filler material</b> J. Ye <sup>1</sup> ; J. Tan <sup>1</sup> ; <sup>1</sup> University of Oxford, Oxford/UK
10:20	<b>Metal Organic Frameworks for Carbon Dioxide Adsorbent in Lithium-Ion Battery</b> H. Ooe <sup>1</sup> ; <sup>1</sup> Murata Manufacturing Co., Ltd., Nagaokakyo-shi, Kyoto/J
10:35	<b>KEYNOTE LECTURE</b> <b>Exploring COFs for Lightweight and Fast Charging Storage</b> R. Vaidhyanathan <sup>1</sup> ; <sup>1</sup> Indian Institute of Science Education and Research PUNE, Pune/IND (Online Lecture)
11:05	Coffee Break

Room: Hall 5

## Novel Materials, Synthesis, Composites

Chair: T. Bennett; University of Cambridge, Cambridge/UK

11:35	<b>Merging Distorted Nanographenes and Framework Materials</b> A. Mateo-Alonso (Koke) <sup>1</sup> ; <sup>1</sup> POLYMAT, University of the Basque Country, San Sebastian /E
11:50	<b>Interfacial synthesis of 2D framework materials</b> R. Dong <sup>1</sup> ; <sup>1</sup> TU Dresden, Dresden/D
12:05	<b>Pre- and post-assembly functionalization of MOFs for proton conduction</b> D. Matoga <sup>1</sup> ; D. Jędrzejowski <sup>1</sup> ; M. Lupa <sup>1</sup> ; M. Szufła <sup>1</sup> ; <sup>1</sup> Jagiellonian University in Krakow, Kraków/PL
12:20	<b>Single-crystal to single-crystal transformations of MOF-supported, site-isolated trigonal planar Cu(I) complexes</b> J. Albalad <sup>1</sup> ; M. Huxley <sup>1</sup> ; R. Peralta <sup>1</sup> ; C. Sumbry <sup>1</sup> ; C. Doonan <sup>1</sup> ; <sup>1</sup> The University of Adelaide, Adelaide/AUS
12:35	<b>Pore selective post-synthetic functionalization of MOF linkers</b> C. Neumann <sup>1</sup> ; <sup>1</sup> Max-Planck Institut für Kohlenforschung, Mülheim/D
12:45	<b>Fast charge diffusion in new dual electrochromic perylene diimide based Zn-MOF thin films</b> V. Monnier <sup>1</sup> ; F. Odobel <sup>1</sup> ; S. Diring <sup>1</sup> ; <sup>1</sup> Nantes Université, Chimie Et Interdisciplinarité : Synthèse, Analyse, Modélisation – CEISAM, UMR CNRS 6230, 2 Chemin de la Houssinière, BP 92208, 44322 Nantes Cedex 3, Nantes/F

Room: Large Hall

Chair: S. Kaskel, TU Dresden, Dresden/D

13:00	Announcement of MOF 2024
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14:10 Closing Remarks

## PROGRAMME

## Wednesday, 7 September 2022

Room: Large Hall

Chair: W. Queen, École Polytechnique Fédéral de Lausanne (EPFL), Lausanne/CH

09:00	<b>PLENARY LECTURE</b> <b>Looking Beyond Crystallinity in Metal-Organic Frameworks</b> T. Bennett <sup>1</sup> ; <sup>1</sup> University of Cambridge, Cambridge/UK
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Room: Conference 1 (4<sup>th</sup> Floor)

## Simulation, Digitization and Machine Learning

Chair:

09:50	<b>Modification of the adsorption properties and the hydrophobic nature of MAF-6</b> S. Calero <sup>1</sup> ; J. Vicent-Luna <sup>1</sup> ; D. Dubbeldam <sup>2</sup> ; R. Madero-Castro <sup>3</sup> ; A. Martín-Calvo <sup>3</sup> ; J. Gutiérrez-Sevillano <sup>3</sup> ; <sup>1</sup> Eindhoven University of Technology, Eindhoven/NL; <sup>2</sup> University of Amsterdam, Amsterdam/NL; <sup>3</sup> University Pablo de Olavide, Seville/E
10:05	<b>A data-driven approach to predict thermal properties of nanoporous materials</b> S. Moosavi <sup>1</sup> ; <sup>1</sup> École Polytechnique Fédéral de Lausanne (EPFL), Sion/CH
10:20	<b>Visualising and Quantifying the Geometric Diversity in MOFs</b> T. Nicholas <sup>1</sup> ; E. Alexandrov <sup>2</sup> ; V. Blatov <sup>2</sup> ; A. Shevchenko <sup>2</sup> ; D. Proserpio <sup>3</sup> ; A. Goodwin <sup>1</sup> ; V. Deringer <sup>1</sup> ; <sup>1</sup> University of Oxford, Oxford/UK; <sup>2</sup> Samara State Technical University, Samara/RUS; <sup>3</sup> Università Degli Studi di Milano, Milano/I
10:35	<b>Navigating through digital reticular chemistry</b> K. Jablonka <sup>1</sup> ; B. Yoo <sup>2</sup> ; D. Ongari <sup>3</sup> ; S. Moosavi <sup>4</sup> ; B. Smit <sup>5</sup> ; <sup>1</sup> École Polytechnique Fédérale de Lausanne (EPFL), Sion/CH; <sup>2</sup> Fero labs, New York/USA; <sup>3</sup> SOLVAY, Milano/I; <sup>4</sup> FU Berlin, Berlin/D; <sup>5</sup> EPFL, Sion/CH
10:50	<b>Extrapolation in Machine Learning with Artificial MOFs</b> G. Froudakis <sup>1</sup> ; <sup>1</sup> University of Crete, Crete/GR
11:05	Coffee Break

Room: Conference 1 (4<sup>th</sup> Floor)

## MOF-derived Materials

Chair: A. Schneemann, TU Dresden, Dresden/D

11:35	<b>Applied Stimuli Responsive MOFs and MOF-derived Materials</b> A. Knebel <sup>1</sup> ; O. Smirnova <sup>1</sup> ; S. Savani <sup>1</sup> ; B. Hosseini Monjezi <sup>2</sup> ; V. Nozari <sup>1</sup> ; J. Caro <sup>3</sup> ; J. Gascon <sup>4</sup> ; C. Wöll <sup>5</sup> ; L. Wondraczek <sup>1</sup> ; <sup>1</sup> Friedrich Schiller University Jena, Otto Schott Institute of Materials Research, Jena/D; <sup>2</sup> Karlsruher Institut für Technologie (KIT) / Institute of Functional Interfaces, Eggenstein-Leopoldshafen/D; <sup>3</sup> Leibniz University Hanover, Institute for Physical Chemistry and Electrochemistry, Hannover/D; <sup>4</sup> King Abdullah University of Science and Technology (KAUST) / KAUST Catalysis Center, Thuwal/SAR; <sup>5</sup> Karlsruhe Institute of Technology (KIT) / Institute of Functional Interfaces, Eggenstein-Leopoldshafen/D
11:50	<b>Reactive Metal–Organic Framework/Textile Composites: Applications in the Degradation and Detection of Nerve Agents</b> M. de Koning <sup>1</sup> ; K. Ma <sup>2</sup> ; M. van Grol <sup>3</sup> ; I. Iordanov <sup>4</sup> ; M. Kruijne <sup>3</sup> ; K. Idrees <sup>2</sup> ; H. Xie <sup>2</sup> ; T. Islamoglu <sup>2</sup> ; R. Bross <sup>3</sup> ; O. Farha <sup>2</sup> ; <sup>1</sup> TNO, Rijswijk, The Netherlands, Rijswijk/NL; <sup>2</sup> Northwestern University, Evanston/USA; <sup>3</sup> TNO Defence, Safety & Security, Rijswijk/NL; <sup>4</sup> USARMY CCDC CBC, Aberdeen Proving Ground/USA
12:05	<b>Insights into the growth of Halide Perovskites from Metal-Organic Frameworks</b> H. Salway <sup>1</sup> ; <sup>1</sup> University of Cambridge, Cambridge/UK
12:20	<b>Catch it – Bind it – Deactivate it: MOF Composites as Active Personal Protective Equipment</b> R. Ettliger <sup>1</sup> ; L. Major <sup>1</sup> ; T. Smith <sup>1</sup> ; A. Naden <sup>1</sup> ; A. Kaiser <sup>2</sup> ; R. Morris <sup>1</sup> ; <sup>1</sup> University of St. Andrews, St Andrews/UK; <sup>2</sup> Technical University of Denmark, Kongens Lyngby/DK
12:35	<b>An Efficient Metal-Organic Framework - Derived Nickel Catalyst for the Light Driven Methanation of CO<sub>2</sub></b> L. Garzon-Tovar <sup>1</sup> ; I. Khan <sup>1</sup> ; D. Mateo <sup>1</sup> ; G. Shterk <sup>1</sup> ; T. Shoinkhorova <sup>1</sup> ; D. Poloneeva <sup>1</sup> ; J. Gascon <sup>1</sup> ; <sup>1</sup> King Abdullah University of Science and Technology (KAUST), Thuwal/SAR
12:45	<b>ZIF derived heterostructured electrode materials for PEM fuel cell applications</b> N. Iqbal <sup>1</sup> ; <sup>1</sup> National University of Sciences & Technology (NUST), Islamabad/PK

Room: Large Hall

Chair: S. Kaskel, TU Dresden, Dresden/D

13:00	Announcement of MOF 2024
13:15	Poster Awards Ceremony

Chair: K. Ozdemir, framergy Inc., College Station/USA

13:25	<b>PLENARY LECTURE</b> <b>Prospects for Porous Coordination Polymers/Metal-Organic Frameworks as a Soft Porous Crystal</b> S. Kitagawa <sup>1</sup> ; <sup>1</sup> Kyoto University, Kyoto/J
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14:10 Closing Remarks

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### ON-SITE TEAM MEMBER



**Kenji Sumida, Ph.D. MBA**  
 Chief Scientific Officer  
 +81 80 1987 7540  
 kenji.sumida@atomis.co.jp



## Metal Organic Frameworks

- A 1.11 **Improved photodegradation of anionic dyes using a complex graphitic carbon nitride and iron-based metal-organic framework material**  
H. Doan<sup>1</sup>; <sup>1</sup> University of Bristol, Bristol/UK
- A 1.12 **Opening the Black Box: Understanding the Self-Assembly of Metal-Organic Frameworks at High Concentrations**  
P. Milner<sup>1</sup>; <sup>1</sup> Cornell University, Ithaca/USA
- A 1.14 **High-throughput Computational Screening of MOFs, COFs, IL/MOF, and MOF/polymer Composites for CH<sub>4</sub>/N<sub>2</sub> Separation**  
H. Gulbalkan<sup>1</sup>; <sup>1</sup> Koç University, Istanbul/TR
- A 1.15 **Hydrophobicity and Vapour Adsorption Studies of Zeolitic Imidazolate Frameworks**  
R. Ahmad<sup>1</sup>; <sup>1</sup> Surface Measurement Systems, Alperon/UK
- A 1.16 **SIMOF-3: Controlling Access to the Internal Pore Environment via a Turnstile Type Mechanism**  
R. Main<sup>1</sup>; R. Morris<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- A 1.17 **Structural factors determining thermal stability limits of IL/MOF composites: effects of ligand functionalization on MOFs**  
O. Durak<sup>1</sup>; <sup>1</sup> Koc University, Istanbul /TR
- A 1.18 **Resistance of Polycrystalline Metal-Organic Framework Powders and Membranes in Organic Acids and Bases**  
Y. Duan<sup>1</sup>; D. Zhao<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP
- A 1.19 **Multifunctional Metal-Organic-Frameworks as filler for high performance PEO-based All-Solid-State battery**  
K. Jeong Jae<sup>1</sup>; Y. Won Seok<sup>2</sup>; A. Cheol Hyoun<sup>2</sup>; C. Hyung Koun<sup>2</sup>; <sup>1</sup> Sungkyunkwan Univ. (SKKU), Soowon city, Jangahn/ROK; <sup>2</sup> Sungkyunkwan Univ. (SKKU), Soowon city, Jangahn /ROK
- A 1.20 **Electrochemical analysis of TiO<sub>2</sub> embedded in carbon matrix derived from Ti-MOF as a anode in lithium-ion battery**  
W. Yang<sup>1</sup>; C. Ahn<sup>1</sup>; J. Kim<sup>1</sup>; H. Cho<sup>1</sup>; <sup>1</sup> Sungkyunkwan University, Jangan-gu, Suwon, Gyeonggi-do, Republic of Korea/ROK
- A 1.21 **Mechanochemistry as a Reconstruction Tool of Decomposed Metal-Organic Frameworks**  
H. Lee<sup>1</sup>; J. Lee<sup>1</sup>; H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
- A 1.22 **An Experimental and Theoretical Study of Through-Space Interevalence Charge Transfer in Cobalt-based Metal-organic Framework**  
A. Nath<sup>1</sup>; S. Vennapusa<sup>1</sup>; S. Mandal<sup>1</sup>; <sup>1</sup> IISER Thiruvananthapuram, Thiruvananthapuram/IND
- A 1.23 **Bimetallic Zr/Ti metal-organic framework for desulfurization**  
P. Thinsoongnoen<sup>1</sup>; <sup>1</sup> Vidyasirimedhi Institute of Science and Technology (VISTEC), Vidyasirimedhi Institute of Science and Technology (VISTEC), Wangchan, Rayong Thailand/T
- A 1.24 **Understanding the structural transformation of 2-dimensional Cu(II)- to Cu(I)-based metal-organic framework**  
J. Park<sup>1</sup>; S. Cho<sup>1</sup>; E. Jin<sup>1</sup>; J. Lee<sup>1</sup>; W. Choe<sup>1</sup>; H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
- A 1.25 **Synthesis and characterization of the Metal-Organic Framework CIM-80 for organic compounds analysis**  
L. Figueroa-Quintero<sup>1</sup>; J. Narciso<sup>1</sup>; E. Ramos Fernandez<sup>2</sup>; <sup>1</sup> Universidad de Alicante, Departamento de Química Inorgánica-Instituto Universitario de Materiales, Alicante/E; <sup>2</sup> University of Alicante, Alicante/E
- A 1.26 **Design and synthesis of novel Lanthanide based metal organic frameworks (MOFs) for catalytic hydrogenation of carbon dioxide to formic acid**  
M. Gumbo<sup>1</sup>; G. Mehlan<sup>1</sup>; <sup>1</sup> Midlands State University, Gweru/ZW
- A 1.27 **Preparation of new Metal-Organic Frameworks for catalytic transformation of carbon dioxide to methanol and formic acid**  
J. Hungwe<sup>1</sup>; <sup>1</sup> Midlands State University, Gweru/ZW
- A 1.28 **Graphene Oxide as a Structural Directing Agent of MOFs**  
A. Saad<sup>1</sup>; C. Sicard<sup>1</sup>; N. Menguy<sup>2</sup>; N. Guillou<sup>1</sup>; N. Steunou<sup>1</sup>; <sup>1</sup> Université de Versailles Saint-Quentin-en-Yvelines, Versailles/F; <sup>2</sup> Sorbonne Université, Paris/F
- A 1.29 **Combining Biopolymer and Metal-Organic Framework for Protein Encapsulation**  
J. Bachir<sup>1</sup>; B. Fan<sup>1</sup>; E. Gkaniatsou<sup>1</sup>; N. Steunou<sup>1</sup>; O. David<sup>1</sup>; C. Sicard<sup>1</sup>; <sup>1</sup> Institut Lavoisier de Versailles, UVSQ, Versailles/F
- A 1.30 **ZIF-8 Synthesis in a Relaxed „Mix and Wait” Way**  
N. Gugin<sup>1</sup>; J. Villajos Collado<sup>1</sup>; I. Feldmann<sup>1</sup>; F. Emmerling<sup>1</sup>; <sup>1</sup> Federal Institute for Materials Research and Testing (BAM), Berlin/D
- A 1.31 **Computational Screening the CSD MOF subset for photocatalytic water splitting & carbon dioxide conversion**  
C. Li<sup>1</sup>; <sup>1</sup> University of Sheffield, Sheffield/UK

- A 1.33 **Nanotrap Grafting in the Microenvironment of a Cation Exchangeable MOF for Efficient Uranium Extraction from Seawater**  
Y. More<sup>1</sup>; Y. More<sup>2</sup>; <sup>1</sup> Indian Institute of Science Education and Research Pune, Pune/IND; <sup>2</sup> IISER Pune, Pune/IND
- A 1.34 **Effect of electric field on band gap of phthalocyanine and porphyrin Metal Organic Framework**  
P. Singhvi<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D
- A 1.35 **Design of novel cluster-based rare-earth metal-organic frameworks**  
H. Bicalho<sup>1</sup>; A. Howarth<sup>1</sup>; <sup>1</sup> Concordia University, Montreal/CDN
- A 1.36 **Electrical Conductivity Enhancement and Tunable Optical Properties of a New Family of Perylene-based Metal-Organic Framework**  
G. Valente<sup>1</sup>; F. Paz<sup>1</sup>; J. Rocha<sup>1</sup>; M. Souto<sup>1</sup>; <sup>1</sup> University of Aveiro, Aveiro/P
- A 1.37 **An Electrically Conducting Three-Dimensional Iron-Catecholate Porous Framework**  
M. Schönherr<sup>1</sup>; <sup>1</sup> Fakultät für Chemie und Pharmazie, LMU München, München/D
- A 1.38 **Performance of UiO-66 Metal Organic Framework on Deep Oxidative Desulfurization for a Model Fuel Mixture : Optimization Using Response Surface Methodology**  
B. Barghi<sup>1</sup>; V. Mikli<sup>2</sup>; I. Reile<sup>3</sup>; A. Niidu<sup>4</sup>; <sup>1</sup> Tallinn University of Technology, Kohtla-Järve/EST; <sup>2</sup> Tallinn University of Technology, Tallinn/EST; <sup>3</sup> National Institute of Chemical and Physical Biology, Tallinn/EST; <sup>4</sup> Tallinn University of Technology, Kohtla Jarvea/EST
- A 1.39 **Titanium terephthalate metal-organic framework as a novel isorecticular platform for photocatalytic reactions**  
B. Chen<sup>1</sup>; A. Mansouri<sup>1</sup>; C. M. Rueda-Navarro<sup>2</sup>; P. Boullay<sup>3</sup>; S. Navalón<sup>2</sup>; G. Mouchaham<sup>1</sup>; C. Serre<sup>1</sup>; <sup>1</sup> Institut des Matériaux Poreux de Paris, UMR 8004, Ecole Normale Supérieure, ESPCI Paris, CNRS, PSL University, 75005 Paris, France, Paris/F; <sup>2</sup> Departamento de Química, Universitat Politècnica de València, C/Camino de Vera, s/n, 46022 Valencia, Spain, Valencia/E; <sup>3</sup> Normandie Université, ENSICAEN, UNICAEN, CNRS, CRISMAT, 14050 Caen, France, Caen/F
- A 1.40 **Modulated flexibility in Ce/Zr- fluorinated MOFs**  
D. Morelli Venturi<sup>1</sup>; F. Costantino<sup>2</sup>; N. Stock<sup>3</sup>; <sup>1</sup> Università degli Studi di Perugia, Perugia /I; <sup>2</sup> Università degli Studi di Perugia, Perugia/I; <sup>3</sup> Christian-Albrechts-Universität zu Kiel, Kiel/D
- A 1.41 **Water cluster structure in the MOF CAU-10-X: a powder diffraction perspective**  
G. Nénért<sup>1</sup>; S. Canossa<sup>2</sup>; D. Rega<sup>3</sup>; M. van der Veen<sup>3</sup>; <sup>1</sup> Malvern Panalytical, Almelo/NL; <sup>2</sup> Max Planck Institute for Solid State Research, Stuttgart/D; <sup>3</sup> TU Delft, Delft/NL
- A 1.43 **Fluorescence Lifetime Elongation and Quantum Yield Enhancement of a TADF-Dye using MIL-68(In) as a Template**  
B. Hosseini Monjezi<sup>1</sup>; G. Hong<sup>2</sup>; T. Kasper<sup>3</sup>; R. Oestreich<sup>4</sup>; O. Weingart<sup>4</sup>; C. Wöll<sup>1</sup>; C. Janiak<sup>4</sup>; S. Bräse<sup>2</sup>; K. Müller-Buschbaum<sup>3</sup>; A. Knebel<sup>5</sup>; <sup>1</sup> Karlsruhe Institut für Technologie (Campus Nord), Eggenstein-Leopoldshafen/D; <sup>2</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe/D; <sup>3</sup> Justus-Liebig-University Giessen, Giessen/D; <sup>4</sup> Heinrich-Heine-University Düsseldorf, Düsseldorf/D; <sup>5</sup> Friedrich Schiller University Jena, Jena/D
- A 1.44 **Hierarchically porous metal/metal oxide - ZIF-8 thin films for photocatalysis energy storage**  
K. Ćwik<sup>1</sup>; <sup>1</sup> Łukasiewicz Research Network, Warsaw/PL
- A 1.45 **Construction of Mg(II)-Organic Frameworks for Efficient Chemical Fixation of CO<sub>2</sub> From Direct Air Under Eco-Friendly Mild Conditions**  
R. Das<sup>1</sup>; <sup>1</sup> IIT Ropar, Ropar/IND
- A 1.46 **Porphyrin-based metal-organic frameworks: structure, gas adsorption and magnetic properties**  
V. Zeleňák<sup>1</sup>; N. Király<sup>2</sup>; <sup>1</sup> Faculty of Science, P. J. Safarik University, Kosice/SK; <sup>2</sup> Faculty of Science, P. J. Safarik University, Košice/SK
- A 1.48 **High-Throughput Computational Design and Discovery of Conductive Materials in the CSD MOF Subset**  
F. Zanca<sup>1</sup>; <sup>1</sup> Federica Zanca, Sheffield/UK
- A 1.49 **In depth investigation of the co-adsorption properties of MOF thin films by in operando spectroscopic Ellipsometry: application for cultural heritage conservation**  
S. Dasgupta<sup>1</sup>; <sup>1</sup> Université de Versailles Saint-Quentin-en-Yvelines, Versailles/F
- A 1.50 **Self-densification synthesis of monolithic soc-MOFs for methane storage and separation performance**  
Y. Yang<sup>1</sup>; D. Fairen-Jimenez<sup>1</sup>; <sup>1</sup> University of Cambridge, Cambridge/UK
- A 1.51 **Pillared-Layered metal organic frameworks with functionalized linkers for the tailored extraction of emerging contaminants**  
Y. Martín García<sup>1</sup>; L. Ramos Santana<sup>1</sup>; P. Napolitano-Tabares<sup>1</sup>; J. Pasán<sup>1</sup>; V. Pino<sup>1</sup>; J. Ayala<sup>1</sup>; A. Lago B.<sup>1</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E

## POSTER PROGRAMME

- A 1.52 **Discovery of two isostructural Ce(IV)-MOFs with an unprecedented inorganic building unit**  
J. Gosch<sup>1</sup>; F. Steinke<sup>1</sup>; N. Stock<sup>1</sup>; D. Morelli Venturi<sup>2</sup>; F. Costantino<sup>2</sup>; E. Svensson Grape<sup>3</sup>; A. Inge<sup>3</sup>; C. Atzori<sup>4</sup>; K. Lomachenko<sup>4</sup>;  
<sup>1</sup> Christian-Albrechts-University Kiel, Kiel/D; <sup>2</sup> University of Perugia, Perugia/I; <sup>3</sup> Stockholm University, Stockholm/S; <sup>4</sup> European Synchrotron Radiation Facility, Grenoble/F
- A 1.53 **Zr<sub>4</sub><sup>+</sup>-terephthalate MOFs with 6-connected structures, highly efficient As(III/V) sorption and superhydrophobic properties**  
M. Manos<sup>1</sup>; A. Pournara<sup>1</sup>; S. Rizogianni<sup>1</sup>; D. Evangelou<sup>1</sup>; E. Andreou<sup>2</sup>; G. Armatas<sup>2</sup>; <sup>1</sup> University of Ioannina, Department of Chemistry, Ioannina/GR; <sup>2</sup> University of Crete, Department of Materials Science and Technology, Heraklion/GR
- A 1.54 **Tuning Hierarchical Porosity in Zr-Based Metal-Organic Frameworks Using Template Assisted and Template-Free Conditions.**  
B. Sunny<sup>1</sup>; A. Thirumurugan<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research (IISER) Thiruvananthapuram, Thiruvananthapuram/IND
- A 1.55 **MOF-derived photothermal catalysts allow the use of ammonia as hydrogen carrier**  
A. Sousa<sup>1</sup>; D. Mateo<sup>1</sup>; L. Garzon-Tovar<sup>1</sup>; <sup>1</sup> King Abdullah University of Science and Technology, Thuwal/SAR
- A 1.56 **The controlled microfluidic formation of stable hcp-UiO-67(Zr) using benzoic acid as the acid modulator**  
T. Bailey<sup>1</sup>; L. Yang<sup>1</sup>; E. Humphries<sup>1</sup>; N. Hondow<sup>1</sup>; K. Wu<sup>2</sup>; <sup>1</sup> School of Chemical and Process Engineering, University of Leeds, Leeds/UK; <sup>2</sup> University of Zhejiang, Hangzhou/CN
- A 1.57 **A Peryleneimide-based Zinc-Coordination Polymer for Photosensitized Singlet-Oxygen Generation**  
S. Deger<sup>1</sup>; S. Weishäupl<sup>1</sup>; A. Pöthig<sup>1</sup>; R. Fischer<sup>1</sup>; <sup>1</sup> Technical University Munich, Garching/D
- A 1.58 **Structural Comparison of Cu- and Zn-based SURMOF-2**  
J. Fischer<sup>1</sup>; D. Chen<sup>1</sup>; C. Wöll<sup>1</sup>; B. Richards<sup>1</sup>; I. Howard<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D
- A 1.59 **New materials based on metallized MOFs for photocatalysis**  
M. Baluk<sup>1</sup>; P. Mazierski<sup>1</sup>; A. Zaleska-Medynska<sup>1</sup>; M. Kroczyńska<sup>2</sup>; J. Łuczak<sup>2</sup>; <sup>1</sup> University of Gdańsk, Gdańsk/PL; <sup>2</sup> Gdańsk University of Technology, Gdańsk/PL
- A 1.60 **Green synthesis approaches towards preparation of glass forming ZIF-76**  
M. Švegovec<sup>1</sup>; A. Škrjanc<sup>2</sup>; A. Krajnc<sup>3</sup>; N. Zabukovec Logar<sup>2</sup>; <sup>1</sup> National Institute of Chemistry and University of Nova Gorica, Ljubljana, Nova Gorica/SLO; <sup>2</sup> National Institute of Chemistry and University of Nova Gorica, Ljubljana, Nova Gorica/SLO; <sup>3</sup> National Institute of Chemistry Ljubljana, Ljubljana/SLO
- A 1.61 **Adaptive Binding in a sql Coordination Network for Indoor Humidity Control**  
X. Li<sup>1</sup>; <sup>1</sup> University of Limerick, Limerick/IRL
- A 1.62 **MOFs for CCS, Deep CCS, Direct Air Capture and Water Harvesting**  
S. Weston<sup>1</sup>; <sup>1</sup> ExxonMobil Technology and Engineering, Annandale/USA
- A 1.63 **Mining Insights on Metal–Organic Framework Synthesis from Scientific Literature Texts**  
H. Park<sup>1</sup>; Y. Kang<sup>1</sup>; W. Choe<sup>2</sup>; J. Kim<sup>1</sup>; <sup>1</sup> KAIST - Korea Advanced Institute of Science and Technology, Daejeon/ROK; <sup>2</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
- A 1.65 **A robust Al<sub>3</sub><sup>+</sup> MOF as a highly selective As(V) sorbent and efficient luminescence probe for Cr(VI) and water**  
D. Evangelou<sup>1</sup>; A. Pournara<sup>1</sup>; C. Tziassiou<sup>1</sup>; E. Andreou<sup>2</sup>; G. Armatas<sup>2</sup>; M. Manos<sup>1</sup>; <sup>1</sup> University of Ioannina, Ioannina/GR; <sup>2</sup> University of Crete, Heraklion/GR
- A 1.66 **Trace removal of benzene vapour using double-walled metal–dipyrazolate frameworks**  
X. Kong<sup>1</sup>; <sup>1</sup> University of Limerick, Limerick/IRL
- A 1.67 **Construction of C–C bonds within the robust metal organic frameworks MFM-300(Cr)**  
T. Luo<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- A 1.68 **Photo-responsive SURMOF films as Actuators**  
Y. Jiang<sup>1</sup>; Y. Liu<sup>1</sup>; S. Grosjean<sup>1</sup>; V. Bon<sup>2</sup>; S. Bräse<sup>1</sup>; C. Wöll<sup>1</sup>; L. Heinke<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D; <sup>2</sup> Dresden University of Technology, Dresden/D
- A 1.69 **Reversible HCl and HBr adsorption in a new aluminum phosphonate MOF**  
T. Reichenau<sup>1</sup>; F. Steinke<sup>1</sup>; M. Wharmby<sup>1</sup>; C. Näther<sup>1</sup>; T. Engesser<sup>1</sup>; N. Stock<sup>1</sup>; <sup>1</sup> Christian-Albrechts-Universität, Kiel/D
- A 1.70 **A Dual-functional Cobalt Metal-organic Framework Decorated with an Oxadiazole Moiety for Ultra-sensitive Detection of Mesityl Oxide, and Iodine Capture**  
H. Bhambri<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research Mohali, Mohali, Punjab /IND

## POSTER PROGRAMME


- A 1.71 **Mixed-donor phenanthroline-carboxylate MOFs**  
C. Setter<sup>1</sup>; J. Clegg<sup>2</sup>; L. Macreadie<sup>3</sup>; <sup>1</sup> The University of Queensland, St Lucia/AUS; <sup>2</sup> The University of Queensland, Brisbane/AUS; <sup>3</sup> The University of Sydney, Sydney/AUS
- A 1.72 **FlowPhotoChem (FPC). Development of more active Metal-Organic Frameworks for Hydrogen Evolution Reaction**  
A. Alborno Gradós<sup>1</sup>; A. Balmori Pastor<sup>1</sup>; D. Morillo<sup>1</sup>; J. Gispert Montserrat<sup>2</sup>; <sup>1</sup> LEITAT Technological Center, Barcelona/E; <sup>2</sup> LEITAT Technological Center, Barcelona /E
- A 1.73 **A Unique Approach towards Controlled Desolvation of Solvent Responsive Flexible Metal-organic Frameworks**  
K. Maity<sup>1</sup>; V. Bon<sup>1</sup>; S. Kaskel<sup>1</sup>; <sup>1</sup> TECHNISCHE UNIVERSITÄT DRESDEN (TUD), Dresden/D
- A 1.74 **Cooperative Gas Sorption in Responsive Porous Liquids**  
A. Koutsianos<sup>1</sup>; <sup>1</sup> TU-Dortmund, Dortmund/D
- A 1.75 **Structurally Flexible 8-fold interpenetrated dia MOF for Atmospheric Water Harvesting**  
A. Subanbekova<sup>1</sup>; V. Nikolayenko<sup>1</sup>; D. Sensharma<sup>1</sup>; A. Bezrukov<sup>1</sup>; S. Darwish<sup>1</sup>; N. Kumar<sup>1</sup>; D. O'Hearn<sup>1</sup>; S. Wang<sup>1</sup>; K. Koupepidou<sup>1</sup>; V. Bon<sup>2</sup>; S. Kaskel<sup>2</sup>; M. Zaworotko<sup>1</sup>; <sup>1</sup> Bernal Institute, University of Limerick, Limerick/IRL; <sup>2</sup> Dresden University of Technology, Dresden/D
- A 1.76 **Mesopores Generation and Programmed Disassembly of Metal-Organic Frameworks by Clip-off Chemistry**  
Y. Yang<sup>1</sup>; I. Imaz<sup>2</sup>; D. Maspocho<sup>2</sup>; <sup>1</sup> ICN2 - Institut Català de Nanociència i Nanotecnologia / Consejo Superior de Investigaciones Científicas (CSIC), Barcelona/E; <sup>2</sup> Institut Català de Nanociència i Nanotecnologia / ICREA, Barcelona/E
- A 1.77 **Incorporating pendant sulfonic groups into metal-organic frameworks using pre-assembly chlorosulfonation strategy**  
M. Szufła<sup>1</sup>; A. Choroś<sup>1</sup>; W. Nitek<sup>1</sup>; D. Matoga<sup>1</sup>; <sup>1</sup> Jagiellonian University, Kraków/PL
- A 1.78 **Vapor-assisted synthesis of the MOF-74 family from zinc, cobalt, and magnesium oxides**  
N. Wauteraerts<sup>1</sup>; M. Tu<sup>1</sup>; S. Rodriguez Hermida<sup>1</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> KU Leuven, Heverlee/B
- A 1.79 **Post-synthetic modification of UiO-66(Zr) – a new method for the synthesis of UiO-66(Zr) polymer composite with superior total arsenic adsorption**  
T. Felder<sup>1</sup>; T. Schertenleib<sup>1</sup>; W. Queen<sup>1</sup>; V. Karve<sup>2</sup>; <sup>1</sup> EPFL Valais Wallis, Sion/CH; <sup>2</sup> HES-SO VS, Sion/CH
- A 1.80 **Positional Installation of Unsymmetrical Fluorine Functionalities onto Metal-Organic Frameworks for Efficient Carbon Dioxide Separation under Humid Conditions**  
T. Yoon<sup>1</sup>; K. Oh<sup>1</sup>; S. Kim<sup>2</sup>; M. Kim<sup>2</sup>; Y. Bae<sup>1</sup>; <sup>1</sup> Yonsei University, Seoul/ROK; <sup>2</sup> Chungbuk National University, Cheongju/ROK
- A 1.81 **Symmetric carboxylic acid with rotatable dipolar groups deployed as linker in optically active metal-organic frameworks**  
L. Mönkeberg<sup>1</sup>; A. Schaate<sup>1</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D
- A 1.82 **Extraordinary Chiral Crystals having a Multidomain Appearances**  
V. Singh<sup>1</sup>; L. Houben<sup>2</sup>; L. J. W. Shimon<sup>2</sup>; S. R. Cohen<sup>2</sup>; Y. Feldman<sup>2</sup>; O. Goalni<sup>2</sup>; M. Lahav<sup>2</sup>; M. E. van der Boom<sup>2</sup>; <sup>1</sup> Weizmann Institute of Science, Rehovot/IL; <sup>2</sup> Weizmann Institute of Science, Rehovot/IL
- A 1.84 **Ammonia vapor assisted synthesis of ZIF-8**  
A. Würz<sup>1</sup>; M. Hartmann<sup>1</sup>; <sup>1</sup> Friedrich Alexander Universität Erlangen-Nürnberg, Erlangen/D
- A 1.85 **Disorder and Linker Vacancies in Porphyrinic Zr-MOFs**  
C. Koschnick<sup>1</sup>; C. Koschnick<sup>1</sup>; R. Stäglich<sup>2</sup>; T. Scholz<sup>1</sup>; M. Terban<sup>1</sup>; G. Savasci<sup>3</sup>; J. Nuss<sup>1</sup>; R. Siegel<sup>2</sup>; C. Ochsenfeld<sup>3</sup>; R. Dinnebier<sup>1</sup>; J. Senker<sup>2</sup>; B. Lotsch<sup>1</sup>; <sup>1</sup> Max Planck Institut für Festkörperforschung, Stuttgart/D; <sup>2</sup> University of Bayreuth, Bayreuth/D; <sup>3</sup> University of Munich (LMU), Munich/D
- A 1.86 **Novel MOFs from fluorinated Carboxylate-Ligands and Investigations of Host-Guest-Interactions within their Pores**  
S. Sebastian<sup>1</sup>; <sup>1</sup> Universität zu Köln, Cologne/D
- A 1.87 **Investigation of 2,5-dimethoxy terephthalate containing coordination polymers and MOFs**  
A. Cammiade<sup>1</sup>; <sup>1</sup> University of Cologne, Frechen/D
- A 1.88 **MOF nanoparticles as multifunctional optical materials for application in silica hollow-core fibers**  
L. Steinbach<sup>1</sup>; A. Schaate<sup>1</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Institut für Anorganische Chemie / Leibniz Universität Hannover, Hannover/D
- A 1.89 **Substituted Spiropyran: Electronic effects and design criteria towards photoactive MOFs**  
D. Cerasale<sup>1</sup>; <sup>1</sup> Cardiff University, Dinas Powys/UK
- A 1.90 **Highly porous MOFs based on elongated Schiff base ligands**  
N. Panagiotou<sup>1</sup>; C. Efthymiou<sup>1</sup>; C. Papatranta-fyllopoulou<sup>1</sup>; M. Markoulides<sup>1</sup>; G. Angeli<sup>2</sup>; C. Tampaxis<sup>3</sup>; N. Chronakis<sup>1</sup>; G. Charalambopoulou<sup>3</sup>; T. Steriotis<sup>3</sup>; G. Papaefstathiou<sup>4</sup>; P. Trikalitis<sup>2</sup>; A. Tasiopoulos<sup>5</sup>; <sup>1</sup> University of Cyprus, Nicosia/CY; <sup>2</sup> University of Crete, Heraklion/GR; <sup>3</sup> National Center for Scientific Research "Demokritos", Athens/GR; <sup>4</sup> National and Kapodistrian University of Athens, Athens/GR; <sup>5</sup> University of Cyprus, Nicosia/GR

## POSTER PROGRAMME

- A 1.91 **Green and Sustainable Synthesis of Mesoporous Metal-Organic Frameworks**  
L. Esrafil<sup>1</sup>; C. Vande Velde<sup>2</sup>; <sup>1</sup> Antwerp, Antwerpen/B; <sup>2</sup> University of Antwerp, Antwerp/B
- A 1.92 **Interligand Chemistry within Metal-Organic Frameworks**  
P. Das<sup>1</sup>; N. Rosi<sup>2</sup>; <sup>1</sup> TU Berlin, Department of Chemistry, Berlin/D; <sup>2</sup> University of Pittsburgh, PITTSBURGH/USA
- A 1.93 **Study of the crystallization behavior of metal organic frameworks using in-situ ultrasound monitoring technique**  
M. Joshi<sup>1</sup>; M. Fischer<sup>1</sup>; M. Hartmann<sup>1</sup>; <sup>1</sup> Erlangen Center for Interface Research and Catalysis (ECRC), University of Erlangen-Nürnberg, Erlangen/D
- A 1.94 **UoC-7: A bimetallic K-Zn-MOF with an anionic framework based on fluorinated trimesate ligands**  
S. Wenzel<sup>1</sup>; <sup>1</sup> University of Cologne, Brühl/D
- A 1.95 **Uranium-Based Anionic CPs and MOFs and the Influence of Functionalization on <sup>137</sup>Cs+ Cation Exchange**  
R. Christoffels<sup>1</sup>; M. Maslo<sup>1</sup>; E. Strub<sup>1</sup>; U. Ruschewitz<sup>1</sup>; <sup>1</sup> Universität zu Köln, Cologne/D
- A 1.96 **Capture studies of SO<sub>2</sub> by a mesoporous Mg(II)-MOF**  
E. Martínez-Ahumada<sup>1</sup>; I. A. Ibarra<sup>2</sup>; <sup>1</sup> Universidad Nacional Autónoma de México (UNAM), Ciudad de México/MEX; <sup>2</sup> Universidad Nacional Autónoma de México, Ciudad de México/MEX
- A 1.97 **MIL-101(Cr) as a sorbent-based humidity sensor for indoor air monitoring**  
P. Pires Conti<sup>1</sup>; P. Iacomini<sup>1</sup>; M. Nicolas<sup>2</sup>; G. Maurin<sup>1</sup>; S. Devautour-Vinot<sup>1</sup>; <sup>1</sup> ICGM - Université Montpellier - CNRS, Montpellier/F; <sup>2</sup> Centre Scientifique et Technique du Bâtiment (CSTB), Grenoble/F
- A 1.98 **Spray Drying as a Continuous One Step Approach for the Synthesis of UiO-66-NH<sub>2</sub>**  
A. Metawe<sup>1</sup>; <sup>1</sup> SSPC, Limerick/IRL
- A 1.99 **Synthesis, Characterization and Dye Adsorption Properties of 3D Co(II)-Metal Organic Frameworks structure with tetracarboxylic acid and bis(imidazole) based ligand**  
E. Ciftci<sup>1</sup>; T. Alp Arıcı<sup>2</sup>; M. Arıcı<sup>3</sup>; H. Erer<sup>3</sup>; O. Yesilel<sup>3</sup>; <sup>1</sup> Max Planck Institute for Solid State Research, Stuttgart/D; <sup>2</sup> Kütahya Dumlupınar University, Kütahya/TR; <sup>3</sup> Eskisehir Osmangazi University, Eskisehir/TR
- A 1.100 **SURMOF-Linker based on Porphyrins and Phthalocyanines**  
L. Langer<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe/D
- A 1.101 **Applications-led inline analysis for the optimisation and continuous production of HKUST-1**  
M. Clark<sup>1</sup>; D. Bradshaw<sup>1</sup>; A. Nightingale<sup>1</sup>; <sup>1</sup> University of Southampton, School of Chemistry, University Road, Southampton SO17 1BJ, United Kingdom 4, Southampton/UK
- A 1.102 **Mechanochemistry for clean and rapid synthesis and transformation of functional MOFs**  
K. Užarević<sup>1</sup>; B. Karadeniz<sup>1</sup>; V. Martinez<sup>1</sup>; I. Brekalo<sup>1</sup>; T. Stolar<sup>1</sup>; <sup>1</sup> Ruđer Bošković Institute, Zagreb/HR
- A 1.103 **The influence of synthesis conditions on Metal-Organic Frameworks**  
M. Kroczevska<sup>1</sup>; J. Łuczak<sup>1</sup>; M. Zalewski<sup>1</sup>; M. Baluk<sup>2</sup>; P. Mazierski<sup>2</sup>; A. Zaleska-Medynska<sup>2</sup>; <sup>1</sup> Gdańsk University of Technology, Gdańsk/PL; <sup>2</sup> University of Gdańsk, Gdańsk/PL
- A 1.105 **Ce-UiO-67 containing metal-chelating linkers: optimizing the synthesis towards catalytic applications**  
V. Finelli<sup>1</sup>; B. Centrella<sup>2</sup>; G. Deplano<sup>2</sup>; N. Porcaro<sup>2</sup>; M. Bonomo<sup>2</sup>; M. Signorile<sup>2</sup>; F. Bonino<sup>2</sup>; C. Barolo<sup>2</sup>; S. Bordiga<sup>2</sup>; <sup>1</sup> Istituto Universitario degli Studi Superiori (IUSS) & University of Turin, Pavia & Turin/I; <sup>2</sup> University of Turin, Turin/I
- A 1.13 **Genetically-engineered peptides for MOFs**  
S. Lympelopoulou<sup>1</sup>; S. Hoff<sup>2</sup>; A. Sola-Rabada<sup>3</sup>; M. Michaelis<sup>3</sup>; I. Efimov<sup>3</sup>; Z. Westcott<sup>3</sup>; M. Chiacchia<sup>1</sup>; I. Willimott<sup>1</sup>; H. Heinz<sup>2</sup>; C. Perry<sup>3</sup>; D. Bradshaw<sup>1</sup>; <sup>1</sup> University of Southampton, Southampton/UK; <sup>2</sup> University of Colorado Boulder, Boulder/USA; <sup>3</sup> Nottingham Trent University, Nottingham/UK

## Covalent Organic Frameworks

- A 1.109 **Accelerating discovery of COFs for CO<sub>2</sub> capture and H<sub>2</sub> purification using structurally guided computational screening**  
G. Aksu<sup>1</sup>; <sup>1</sup> Koc University, Istanbul/TR
- A 1.110 **Design and Synthesis of Novel Architectures of Covalent Organic Frameworks**  
S. Xie<sup>1</sup>; D. Jiang<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP
- A 1.111 **A Statistical Representation of Stacking Disorder in Layered Covalent Organic Frameworks**  
Y. Zhang<sup>1</sup>; M. Položij<sup>2</sup>; T. Heine<sup>2</sup>; <sup>1</sup> , Dresden/D; <sup>2</sup> TU Dresden, Dresden/D



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- A 1.112 **Covalent organic framework discovery for photocatalysis**  
B. Mouriño<sup>1</sup>; A. Ortega-Guerrero<sup>1</sup>; K. Jablonka<sup>1</sup>; B. Smit<sup>1</sup>; <sup>1</sup> EPFL, Sion/CH
- A 1.113 **Geometric Frustration in a Covalent Organic Framework by using a C<sub>5</sub>-symmetrical Linker**  
F. Haase<sup>1</sup>; <sup>1</sup> Karlsruher Institut für Technologie (KIT), Eggenstein-Leopoldshafen/D
- A 1.114 **An Approach Towards Molecular Sieving COFs**  
S. Savani<sup>1</sup>; O. Smirnova<sup>1</sup>; L. Wondraczek<sup>1</sup>; A. Knebel<sup>1</sup>; <sup>1</sup> Friedrich-Schiller-Universität Jena, Otto-Schott-Institut für Materialforschung, Jena/D
- A 1.115 **Structure-property relationships of optically active COFs**  
E. Dautzenberg<sup>1</sup>; M. Lam<sup>1</sup>; T. Nikolaeva<sup>1</sup>; W. Franssen<sup>1</sup>; B. van Lagen<sup>1</sup>; G. Li<sup>1</sup>; L. de Smet<sup>1</sup>; <sup>1</sup> Wageningen University & Research, Wageningen/NL
- A 1.116 **Highly efficient metal/solvent-free chemical fixation of CO<sub>2</sub> at atmospheric pressure conditions using functionalized porous covalent organic frameworks**  
G. Singh<sup>1</sup>; <sup>1</sup> Indian Institute of Technology Roapr, Ropar/IND
- A 1.117 **Electrical Conductivity Enhancement and Tunable Optical Properties of a New Family of Perylene-based Metal-Organic Framework**  
G. Valente<sup>1</sup>; F. Paz<sup>1</sup>; J. Rocha<sup>1</sup>; M. Souto<sup>1</sup>; <sup>1</sup> University of Aveiro, Aveiro/P
- A 1.118 **Synthesis of Porous Materials based on Metallated Corroles for Carbon Monoxide Detection**  
J. Yang<sup>1</sup>; L. André<sup>1</sup>; N. Desbois<sup>1</sup>; S. Brandès<sup>1</sup>; M. Vanotti<sup>2</sup>; S. Poisson<sup>2</sup>; V. Blondeau-Patisier<sup>2</sup>; C. Gros<sup>1</sup>; <sup>1</sup> Université Bourgogne Franche-Comté, Dijon/F; <sup>2</sup> Université Bourgogne Franche-Comté, Besançon/F
- A 1.119 **Benzo[d]imidazole-based chiral covalent organic frameworks**  
T. He<sup>1</sup>; Y. Zhao<sup>1</sup>; <sup>1</sup> Nanyang Technological University, Singapore/SGP
- A 1.120 **Crystalline Diithine Linked Covalent-organic framework: A Dynamic Platform for Post-synthetic sulfurization for Cathode Activity in Lithium-sulfur Battery**  
S. Haldar<sup>1</sup>; <sup>1</sup> Technical University Dresden, Dresden/D
- A 1.121 **Redox-active and electrically conductive thienothiophene thienoisindigo-based covalent organic frameworks**  
K. Muggli<sup>1</sup>; L. Spies<sup>1</sup>; D. Bessinger<sup>1</sup>; F. Auras<sup>2</sup>; T. Bein<sup>1</sup>; <sup>1</sup> Ludwig-Maximilians Universität München (LMU), München/D; <sup>2</sup> University of Cambridge, Cambridge/UK
- A 1.122 **A Porous, Crystalline, Thiaborinane Covalent-Organic Framework**  
K. Garcia Alvarez<sup>1</sup>; M. Springer<sup>2</sup>; A. Khan<sup>1</sup>; L. Shupletsov<sup>1</sup>; A. De<sup>1</sup>; A. Asteriadis<sup>1</sup>; K. Merkel<sup>3</sup>; S. Haldar<sup>1</sup>; F. Ortman<sup>3</sup>; E. Brunner<sup>1</sup>; T. Heine<sup>1</sup>; A. Kuc<sup>1</sup>; A. Schneemann<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D; <sup>2</sup> Helmholtz Zentrum Dresden Rossendorf / TU Dresden, Dresden/D; <sup>3</sup> Technische Universität München, Garching/D
- A 1.123 **Highly Crystalline 2D Conjugated Dibenzo[g,p]chrysene-Based Large-Pore Kagome Covalent Organic Frameworks**  
T. Xue<sup>1</sup>; D. Medina<sup>1</sup>; T. Bein<sup>1</sup>; <sup>1</sup> University of Munich (LMU), Munich/D
- A 1.124 **Interweaving 2-dimensional covalent organic frameworks using calix[4]arene supramolecular synthon**  
B. Garai<sup>1</sup>; A. Trabolsi<sup>1</sup>; <sup>1</sup> New York University Abu Dhabi, Abu Dhabi/UAE
- A 1.125 **Protonated Imine-Linked Covalent Organic Frameworks for Photocatalytic Hydrogen Evolution**  
J. Yang<sup>1</sup>; A. Thomas<sup>1</sup>; <sup>1</sup> Technische Universität Berlin / Institut für Chemie, Berlin/D
- A 1.126 **Influence of the linkage on the electrical conductivity of Tetrathiafulvalene-based Covalent Organic Frameworks**  
P. Ferreira<sup>1</sup>; G. Valente<sup>1</sup>; K. Strutynski<sup>1</sup>; M. Melle-Franco<sup>1</sup>; T. Bein<sup>2</sup>; M. Souto<sup>1</sup>; <sup>1</sup> University of Aveiro, Aveiro/P; <sup>2</sup> University of Munich (LMU), Munich/D
- A 1.127 **Incorporation of Pt Nanoclusters into Covalent Organic Frameworks: A Strategy to Design Photoelectrodes for Water Splitting**  
K. Paliusyte<sup>1</sup>; <sup>1</sup> Fakultät für Chemie und Pharmazie, LMU München, Munich/D
- A 1.128 **Controllable Synthesis of All-carbon Linked 3D COF Films for Organic Heterojunctions**  
Y. Yang<sup>1</sup>; C. Schäfer<sup>1</sup>; K. Börjesson<sup>1</sup>; <sup>1</sup> University of Gothenburg, Gothenburg/S
- A 1.129 **Integrating Dual-functionality and Ultrastability in Covalent Organic Frameworks via One Pot Multicomponent Reaction for Solar-Driven H<sub>2</sub>O<sub>2</sub> Production**  
P. Das<sup>1</sup>; A. Thomas<sup>2</sup>; <sup>1</sup> TU Berlin, Department of Chemistry, Berlin/D; <sup>2</sup> TU Berlin, Berlin/D
- A 1.130 **Functional Macro/Micro-Covalent Organic Framework for Enzyme dependent Cofactor Encapsulation**  
Y. Ziouani<sup>1</sup>; <sup>1</sup> TU Berlin, Department of Chemistry, Berlin/D

## POSTER PROGRAMME

- A 1.131 **Chemical and solvent assisted exfoliation of 2D Covalent organic frameworks towards processable nanosheets**  
A. De<sup>1</sup>; E. Cihan<sup>1</sup>; L. Shupletsov<sup>1</sup>; G. Cuniberti<sup>1</sup>; S. Kaskel<sup>1</sup>; A. Schneemann<sup>1</sup>; <sup>1</sup> Dresden University of Technology, Dresden/D
- A 1.132 **Antiaromatic Covalent Organic Frameworks for Energy Material Applications**  
J. Sprachmann<sup>1</sup>; T. Wachsmuth<sup>1</sup>; D. Burmeister<sup>1</sup>; M. Bhosale<sup>2</sup>; B. Esser<sup>2</sup>; O. Dumele<sup>1</sup>; <sup>1</sup> Humboldt Universität zu Berlin, Berlin/D; <sup>2</sup> Universität Ulm, Ulm/D
- A 1.133 **Narrowing the bandgaps in D-A COFs to enable metal-free photocatalytic water splitting**  
H. Yu<sup>1</sup>; T. Heine<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- A 1.134 **Using Sound to Synthesize Covalent Organic Frameworks in Water**  
W. Zhao<sup>1</sup>; P. Yan<sup>1</sup>; H. Yang<sup>1</sup>; M. Bahri<sup>1</sup>; A. James<sup>1</sup>; H. Chen<sup>1</sup>; L. Liu<sup>1</sup>; B. Li<sup>1</sup>; Z. Pang<sup>1</sup>; R. Clowes<sup>1</sup>; N. Browning<sup>1</sup>; J. Ward<sup>1</sup>; Y. Wu<sup>1</sup>; A. Cooper<sup>1</sup>; <sup>1</sup> University of Liverpool, Liverpool/UK

## Further Novel Materials, Synthesis &amp; Composites

- A 1.01 **Post-synthetic amine functionalization of MOFs for post-combustion CO<sub>2</sub> capture**  
A. Justin<sup>1</sup>; J. Espin<sup>1</sup>; T. Scherteneleib<sup>1</sup>; O. Trukhina<sup>1</sup>; I. Kochetygov<sup>1</sup>; W. Queen<sup>1</sup>; <sup>1</sup> EPFL Valais Wallis, Sion/CH
- A 1.02 **Novel hybrid composites comprising metal-organic frameworks and inorganic glasses**  
A. Chester<sup>1</sup>; C. Castillo Blas<sup>1</sup>; B. Rodrigues<sup>2</sup>; L. Wondraczek<sup>2</sup>; D. Keen<sup>3</sup>; T. Bennett<sup>1</sup>; <sup>1</sup> Department of Material Science & Metallurgy, University of Cambridge, Cambridge/UK; <sup>2</sup> University Jena, Jena /D; <sup>3</sup> ISIS Facility, Rutherford Appleton Laboratory, Oxford/UK
- A 1.03 **Unraveling the Molecular Mechanism of MIL-53(Al) Crystallization**  
D. Salionov<sup>1</sup>; O. Semivrazhskaya<sup>2</sup>; N. Casati<sup>1</sup>; M. Ranocchiari<sup>1</sup>; S. Bjelić<sup>1</sup>; R. Verel<sup>2</sup>; J. van Bokhoven<sup>2</sup>; V. Sushkevich<sup>3</sup>; <sup>1</sup> Paul Scherrer Institut (PSI), Villigen/CH; <sup>2</sup> ETH Zürich, Zurich/CH; <sup>3</sup> Paul Sherrer Institute, Villigen/CH
- A 1.05 **ABX<sub>3</sub> Molecular Perovskites as Barocalorics**  
S. Kronawitter<sup>1</sup>; G. Kieslich<sup>1</sup>; <sup>1</sup> Technical University of Munich, Garching/D
- A 1.06 **Quantum dot-decorated COF/MOF hybrid materials: synthesis and characterization**  
D. Górczyński<sup>1</sup>; B. Bajorowicz<sup>1</sup>; A. Zaleska-Medynska<sup>1</sup>; <sup>1</sup> University of Gdansk, Gdansk/PL
- A 1.07 **Naphthalene-Tagged Highly Stable and Reusable Luminescent and Structurally Diverse Zn(II) and Cd(II) based Metal-Organic Probes for Fast and Selective Detection of 4-Nitroaniline in Water**  
A. Chanda<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research Mohali, PUNJAB/IND
- A 1.08 **High Entropy Organic-Inorganic Framework Materials as Electrocatalyst**  
A. Roy<sup>1</sup>; F. Emmerling<sup>1</sup>; B. Bhattacharya<sup>1</sup>; <sup>1</sup> BAM - Bundesanstalt für Materialforschung und -prüfung, Berlin/D
- A 1.10 **Unveiling the Impact of Diverse Morphology of Ionic Porous Organic Polymer with Mechanistic Insight on the Ultrafast and Selective Removal of Toxic Pollutants from Water**  
W. Mandal<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research (IISER), Pune, PUNE/IND
- A 1.107 **A flexible square lattice coordination network for efficient removal of propyne from propylene**  
M. Gao<sup>1</sup>; <sup>1</sup> University of Limerick, University of Limerick, Limerick, Republic of Ireland/IRL
- A 1.108 **Cyclotrimeratrylene-based Coordination Polymers for Dye Uptake**  
M. Snelgrove<sup>1</sup>; M. Hardie<sup>1</sup>; <sup>1</sup> University of Leeds, Leeds/UK
- A 1.135 **Synthetic Porous Melanin Toward Chemical Warfare Agent Adsorption and Remediation**  
Z. Siwicka<sup>1</sup>; F. Son<sup>1</sup>; C. Battistella<sup>1</sup>; M. Moore<sup>2</sup>; J. Korpany<sup>1</sup>; N. McCallum<sup>1</sup>; Z. Wang<sup>2</sup>; B. Johnson<sup>2</sup>; O. Farha<sup>1</sup>; N. Gianneschi<sup>1</sup>; <sup>1</sup> Northwestern University, Evanston/USA; <sup>2</sup> Naval Research Laboratory, Washington, D.C./USA
- A 1.136 **Chiral Coordination Polymers with L-Alanine-based 1,2,4-Triazolyl Benzoate Linkers**  
H. Krautscheid<sup>1</sup>; O. Erhart<sup>1</sup>; <sup>1</sup> Universität Leipzig, Leipzig/D
- A 1.137 **Tin-Organic Frameworks as Catalysts for Epimerization of Monosaccharides in Aqueous Solutions**  
I. Delidovich<sup>1</sup>; A. Hoffmann<sup>2</sup>; M. Rose<sup>3</sup>; <sup>1</sup> TU Wien, Wien/A; <sup>2</sup> RWTH Aachen University, Aachen/D; <sup>3</sup> TU Darmstadt, Darmstadt/D
- A 1.138 **Porous salts containing unprecedented cationic Al<sub>24</sub>-hydroxide clusters from a scalable, green synthesis route**  
B. Achenbach<sup>1</sup>; N. Stock<sup>1</sup>; E. Svensson Grape<sup>2</sup>; A. Inge<sup>2</sup>; <sup>1</sup> Kiel University, Kiel/D; <sup>2</sup> University of Stockholm, Stockholm/S

## POSTER PROGRAMME

- A 1.139 **Beyond Random Self-Assembly: Multivariate Porous Platform Based on Metal-Organic Polyhedra**  
D. Nam<sup>1</sup>; J. Kim<sup>1</sup>; E. Hwang<sup>1</sup>; J. Nam<sup>1</sup>; H. Jeong<sup>1</sup>; T. Kwon<sup>1</sup>; W. Choe<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
- A 1.140 **Switchable MOP solubility through surface chemistry: engineering molecular self-sorting systems**  
L. Hernández-López<sup>1</sup>; A. Cortés-Martínez<sup>1</sup>; J. Martínez-Esaín<sup>2</sup>; T. Grancha<sup>2</sup>; T. Parella<sup>3</sup>; J. Faraudo<sup>4</sup>; A. Carné-Sánchez<sup>1</sup>; D. MasPOCH<sup>5</sup>; <sup>1</sup> Catalan Institute of Nanoscience and Nanotechnology, CSIC, and The Barcelona Institute of Science and Technology, Chemistry Department of Autonomous University of Barcelona, Barcelona/E; <sup>2</sup> Catalan Institute of Nanoscience and Nanotechnology, CSIC, and The Barcelona Institute of Science and Technology, Barcelona/E; <sup>3</sup> Nuclear Magnetic Resonance Service of Autonomous University of Barcelona, Barcelona/E; <sup>4</sup> Institut de Ciència de Materials de Barcelona, Barcelona/E; <sup>5</sup> Catalan Institute of Nanoscience and Nanotechnology, CSIC, and The Barcelona Institute of Science and Technology, Chemistry Department of Autonomous University of Barcelona, Barcelona/E
- A 1.141 **Supramolecular coordination polymers based on lantern-type metal-organic cages**  
E. Sánchez-González<sup>1</sup>; G. Craig<sup>2</sup>; F. Haase<sup>3</sup>; T. Tateishi<sup>4</sup>; P. Larpent<sup>4</sup>; A. Carné-Sánchez<sup>5</sup>; S. Tokuda<sup>6</sup>; Y. Colón<sup>6</sup>; S. Furukawa<sup>4</sup>; <sup>1</sup> Universidad Nacional Autónoma de México/Instituto de Investigaciones en Materiales, Ciudad Universitaria, Coyoacán, CDMX/MEX; <sup>2</sup> University of Strathclyde, Glasgow/UK; <sup>3</sup> Martin-Luther-University Halle-Wittenberg, Halle (Saale)/D; <sup>4</sup> Institute for Integrated Cell-Material Sciences, Kyoto University, Kyoto/J; <sup>5</sup> Catalan Institute of Nanoscience and Nanotechnology, CSIC, and The Barcelona Institute of Science and Technology, Barcelona/E; <sup>6</sup> University of Notre Dame, Notre Dame/USA
- A 1.142 **SO<sub>2</sub> Capture and Fluorimetric Detection by a Copper(II)-based MOP**  
A. LOPEZ<sup>1</sup>; <sup>1</sup> Universidad Nacional Autónoma de México (UNAM), CIUDAD DE MÉXICO/MEX
- A 1.143 **Mechanochemically Synthesised Dicyanamide Hybrid Organic-Inorganic Perovskites and their Melt-Quenched Glasses**  
L. McHugh<sup>1</sup>; M. Thorne<sup>1</sup>; A. Chester<sup>1</sup>; M. Etter<sup>2</sup>; K. Užarevič<sup>3</sup>; T. Bennett<sup>1</sup>; <sup>1</sup> University of Cambridge, Cambridge/UK; <sup>2</sup> Deutsches Elektronen Synchrotron DESY, Hamburg/D; <sup>3</sup> Ruđer Bošković Institute, Zagreb/HR
- A 1.144 **Exploration of glassy state in Prussian blue analogues**  
N. Ma<sup>1</sup>; S. Horike<sup>1</sup>; <sup>1</sup> Kyoto University, Kyoto/J
- A 1.145 **High-quality ZIF-62 glass for gas separation**  
O. Smirnova<sup>1</sup>; V. Nozari<sup>1</sup>; S. Savani<sup>1</sup>; L. Wondraczek<sup>1</sup>; A. Knebel<sup>1</sup>; <sup>1</sup> Friedrich-Schiller-University Jena, Jena/D
- A 1.146 **ZIF-8 derived MOF glasses with high microporosity**  
W. Xue<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> Technische Universität Dortmund, Dortmund/D
- A 1.147 **Organic modification of zeolitic imidazolate framework glasses: From defect creation to charge transfer**  
J. Weiss<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> TU Dortmund, Dortmund/D
- A 1.148 **Quantification of gas-accessible microporosity in metal-organic framework glasses**  
L. Frenzel-Beyme<sup>1</sup>; P. Kolodzejski<sup>1</sup>; J. Weiß<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> Technische Universität Dortmund, Dortmund/D
- A 1.149 **Alkali-Ion-Modified Zeolitic Imidazolate Framework Glasses**  
P. Kolodzejski<sup>1</sup>; L. Richter<sup>1</sup>; J. Weiss<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> TU Dortmund, Dortmund/D
- A 1.150 **The Thermal Properties of Hybrid Organic-Inorganic Perovskites (HOIPs)**  
C. Ye<sup>1</sup>; L. McHugh<sup>1</sup>; S. Dutton<sup>1</sup>; T. Bennett<sup>1</sup>; <sup>1</sup> University of Cambridge, Cambridge/UK
- A 1.151 **Nanocomposite composed of metal sulfide and a water-stable metal-organic framework for colorimetric detection of hydrogen peroxide**  
Y. Chen<sup>1</sup>; Y. Chen<sup>2</sup>; Y. Wang<sup>2</sup>; T. Chang<sup>2</sup>; C. Shen<sup>2</sup>; C. Kung<sup>2</sup>; <sup>1</sup> National Cheng Kung University, No.1, University Road, Tainan City, Taiwan/RC; <sup>2</sup> National Cheng Kung University, Tainan City/RC
- A 1.153 **Gold nanoparticle encapsulated monolithic ZIF-67 as CO<sub>2</sub> photoreduction photocatalyst**  
T. Tian<sup>1</sup>; J. Xu<sup>2</sup>; A. Abdolazizi<sup>3</sup>; C. Ji<sup>2</sup>; J. Hou<sup>3</sup>; J. Riley<sup>2</sup>; C. Yan<sup>3</sup>; M. Ryan<sup>2</sup>; F. Xie<sup>2</sup>; C. Petit<sup>1</sup>; <sup>1</sup> Department of Chemical Engineering, Imperial College London, South Kensington Campus, London, SW7 2AZ, UK, London/UK; <sup>2</sup> Department of Materials, Imperial College London, London/UK; <sup>3</sup> The University of Queensland, Queensland/AUS
- A 1.154 **HKUST-1@GO monoliths with improved thermal and mechanical properties**  
J. Farrando-Perez<sup>1</sup>; <sup>1</sup> University of Alicante, Alicante/E
- A 1.155 **Atom-precise nanoclusters encapsulated in metal-organic frameworks for electrocatalytic applications**  
K. Kollmannsberger<sup>1</sup>; A. Bandarenka<sup>1</sup>; J. Warnan<sup>1</sup>; R. Fischer<sup>1</sup>; <sup>1</sup> Technical University Munich, Garching bei München/D
- A 1.156 **Synthesis and Characterisation of CALF-20/GO nanocomposites for microwave assisted adsorbate regeneration**  
R. Ayaz<sup>1</sup>; Z. Wang<sup>2</sup>; A. Lieb<sup>3</sup>; K. Sundmacher<sup>2</sup>; F. Scheffler<sup>1</sup>; <sup>1</sup> Otto-v.-Guericke-University, Magdeburg/D; <sup>2</sup> Max-Planck Institut for Dynamics of Complex Technical Systems, Magdeburg/D

## POSTER PROGRAMME

- A 1.157 **Two-dimensional (2D) Functional MOF/QDN Based Composite Materials as Versatile Platforms for Advanced Environmental and Energy-based Applications**  
A. Karmakar<sup>1</sup>; M. Barsoum<sup>2</sup>; <sup>1</sup> Drexel University, Philadelphia/USA; <sup>2</sup> Drexel University, Philadelphia/USA
- A 1.158 **Electrospinning of Metal-Organic-Frameworks into Nanofiber Architectures for gas separation and air filters**  
A. Kaiser<sup>1</sup>; A. Nambi<sup>2</sup>; R. Ettliger<sup>3</sup>; Y. Zhao<sup>1</sup>; <sup>1</sup> Technical University of Denmark (DTU), Kgs Lyngby/DK; <sup>2</sup> Technical University of Denmark, Kgs Lyngby/DK; <sup>3</sup> University of St. Andrews, St. Andrews/UK
- A 1.159 **Development of Nanocomposites with Adaptive Mechanical Properties: Light-Degradable Nanoporous Filler Particles in Silicone**  
F. Klodwig<sup>1</sup>; L. Finck<sup>2</sup>; T. Herrmann<sup>1</sup>; K. Nolte<sup>1</sup>; S. Noyun<sup>1</sup>; H. Menzel<sup>2</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D; <sup>2</sup> Technische Universität Braunschweig, Braunschweig/D
- A 1.160 **Vertically Aligned Stemmed Nanowires of Fe<sub>3</sub>O<sub>4</sub>/NiCo<sub>2</sub>O<sub>4</sub> as Binder Free Photoanode with Synergistic cathode contribution in Photo-electrocatalytic Water Remediation**  
R. Kaushik<sup>1</sup>; K. Sharma<sup>2</sup>; A. Halder<sup>2</sup>; <sup>1</sup> IIT Mandi, Kamand/IND; <sup>2</sup> IIT Mandi, Mandi/IND
- A 1.162 **Two-Dimensional Coordination Polymers with Curcuminoid Ligands**  
M. Soler<sup>1</sup>; A. Campos<sup>1</sup>; J. Iribarra-Araya<sup>2</sup>; L. Rodríguez-Cid<sup>3</sup>; M. Surós-Roman<sup>3</sup>; W. Qian<sup>3</sup>; N. Parra<sup>1</sup>; C. Domingo<sup>3</sup>; N. Aliaga-Alcalde<sup>4</sup>; <sup>1</sup> University of Chile, Santiago/RCH; <sup>2</sup> Universidad de Chile, Santiago/RCH; <sup>3</sup> Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Bellaterra/E; <sup>4</sup> Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) y ICREA, Bellaterra/E
- A 1.163 **Metal Phosphonate MOFs as Novel Consolidants for Cultural Heritage Artefacts**  
K. Demadis<sup>1</sup>; E. Armakola<sup>1</sup>; <sup>1</sup> University of Crete, Heraklion/GR

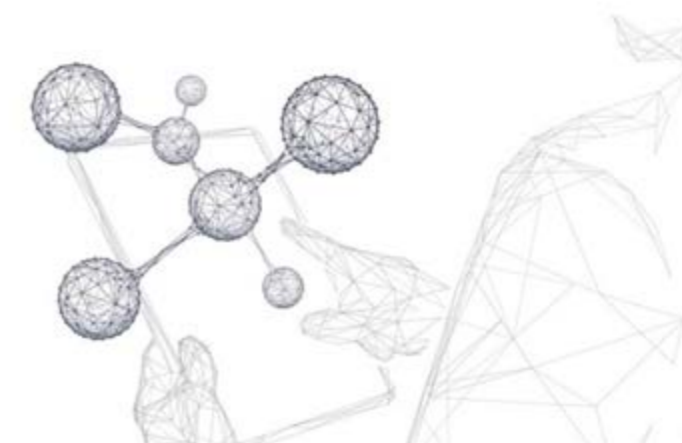
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## POSTER PROGRAMME

- A 1.164 **Targeting surface spin-crossover coordination networks via electrospray ionization deposition**  
N. Suryadevara<sup>1</sup>; B. Schoof<sup>2</sup>; D. Meier<sup>2</sup>; A. Walz<sup>2</sup>; A. Huettig<sup>2</sup>; J. Reichert<sup>2</sup>; S. Klyatskaya<sup>1</sup>; A. Papageorgiou<sup>2</sup>; M. Ruben<sup>1</sup>; J. Barth<sup>2</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT)/ Institute of Nanotechnology, Karlsruhe/D; <sup>2</sup> Technical University of Munich, Munich/D
- A 1.165 **Shaped Inorganic-Organic Hybrid Catalyst Materials Based on Highly Crosslinked Porous BINAP Polymers for FA Decomposition**  
S. Seidel<sup>1</sup>; P. Hausoul<sup>1</sup>; R. Palkovits<sup>1</sup>; <sup>1</sup> RWTH Aachen University, Aachen/D
- A 1.166 **Direct growth of MOFs on silicon surfaces**  
W. Fu<sup>1</sup>; H. Yuan<sup>1</sup>; N. Soulmi<sup>1</sup>; M. Rosso<sup>1</sup>; W. Fu<sup>1</sup>; <sup>1</sup> CNRS - Ecole Polytechnique - IP Paris, Palaiseau/F
- A 1.167 **Processing Titanium-Organic Frameworks as thin films: nanoparticles and metal-induced transformations**  
M. Romero Angel<sup>1</sup>; J. Castells Gil<sup>1</sup>; V. Rubio-Giménez<sup>2</sup>; R. Ameloot<sup>2</sup>; S. Tatay<sup>1</sup>; C. Martí-Gastaldo<sup>1</sup>; <sup>1</sup> Universitat de València, Paterna, Valencia/E; <sup>2</sup> KU Leuven, Centre for Membrane Separations, Adsorption, Catalysis and Spectroscopy for Sustainable Solutions, Leuven/B
- A 1.168 **Environmentally benign scalable sorption-vapor synthesis of mechanically robust MOF-polymer composites for reactive toxin protection**  
S. Morgan<sup>1</sup>; M. Willis<sup>1</sup>; G. Peterson<sup>2</sup>; J. Mahle<sup>2</sup>; G. Parsons<sup>1</sup>; <sup>1</sup> North Carolina State University, Raleigh/USA; <sup>2</sup> U.S. Army Combat Capabilities Command Chemical Biological Center, Aberdeen Proving Ground/USA
- A 1.169 **Aerosol jet printing of the ultramicroporous calcium squarate metal-organic framework**  
D. Kravchenko<sup>1</sup>; A. Matavž<sup>1</sup>; V. Rubio-Giménez<sup>2</sup>; H. Vanduffel<sup>1</sup>; M. Verstrecken<sup>1</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> KU Leuven, Centre for Membrane Separations, Adsorption, Catalysis and Spectroscopy for Sustainable Solutions, Leuven/B
- A 1.170 **Hierarchical mesoporous metallic and oxide films fabricated by magnetron sputtering**  
J. Zawadzki<sup>1</sup>; M. Wzorek<sup>1</sup>; K. Ćwik<sup>1</sup>; M. Borysiewicz<sup>1</sup>; <sup>1</sup> Łukasiewicz Research Network - Institute of Microelectronics and Photonics, Warsaw/PL
- A 1.171 **Tunable Emission in Lanthanide-SURMOFs Heteroepitaxial Thin Films: White Light Emission and Thermometer**  
D. Chen<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen/D
- A 1.172 **ZIF-62 derived hybrid glass thin films**  
O. Sisman<sup>1</sup>; O. Smirnova<sup>2</sup>; S. Savani<sup>2</sup>; V. Nozari<sup>2</sup>; J. Velazquez Garcia<sup>1</sup>; D. Galusek<sup>1</sup>; A. Knebel<sup>2</sup>; L. Wondraczek<sup>2</sup>; <sup>1</sup> FunGlass Research Center, Trencin/SK; <sup>2</sup> Friedrich Schiller University Jena, Jena/D
- A 1.173 **Fe-BDC MOF thin layers for the passivation of Si anode in Li-ion batteries**  
N. Soulmi Chibani<sup>1</sup>; W. Fu<sup>1</sup>; F. Ozanam<sup>1</sup>; M. Rosso<sup>1</sup>; C. Henry de Villeneuve<sup>1</sup>; <sup>1</sup> CNRS - Ecole Polytechnique - IPP, Palaiseau/F
- A 1.174 **Analysis of Multi-layer Thin Film Structures of Metal Hexacyanometallates**  
L. Harms<sup>1</sup>; G. Wittstock<sup>1</sup>; <sup>1</sup> Carl von Ossietzky University Oldenburg, Oldenburg/D
- A 1.175 **MOF-on-MOF Heterostructured Thin Films: A Rational Design to Explore Interfacial Properties**  
P. Sindhu<sup>1</sup>; <sup>1</sup> IISER Pune, Pune/IND
- A 1.176 **Hydropyrolysis – a way toward previously unattainable MOF-mediated materials**  
I. Khan<sup>1</sup>; L. Garzon-Tovar<sup>1</sup>; S. Ould-Chikh<sup>1</sup>; G. Shterk<sup>1</sup>; T. Shoinkhorova<sup>1</sup>; M. Caglayan<sup>1</sup>; A. Ramirez<sup>1</sup>; J. Cerrillo<sup>1</sup>; D. Poloneeva<sup>1</sup>; J. Gascon<sup>1</sup>; <sup>1</sup> King Abdullah University of Science and Technology (KAUST) / KAUST Catalysis Center, JEDDAH/SAR
- A 1.177 **Single-Atom Catalyst supported on a bioMOF**  
P. Escamilla Berenguer<sup>1</sup>; J. Ferrando Soria<sup>1</sup>; E. Pardo Marín<sup>1</sup>; D. Armentano<sup>2</sup>; <sup>1</sup> University of Valencia, Paterna (Valencia)/E; <sup>2</sup> Università della Calabria, Cosenza /I
- A 1.178 **Synthesis of N-doped carbon electrocatalysts derived from MOF-5**  
Y. Shu<sup>1</sup>; Y. Taniguchi<sup>1</sup>; K. Miyake<sup>1</sup>; Y. Uchida<sup>1</sup>; N. Nishiyama<sup>1</sup>; <sup>1</sup> Osaka University, Toyonaka/J
- A 1.179 **Metal Oxide Materials Generated by Pyrolysis and Calcination of MOF Systems - Hierarchical Pore Structure and Surface-Bound Micro- and Nano-Particles**  
F. Mertens<sup>1</sup>; B. Störr<sup>1</sup>; B. Berger<sup>1</sup>; D. Steinbach<sup>1</sup>; A. Lißner<sup>1</sup>; <sup>1</sup> Technische Universität Bergakademie Freiberg, Freiberg/D
- A 1.180 **Cu-functionalised porous boron nitride derived from metal-organic framework as CO<sub>2</sub> photoreduction photocatalyst**  
T. Tian<sup>1</sup>; J. Xu<sup>2</sup>; Y. Xiong<sup>3</sup>; N. Ramanan<sup>4</sup>; M. Ryan<sup>4</sup>; F. Xie<sup>2</sup>; C. Petit<sup>5</sup>; <sup>1</sup> Imperial College London, London/UK; <sup>2</sup> Department of Materials, Imperial College London, London/UK; <sup>3</sup> Universidad Autónoma de Madrid, Madrid/E; <sup>4</sup> Diamond Light Source Ltd, Didcot/UK; <sup>5</sup> Department of Chemical Engineering, Imperial College London, South Kensington Campus, London, SW7 2AZ, UK, London/UK

## POSTER PROGRAMME

- A 1.181 **Multimetallic Porphyrinic Metal-Organic Frameworks As Precursors Of Supported Metal Nanoalloys**  
R. Gil San Millan<sup>1</sup>; M. Pander<sup>1</sup>; E. Stachura<sup>1</sup>; W. Bury<sup>1</sup>; <sup>1</sup> University of Wroclaw, Wroclaw/PL
- A 1.182 **MOF-templated Porous Parylene Particles Synthesis via Chemical Vapor Polymerization**  
S. Begum<sup>1</sup>; S. Bräse<sup>1</sup>; W. Wenzel<sup>1</sup>; J. Lahann<sup>1</sup>; M. Tsotsalas<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe/D
- A 1.183 **Carbon-Based Hybrid Materials Derived from Metal-Organic Framework and Bacterial Cellulose Composites for Electrochemical Applications**  
M. Balkan<sup>1</sup>; O. Ziyilhan<sup>2</sup>; H. Ipekci<sup>2</sup>; A. Uzunoglu<sup>2</sup>; M. Erkartal<sup>3</sup>; U. Sen<sup>1</sup>; <sup>1</sup> Eskisehir Technical University, Eskisehir/TR; <sup>2</sup> Necmettin Erbakan University, Konya/TR; <sup>3</sup> Abdullah Gul University, Kayseri/TR
- A 1.184 **Investigation of the thermokinetics of the decomposition of mixed metal Zr/W UiO66-type MOF materials for the formation of hybrid oxides ZrO<sub>2</sub>@WO<sub>2</sub>**  
C. Fotsop<sup>1</sup>; A. Lieb<sup>1</sup>; F. Scheffler<sup>1</sup>; <sup>1</sup> Otto-v.-Guericke-University, Magdeburg/D
- A 1.185 **Homoporous hybrid membranes containing metal-organic cages for CO<sub>2</sub> separation**  
Z. Yang<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP
- A 1.186 **Covalent organic framework membranes for catalyst recovery by organic solvent nanofiltration**  
H. Yang<sup>1</sup>; <sup>1</sup> , Singapore/SGP
- A 1.187 **Selective Ion Sieving and Disorder in Membranes Constructed from Two-Dimensional Covalent Organic Frameworks**  
B. Parkinson<sup>1</sup>; J. Hoberg<sup>2</sup>; <sup>1</sup> University of Wyoming, Laramie, Wyoming/USA; <sup>2</sup> University of Wyoming, Laramie/USA
- A 1.188 **Upgrading the CO<sub>2</sub> separation with novel Covalent Organic Framework-based Mixed Matrix Membranes**  
A. Nabais<sup>1</sup>; P. Ortiz Albo<sup>1</sup>; V. Diniz<sup>1,2</sup>; L. Rodrigues<sup>1,2</sup>; S. Freitas<sup>1,2</sup>; P. Mothé-Esteves<sup>2</sup>; L. Branco<sup>1</sup>; L. Neves<sup>1</sup>; <sup>1</sup> LAQV, REQUIMTE / Faculty of Science and Technology, NOVA University of Lisbon, FCT-UNL, Caparica/P; <sup>2</sup> UFRJ - Universidade Federal do Rio de Janeiro, Rio de Janeiro/BR
- A 1.189 **Growth of ZIF-8 on 3D printed ceramic structure for gas separation**  
S. Rana<sup>1</sup>; O. Smirnova<sup>1</sup>; S. Savani<sup>1</sup>; L. Wondraczek<sup>1</sup>; A. Knebel<sup>1</sup>; <sup>1</sup> Friedrich-Schiller-University Jena, Jena/D
- A 1.190 **Benzimidazole-dichloroimidazole zeolitic frameworks based on ZIF-7 and their application in mixed matrix membranes for CO<sub>2</sub>/N<sub>2</sub> separation**  
Q. Jia<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- A 1.191 **Formation of a Three-Dimensional Polyrotaxane Metal-Organic Framework by a [2+2] Cycloaddition Reaction between Wheels**  
H. Ju<sup>1</sup>; M. Shin<sup>1</sup>; I. Park<sup>2</sup>; J. Jung<sup>1</sup>; J. Vittal<sup>3</sup>; S. Lee<sup>1</sup>; <sup>1</sup> Gyeongsang National University, Jinju /ROK; <sup>2</sup> Chungnam National University, Daejeon/ROK; <sup>3</sup> National University of Singapore, Singapore/SGP
- A 1.192 **Investigation into the Solvent Assisted Ligand Exchange of ZIF-8: the impact of linker and solvent composition on gas sorption properties**  
A. Škrjanc<sup>1</sup>; N. Zabukovec Logar<sup>1</sup>; <sup>1</sup> National Institute of Chemistry and University of Nova Gorica, Ljubljana/SLO
- B 1.193 **Dynamic Covalent Exchange of MOF Nanoparticles**  
A. Edward<sup>1</sup>; A. Naden<sup>1</sup>; E. Kay<sup>1</sup>; R. Morris<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- B 1.194 **A post-synthetic modification strategy for the expansion of π-conjugation in covalent organic frameworks**  
S. Fernandes<sup>1</sup>; K. Cid-Seara<sup>1</sup>; L. Frey<sup>2</sup>; N. Guldris<sup>1</sup>; C. Rodríguez Abreu<sup>3</sup>; Y. Kolen'ko<sup>1</sup>; A. Silva<sup>4</sup>; D. Medina<sup>5</sup>; L. Salonen<sup>1</sup>; <sup>1</sup> International Iberian Nanotechnology Laboratory, Braga/P; <sup>2</sup> LMU München, München/D; <sup>3</sup> Institute of Advanced Chemistry of Catalonia, Barcelona/E; <sup>4</sup> Associate Laboratory for Green Chemistry-Network of Chemistry and Technology (LAQV-REQUIMTE), Aveiro/P; <sup>5</sup> Ludwig-Maximilian-University Munich, München/D
- B 1.195 **Exchange of coordinated carboxylates with azolates as a route to obtain a microporous zinc-azolate framework**  
K. Fahy<sup>1</sup>; T. Islamoglu<sup>2</sup>; O. Farha<sup>2</sup>; <sup>1</sup> Northwestern University, Evanston, IL /USA; <sup>2</sup> Northwestern University, Evanston/USA
- B 1.196 **MOF-808 doped with transition metals and lanthanides for barcode design**  
N. Marquardt<sup>1</sup>; F. von der Haar<sup>2</sup>; A. Schaate<sup>2</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D; <sup>2</sup> Leibniz Universität Hannover, Hannover/D
- B 1.197 **A Post-Synthetic Modification Strategy for Enhancing Pt Adsorption in MOF/Polymer Composites**  
T. Schertenleib<sup>1</sup>; V. Karve<sup>1</sup>; D. Stoian<sup>2</sup>; O. Trukhina<sup>1</sup>; M. Asgari<sup>3</sup>; W. Queen<sup>1</sup>; <sup>1</sup> EPFL Valais Wallis, Sion/CH; <sup>2</sup> European Synchrotron Radiation Facility (ESRF), Grenoble/F; <sup>3</sup> University of Cambridge, Cambridge/UK
- B 1.198 **Tetrazine click chemistry as a gentle method of covalent functionalization of metal-organic frameworks: JUK-20 case studies**  
D. Jędrzejowski<sup>1</sup>; D. Matoga<sup>1</sup>; <sup>1</sup> Jagiellonian University in Krakow, Cracow/PL

## POSTER PROGRAMME

- B 1.199 **Postsynthetic Pore-Selective Functionalization of NU-1000**  
M. Bengsch<sup>1</sup>; H. Petersen<sup>1</sup>; N. Tchorz<sup>1</sup>; C. Neumann<sup>1</sup>; <sup>1</sup> Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr/D
- B 1.200 **Post-Synthetic Metalation of MOFs: Alternative Adsorption Sites for Sulfur Gas Uptake**  
T. Evans<sup>1</sup>; K. Walton<sup>1</sup>; <sup>1</sup> Georgia Institute of Technology, Atlanta, GA/USA
- Functions**
- B 2.02 **DUT-52(Zr)-based mixed matrix membrane as microextraction device for analyses**  
A. Gutiérrez-Serpa<sup>1</sup>; T. Kundu<sup>1</sup>; J. Pasán<sup>2</sup>; A. Jiménez-Abizanda<sup>3</sup>; S. Kaskel<sup>1</sup>; I. Senkovska<sup>4</sup>; V. Pino<sup>2</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D; <sup>2</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E; <sup>3</sup> University of La Laguna, San Cristóbal de La Laguna/E; <sup>4</sup> Technische Universität Dresden, Dresden/D
- B 2.03 **“4+2” Phenyl Ligands Towards Semiconducting Conjugated Coordination Polymers with High Mobility**  
X. Huang<sup>1</sup>; R. Dong<sup>1</sup>; X. Feng<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- B 2.04 **Parts-per-million detection of volatile organic compounds via surface plasmon polaritons and vapor-phase-deposited metal-organic framework thin films**  
M. Tietze<sup>1</sup>; M. Obst<sup>1</sup>; G. Arnauts<sup>1</sup>; N. Wauteraerts<sup>1</sup>; S. Rodríguez-Hermida<sup>1</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> KU Leuven - University of Leuven, Leuven/B
- B 2.05 **Multivariable MOF Capacitive Gas Sensors for Selective Detection of Volatile Organic Compounds**  
A. Matavž<sup>1</sup>; M. Verstreken<sup>1</sup>; M. Tietze<sup>1</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> KU Leuven, Leuven/B
- B 2.06 **Carboxylate-based Piezo-actuated MOF@SAW-Devices**  
J. Schnabel<sup>1</sup>; J. Winkeljann<sup>1</sup>; A. Schulz<sup>1</sup>; A. Wixforth<sup>1</sup>; P. Lunkenheimer<sup>1</sup>; H. Oberhofer<sup>2</sup>; D. Volkmer<sup>1</sup>; <sup>1</sup> University of Augsburg, Augsburg/D; <sup>2</sup> Technical University Munich, Garching/D
- B 2.07 **Selective Reactions in Metal-organic frameworks: Sensor Materials and Anti-counterfeiting Systems**  
N. Marquardt<sup>1</sup>; M. Schulz<sup>1</sup>; A. Schaate<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover / Institut für Anorganische Chemie, Hannover/D
- B 2.08 **In-situ Electrochemical Synthesis of Copper Hexahydroxytriphenylene MOF for Chemiresistive Gas Sensing**  
A. Lister<sup>1</sup>; B. Armitage<sup>1</sup>; Y. Wang<sup>1</sup>; M. Castell<sup>1</sup>; <sup>1</sup> University of Oxford, Oxford/UK
- B 2.09 **Sensor arrays with unique selectivities: MOF-based electronic noses for detecting VOC mixtures and photoprogrammable selectivities**  
P. Qin<sup>1</sup>; S. Okur<sup>1</sup>; L. Heinke<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D
- B 2.10 **Lanthanide-based oxygen gas sensing in luminescent MOFs**  
T. Kasper<sup>1</sup>; K. Müller-Buschbaum<sup>1</sup>; <sup>1</sup> Justus Liebig University Gießen, Gießen/D
- B 2.11 **2-Dimensional Rare Earth Metal-Organic Frameworks based on a hexanuclear secondary building unit as efficient detectors for vapours of nitroaromatics and volatile organic compounds**  
A. Tasiopoulos<sup>1</sup>; N. Panagiotou<sup>1</sup>; F. Moscoso<sup>2</sup>; T. Lopes-Costa<sup>2</sup>; J. Pedrosa<sup>2</sup>; <sup>1</sup> University of Cyprus, Nicosia/CY; <sup>2</sup> Universidad Pablo de Olavide, Seville/E
- B 2.12 **Hierarchical conductive metal organic frameworks film with high permeability for efficient heterogeneous mass transfer**  
C. Huang<sup>1</sup>; X. Feng<sup>1</sup>; R. Dong<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D
- B 2.13 **System-integration of Two-Dimensional Metal-organic Frameworks as transistors for (bio)sensor applications**  
H. Jiang<sup>1</sup>; B. Cheng<sup>2</sup>; S. Ingebrandt<sup>1</sup>; V. Pachauri<sup>1</sup>; <sup>1</sup> RWTH Aachen - Institute of Materials in Electrical Engineering 1, Aachen/D; <sup>2</sup> RWTH Aachen University, Aachen/D
- B 2.14 **Selective Cobalt precipitation for the synthesis of precursors for cathode materials of Li-ion batteries**  
A. Lavergne-Bril<sup>1</sup>; D. Peralta<sup>1</sup>; J. Colin<sup>1</sup>; P. Maldivi<sup>1</sup>; C. Celle<sup>1</sup>; S. Patoux<sup>1</sup>; <sup>1</sup> CEA Grenoble, Grenoble/F
- B 2.15 **Azo-functional MOFs for Charge Storage in Sodium-Ion Batteries**  
A. Desai<sup>1</sup>; R. Morris<sup>1</sup>; A. Armstrong<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- B 2.16 **Catalysing the Performance of Li-Sulfur Batteries with Two-Dimensional Conductive Metal Organic Frameworks**  
P. Bhauriyal<sup>1</sup>; T. Heine<sup>2</sup>; <sup>1</sup> TU Dresden, Dresden/D; <sup>2</sup> Technische Universität Dresden (TUD), Dresden/D
- B 2.17 **Sodium Metal-Organic Frameworks (Na-MOFs)/Hard Carbon Composite Negative Electrode Materials for Sodium-Ion Batteries**  
J. Cabañero<sup>1</sup>; A. Desai<sup>1</sup>; R. Morris<sup>1</sup>; A. Armstrong<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK

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- B 2.18 **Covalent organic framework and ionic-liquid composite electrolyte for directional ion transport in sodium-ion batteries**  
A. Singh<sup>1</sup>; T. Bein<sup>1</sup>; <sup>1</sup> University of Munich (LMU), Department of Chemistry and Center for NanoScience (CeNS), Munich/D
- B 2.19 **Study on the electronic and ionic transports within redox-active zirconium-based metal-organic frameworks in aqueous electrolytes**  
C. Shen<sup>1</sup>; Y. Chen<sup>2</sup>; Y. Wang<sup>2</sup>; T. Chang<sup>2</sup>; Y. Chen<sup>2</sup>; C. Kung<sup>2</sup>; <sup>1</sup> National Cheng Kung University, No.1, University Road, Tainan City, Taiwan/RC; <sup>2</sup> National Cheng Kung University, Tainan City/RC
- B 2.20 **Effect of electrode construction method on the catalytic activity of Ni-MOF-525 in the electrochemical CO<sub>2</sub> reduction reaction**  
D. Narvaez-Celada<sup>1</sup>; A. Varela<sup>1</sup>; <sup>1</sup> National Autonomous University of Mexico, Mexico City/MEX
- B 2.21 **Catalytically Active Silver Nanoparticles Stabilized on a Thiol-functionalized Metal-Organic Framework for Efficient Hydrogen Evolution Reaction**  
S. M<sup>1</sup>; <sup>1</sup> Indian Institute of Science Education and Research, Thiruvananthapuram /IND
- B 2.22 **High Mg<sup>2+</sup>-ion conductivity in ionic-liquid free MOF electrolytes**  
R. Maile<sup>1</sup>; K. Müller-Buschbaum<sup>1</sup>; <sup>1</sup> JLU Giessen, Gießen/D
- B 2.23 **sp-Carbon Incorporated Conductive Metal-Organic Framework as Photocathode for Photoelectrochemical Hydrogen Generation**  
Y. Lu<sup>1</sup>; X. Feng<sup>1</sup>; R. Dong<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- B 2.24 **Ultra-Thin Quantifiably Tunable Luminescent Metal-Organic Nanosheets**  
D. Sherman<sup>1</sup>; M. Gutiérrez<sup>2</sup>; J. Tan<sup>3</sup>; <sup>1</sup> The University of Oxford, Oxford/UK; <sup>2</sup> University of Castilla-La Mancha, Ciudad Real/E; <sup>3</sup> University of Oxford, Oxford/UK
- B 2.25 **Optical properties of metal-organic frameworks from first principles**  
M. Treger<sup>1</sup>; P. Behrens<sup>1</sup>; A. Schneider<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover / Institut für Anorganische Chemie, Hannover/D
- B 2.26 **Observation of two distinct luminescence bands for open- and closed-pore structures in MIL-53(Al)**  
L. Barbata<sup>1</sup>; D. Scavuzzo<sup>1</sup>; S. Agnello<sup>1</sup>; F. Gelardi<sup>1</sup>; M. Cannas<sup>1</sup>; G. Buscarino<sup>1</sup>; <sup>1</sup> University of Palermo, Palermo/I
- B 2.27 **Immobilization of highly luminescent metal complexes in zirconium-based metal-organic frameworks**  
K. Terlinden<sup>1</sup>; S. Henke<sup>2</sup>; <sup>1</sup> TU Dortmund, Dortmund/D; <sup>2</sup> Technische Universität Dortmund, Dortmund/D
- B 2.28 **Synthesis and optical modulation of Co-ZIF-90-on-ZIF-8 coatings**  
N. Keppler<sup>1</sup>; N. Keppler<sup>1</sup>; A. Schaate<sup>1</sup>; K. Hindricks<sup>1</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D
- B 2.29 **Hierarchical superparamagnetic MOFs nanovectors for anti-inflammation and cancer theranostics**  
H. Zhao<sup>1</sup>; S. Sene<sup>2</sup>; F. Carn<sup>3</sup>; F. Gazeau<sup>3</sup>; E. Dumas<sup>2</sup>; C. Serre<sup>1</sup>; N. Steunou<sup>4</sup>; <sup>1</sup> Institut des Matériaux Poreux de Paris, ENS, ESPCI, PSL University, Paris/F; <sup>2</sup> Institut Lavoisier de Versailles, UVSQ, Versailles/F; <sup>3</sup> Laboratoire Matière et Systèmes Complexes, Université de Paris, Paris/F; <sup>4</sup> Université Versailles St Quentin en Yvelines, Versailles/F
- B 2.30 **High throughput screening analysis of metal-organic frameworks for drug delivery in pancreatic cancer cell lines**  
F. Melle<sup>1</sup>; <sup>1</sup> University of Cambridge, Department of Chemical Engineering and Biotechnology, Cambridge/UK
- B 2.31 **DNA-Mimicking Metal-Organic Frameworks with Accessible Adenine Faces for Complementary Base Pairing**  
S. Chand<sup>1</sup>; O. Alahmed<sup>2</sup>; W. Baslyman<sup>1</sup>; N. Khashab<sup>1</sup>; <sup>1</sup> King Abdullah University of Science and Technology (KAUST) / Advanced Membranes and Porous Materials Center, Thuwal/SAR; <sup>2</sup> King Abdullah University of Science and Technology (KAUST), Thuwal/SAR
- B 2.32 **Optimizing the Synthesis of MOF-Polymer-Hybrid Materials with a New Machine Learning-Based Screening Method – to Improve Drug Delivery Processes.**  
I. Wagner<sup>1</sup>; S. Spiegel<sup>1</sup>; S. Begum<sup>1</sup>; F. Kirschhöfer<sup>1</sup>; G. Delaittre<sup>2</sup>; M. Tsotsalas<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology, Karlsruhe/D; <sup>2</sup> Berg. Universität Wuppertal, Wuppertal/D
- B 2.33 **Mechanism of Drug Encapsulation in MOFs focusing on Solvent Dipole**  
K. Ohshima<sup>1</sup>; S. Ohsaki<sup>1</sup>; H. Nakamura<sup>1</sup>; S. Watano<sup>1</sup>; <sup>1</sup> Osaka Metropolitan University, Sakai/J
- B 2.34 **A Biocompatible Zn(II) metal-organic framework with exceptional doxorubicin uptake capacity**  
A. Ahmed<sup>1</sup>; <sup>1</sup> National University of Ireland Galway, Galway/IRL
- B 2.35 **Protein encapsulation through Lewis-acid-mediated MOF mineralization for effective intracellular delivery**  
J. Cases Díaz<sup>1</sup>; B. Lozano Torres<sup>1</sup>; M. Giménez-Marqués<sup>1</sup>; <sup>1</sup> Instituto de Ciencia Molecular (ICMol), Universitat de Valencia, Paterna/E
- B 2.36 **Porous Organic Polymer for the Ni-Catalyzed Direct C-H Arylation of Heteroarenes**  
J. Canivet<sup>1</sup>; <sup>1</sup> Université Claude Bernard Lyon, Villeurbanne/F

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- B 2.37 **Templating cooperative active sites in metal–organic frameworks**  
D. Xiao<sup>1</sup>; <sup>1</sup> University of Washington, Seattle, WA/USA
- B 2.38 **Simultaneous Hydrogen Production and Molecular Synthesis over Photoactive Metal-Organic Frameworks**  
N. Chiu<sup>1</sup>; <sup>1</sup> Oregon State University, Corvallis/USA
- B 2.39 **Zn-MOF-74 Enables Tandem Hydroformylation-Aldol Condensation by Adsorption-Driven Modulation**  
P. Gäumann<sup>1</sup>; D. Ongari<sup>2</sup>; B. Smit<sup>2</sup>; J. van Bokhoven<sup>3</sup>; M. Ranocchiari<sup>1</sup>; <sup>1</sup> PSI, Villigen/CH; <sup>2</sup> EPFL Valais, Sion/CH; <sup>3</sup> ETH / Paul Scherrer Institute (PSI), Zürich/ Villigen/CH
- B 2.40 **Catalytic performance of MIL-100(Fe) in the fixation of CO<sub>2</sub> into cyclic carbonates**  
J. Delgado-Marín<sup>1</sup>; J. Narciso<sup>1</sup>; E. Ramos Fernandez<sup>2</sup>; <sup>1</sup> Universidad de Alicante, Departamento de Química Inorgánica-Instituto Universitario de Materiales, Alicante/E; <sup>2</sup> University of Alicante, Alicante/E
- B 2.41 **Computationally Assisted Functionalization of UiO-67 to promote the synthesis of methyl acrylate from CO<sub>2</sub>**  
D. Tian<sup>1</sup>; G. Pareras<sup>1</sup>; A. Twomey<sup>1</sup>; <sup>1</sup> University College Cork, Cork/IRL
- B 2.42 **Ab-initio Prediction of MOFs Catalysts for CO<sub>2</sub> Reduction**  
S. Liu<sup>1</sup>; D. Fan<sup>1</sup>; P. Lyu<sup>1</sup>; G. Maurin<sup>1</sup>; <sup>1</sup> ICGM, Univ. Montpellier, CNRS, Montpellier/F
- B 2.43 **Bifunctional MOF-based Catalyst for Efficient Cycloaddition of CO<sub>2</sub> to Epoxides under Mild Conditions**  
M. Pander<sup>1</sup>; <sup>1</sup> University of Wrocław, Wrocław/PL
- B 2.44 **Insights into the Ru substitution on redox activity of HKUST-1 in oxidative desulfurization reaction of a model fuel**  
M. Moghadasi<sup>1</sup>; R. Khajavian<sup>1</sup>; M. Mirzaei<sup>1</sup>; <sup>1</sup> Ferdowsi University of Mashhad, Mashhad/IR
- B 2.45 **Ultra-fast catalytic detoxification of organophosphates by nano-zeolitic imidazolate frameworks**  
A. Ebrahimi<sup>1</sup>; L. Krivosudský<sup>2</sup>; <sup>1</sup> Comenius University in Bratislava, Bratislava 4/SK; <sup>2</sup> Comenius University in Bratislava, Bratislava/SK
- B 2.46 **Confinement Effects of Porphyrin MOFs in Catalysis**  
K. Hemmer<sup>1</sup>; M. Cokoja<sup>1</sup>; R. Fischer<sup>1</sup>; <sup>1</sup> Technische Universität München, Garching/D
- B 2.47 **Selective Methane Oxidation using Metal-Organic Frameworks**  
P. Melix<sup>1</sup>; R. Snurr<sup>2</sup>; <sup>1</sup> Universität Leipzig, Leipzig/D; <sup>2</sup> Northwestern University, Evanston/USA
- B 2.48 **Introducing a Second Metal to Zr-MOF-808 to Increase Activity as an Artificial Peptidase**  
A. Mullaliu<sup>1</sup>; C. Simms<sup>1</sup>; F. de Azambuja<sup>1</sup>; T. Parac-Vogt<sup>1</sup>; <sup>1</sup> KU Leuven, Leuven/B
- B 2.49 **Effective Degradation of Novichok Nerve Agents by the Zirconium Metal-Organic Framework MOF-808**  
M. de Koning<sup>1</sup>; C. Soares<sup>2</sup>; M. van Grol<sup>1</sup>; R. Bross<sup>1</sup>; G. Maurin<sup>1</sup>; <sup>1</sup> TNO Defense, Safety and Security,, Rijswijk/NL; <sup>2</sup> ICGM, Univ. Montpellier, CNRS, ENSCM, Montpellier/F
- B 2.50 **3D Printed Hierarchical Aerogel Electrode of Metal-Organic Framework Derived Single Atom Electrocatalysts for Oxygen Evolution Reaction**  
P. Liu<sup>1</sup>; <sup>1</sup> Technical University of Munich, Garching/D
- B 2.51 **Phenanthroline-based Covalent-Organic Framework for (Photo)electrochemical CO<sub>2</sub> Reduction**  
L. Spies<sup>1</sup>; J. Schneider<sup>1</sup>; A. Patrocinio<sup>2</sup>; T. Bein<sup>1</sup>; <sup>1</sup> Ludwig Maximilian Universität München, München/D; <sup>2</sup> Federal University of Uberlandia, Uberlandia/BR
- B 2.52 **Potential use of MOFs as catalysts for glycolysis of poly(terephthalate ethylene)**  
P. Jutrzenka Trzebiatowska<sup>1</sup>; M. Baluk<sup>2</sup>; A. Zaleska-Medynska<sup>3</sup>; M. Gazda<sup>4</sup>; <sup>1</sup> University of Gdańsk, Gdańsk/PL; <sup>2</sup> University of Gdansk, Gdańsk/PL; <sup>3</sup> University of Gdansk,, Gdańsk/PL; <sup>4</sup> Gdansk University of Technology, Gdańsk/PL
- B 2.53 **Design of low crystalline Bimetallic AgCu MOF for electrochemical CO<sub>2</sub> reduction**  
A. Nambi<sup>1</sup>; <sup>1</sup> DTU, Kongens Lyngby/DK
- B 2.54 **Assessing the performance of dye sensitized monolithic NH<sub>2</sub>-UiO-66 as a photocatalytic agent for hydrogen evolution**  
S. Mtetwa<sup>1</sup>; E. Lam<sup>1</sup>; D. Fairen-Jimenez<sup>2</sup>; E. Reisner<sup>1</sup>; A. Wheatley<sup>1</sup>; <sup>1</sup> University of Cambridge, Department of Chemistry, Cambridge/UK; <sup>2</sup> University of Cambridge, Department of Chemical Engineering and Biotechnology, Cambridge/UK
- B 2.55 **Heterogenized Phosphine Rhodium Molecular Catalyst within Metal-Organic Framework (MOF) for Ethylene Hydroformylation**  
P. Samanta<sup>1</sup>; J. Canivet<sup>2</sup>; <sup>1</sup> Institute of research on catalysis and the environment of Lyon, Villeurbanne/F; <sup>2</sup> Institute of research on catalysis and the environment of Lyon, Lyon/F
- B 2.56 **Tuning selectivity of commercial electro oxidation catalyst via facile MOF coating**  
L. Shupletsov<sup>1</sup>; S. Amanzadeh Salout<sup>1</sup>; A. Hossain Khan<sup>1</sup>; A. De<sup>1</sup>; I. Senkowska<sup>1</sup>; S. Kaskel<sup>1</sup>; E. Brunner<sup>1</sup>; <sup>1</sup> TU Dresden/D

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- B 2.57 **Photocatalytic reduction of CO<sub>2</sub> to formates with MIL-100/101**  
P. Länger<sup>1</sup>; J. Senker<sup>1</sup>; <sup>1</sup> Universität Bayreuth, Bayreuth/D
- B 2.58 **Self-Templated Conversion of A Self-healing Metal-Organic “Soft” Coordination Polymer Gel into Active Photocatalyst: Nd/MF@Carbon Quasiaserogels Boosting Photocatalytic CO<sub>2</sub> Reduction by Water**  
N. Alam<sup>1</sup>; D. Debajit Sarma<sup>1</sup>; <sup>1</sup> Indian Institute of Technology Patna, Patna/IND
- B 2.59 **Metal-free Sulfide Covalent Organic Polymers as a hypervalent S-O interaction heterogeneous catalysts**  
M. Melero Gutiérrez<sup>1</sup>; F. Lladrés i Xamena<sup>1</sup>; U. Díaz<sup>1</sup>; <sup>1</sup> ITQ (UPV-CSIC), Valencia/E
- B 2.60 **NHC-functionalized linkers for the fabrication of SURMOFs applicable in SABRE-NMR**  
S. Oßwald<sup>1</sup>; <sup>1</sup> Karlsruher Institut für Technologie (KIT), Karlsruhe/D
- B 2.61 **Correlating oxidation states and electrocatalytic activity in bifunctional two-dimensional conjugated di-copper metal-organic frameworks**  
A. Dominic<sup>1</sup>; Z. Wang<sup>1</sup>; A. Kuc<sup>2</sup>; P. Petkov<sup>3</sup>; H. Ly<sup>1</sup>; T. Pham<sup>4</sup>; M. Kutzschbach<sup>4</sup>; Y. Cao<sup>5</sup>; J. Bachmann<sup>5</sup>; X. Feng<sup>2</sup>; R. Dong<sup>2</sup>; I. Weidinger<sup>2</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D; <sup>2</sup> Helmholtz- Zentrum Dresden Rossendorf e.V., Dresden/D; <sup>3</sup> University of Sofia, Sofia/BG; <sup>4</sup> Berlin University of Technology, Berlin/D; <sup>5</sup> Friedrich-Alexander-Universität Erlangen Nürnberg, Erlangen/DE, Erlangen/D
- B 2.62 **Metal-Phthalocyanine-Based 2D Conjugated MOF Electrocatalysts**  
M. Wang<sup>1</sup>; H. Zhong<sup>1</sup>; R. Dong<sup>1</sup>; E. Brunner<sup>1</sup>; S. Kaskel<sup>1</sup>; X. Feng<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Germany, Dresden/D
- B 2.63 **Photoelectrochemical Carbon Dioxide Reduction Catalyzed by a Cobalt Porphyrinic Metal-Organic Framework**  
N. Suremann<sup>1</sup>; A. Beiler<sup>1</sup>; B. McCarthy<sup>1</sup>; W. Gschwind<sup>1</sup>; S. Ott<sup>1</sup>; <sup>1</sup> University of Uppsala, Uppsala/S
- B 2.64 **Selective, Photocatalytic Reduction of Acetylene to Ethylene Using the MOF Co-PCN-222**  
A. Stone<sup>1</sup>; J. Hupp<sup>1</sup>; E. Weiss<sup>1</sup>; <sup>1</sup> Northwestern University, Evanston/USA
- B 2.65 **Adsorption of Ethanol and Water in ZIFs for TES applications: The influence of structural parameters**  
C. Byrne<sup>1</sup>; N. Zabukovec Logar<sup>1</sup>; <sup>1</sup> National Institute of Chemistry, Ljubljana/SLO
- B 2.66 **Theoretical understanding of gate adsorption behavior under external forces with the aid of free energy analysis**  
H. Arima<sup>1</sup>; S. Hiraide<sup>1</sup>; H. Tanaka<sup>2</sup>; M. Miyahara<sup>1</sup>; <sup>1</sup> Kyoto University, Department of Chemical Engineering, Katsura, Nishikyo, Kyoto/J; <sup>2</sup> Shinshu University, Wakasato, Nagano city, Nagano/J
- B 2.67 **Selective adsorption of diols on porous organic frameworks via non-covalent cooperative molecular recognition**  
T. Zensen<sup>1</sup>; T. Röper<sup>1</sup>; N. Sackers<sup>1</sup>; T. Fuchs<sup>1</sup>; A. Pöpller<sup>2</sup>; A. Jupke<sup>1</sup>; R. Palkovits<sup>1</sup>; I. Delidovich<sup>3</sup>; <sup>1</sup> RWTH Aachen, Aachen/D; <sup>2</sup> Julius-Maximilians-Universität Würzburg, Aachen/D; <sup>3</sup> TU Wien, Aachen/D
- B 2.68 **Investigating the Effect of Particle Size on Gas Adsorption in Flexible ZIF-7 Framework**  
R. Bose<sup>1</sup>; P. Selvam<sup>1</sup>; N. Kaisare<sup>1</sup>; <sup>1</sup> Indian Institute of Technology Madras, Chennai/IND
- B 2.69 **Crystal-size dependent guest-selective switchability of pillared layer metal–organic framework DUT-8(Zn)**  
L. Abylgazina<sup>1</sup>; I. Senkowska<sup>1</sup>; R. Engemann<sup>1</sup>; V. Bon<sup>1</sup>; S. Kaskel<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- B 2.70 **Developing Pressure Swing Adsorption Process for Biogas Upgrading using Shaped MIL-160(Al)**  
M. Karimi<sup>1</sup>; A. Rodrigues<sup>1</sup>; A. Ferreira<sup>1</sup>; F. Nouar<sup>2</sup>; K. Cho<sup>3</sup>; U. Lee<sup>3</sup>; C. Serre<sup>4</sup>; J. Silva<sup>5</sup>; <sup>1</sup> University of Porto, Porto/P; <sup>2</sup> Institut des Matériaux Poreux de Paris, CNRS, Ecole Normale Supérieure, PSL University, Paris/F; <sup>3</sup> Korea Research Institute of Chemical Technology, Gajeong-ro/ROK; <sup>4</sup> Institut des Matériaux Poreux de Paris, CNRS, Ecole Normale Supérieure, PSL University, Paris/F; <sup>5</sup> Centro de Investigação de Montanha, Bragança/P
- B 2.73 **Cation and Anion Effects in IL@MOF Materials: Impact on Sorbent Properties**  
T. Ferreira<sup>1</sup>; A. Vera<sup>1</sup>; B. Moura<sup>1</sup>; L. Esteves<sup>1</sup>; T. Carvalho<sup>1</sup>; M. Tariq<sup>1</sup>; P. Reis<sup>1</sup>; J. Esperança<sup>1</sup>; I. Esteves<sup>1</sup>; <sup>1</sup> LAQV/ REQUIMTE, Department of Chemistry, NOVA School of Science and Technology, FCT NOVA, Universidade NOVA de Lisboa, Caparica/P
- B 2.72 **Binding sites of ethylene and 1-MCP in MOF HKUST-1: experimental and theoretical investigation**  
A. Pnevskaya<sup>1</sup>; <sup>1</sup> IRI Smart materials, Southern Federal University, Rostov-on-Don/RUS
- B 2.74 **Biocompatible metal-organic framework for NO adsorption**  
T. Tajnšek<sup>1</sup>; M. Mazaj<sup>1</sup>; N. Zabukovec Logar<sup>1</sup>; <sup>1</sup> National Institute of Chemistry, Slovenia, Ljubljana/SLO
- B 2.75 **Kinetic trapping – Gas storage and gas release of SF<sub>6</sub> in ZIF-8**  
K. Heinz<sup>1</sup>; H. Bunzen<sup>1</sup>; <sup>1</sup> University of Augsburg, Augsburg/D
- B 2.76 **The Effect of the Metal Center on the Adsorption of Water in the CPO-27(M) Framework Series**  
M. Kloß<sup>1</sup>; D. Baier<sup>1</sup>; C. Weinberger<sup>1</sup>; M. Tiemann<sup>1</sup>; <sup>1</sup> Paderborn University, Paderborn/D

## POSTER PROGRAMME

- B 2.77 **Influence of functional groups in the linker of UiO-66-MOFs on the adsorption of volatile organic compounds and water**  
A. Hannebauer<sup>1</sup>; K. Hindricks<sup>1</sup>; A. Schaate<sup>1</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz University Hannover, Hannover/D
- B 2.78 **Greenhouse gas sorption on metal-organic frameworks synthesized with 2,5-Di-(t-butyl)-Dihydroxy-1,4-Benzoquinone (DBHQ) linker**  
O. Cheung<sup>1</sup>; M. Åhlén<sup>1</sup>; D. Deole<sup>1</sup>; E. Tikhomirov<sup>1</sup>; <sup>1</sup> Uppsala University, Uppsala/S
- B 2.79 **Selective SF<sub>6</sub> adsorption and separation in pyrene-based metal-organic frameworks**  
M. Åhlén<sup>1</sup>; O. Cheung<sup>1</sup>; <sup>1</sup> Uppsala University, Uppsala/S
- B 2.80 **Simulation of Methane Sorption in the new Family of qzd-MOFs and the Application of Machine Learning for Predicting the Methane Uptake and Working Capacity.**  
M. Suyetin<sup>1</sup>; <sup>1</sup> Institute of Nanotechnology, Karlsruhe Institute of Technology., Eggenstein-Leopoldshafen, Germany/D
- B 2.81 **Polar Inorganic Pillars: Tuning CO<sub>2</sub> Capture Performance from Air**  
M. Soukri<sup>1</sup>; D. O'Nolan<sup>1</sup>; <sup>1</sup> RTI International, Durham/USA
- B 2.82 **Adsorption of sulphur dioxide in Cu(II)-carboxylate framework materials: the role of ligand functionalisation and open metal sites**  
J. Li<sup>1</sup>; <sup>1</sup> University of Manchester, Department of Chemistry/UK
- B 2.83 **A mechanistic study into the adsorption of n-butanol in ZIF-8 towards its separation from low concentration fermentation broths**  
S. Wallbridge<sup>1</sup>; S. Dann<sup>2</sup>; J. Christie<sup>2</sup>; J. Wagner<sup>2</sup>; <sup>1</sup> Loughborough University, Loughborough /UK; <sup>2</sup> Loughborough University, Loughborough/UK
- B 2.84 **Unexpected Role of Humidity in Diamine-Appended Mg<sub>2</sub>(dobpdc) Contactors for CO<sub>2</sub> Capture**  
H. Holmes<sup>1</sup>; W. Quan<sup>1</sup>; S. Weston<sup>2</sup>; J. Kalyanaraman<sup>2</sup>; C. Abney<sup>2</sup>; W. Koros<sup>1</sup>; M. Realf<sup>1</sup>; R. Lively<sup>1</sup>; <sup>1</sup> Georgia Institute of Technology, Atlanta/USA; <sup>2</sup> ExxonMobil Research and Engineering, Annandale/USA
- B 2.85 **Insights into Mass Transfer Barriers in Metal-Organic Frameworks**  
F. Son<sup>1</sup>; B. Bukowski<sup>1</sup>; Y. Chen<sup>1</sup>; L. Robison<sup>1</sup>; R. Snurr<sup>1</sup>; O. Farha<sup>1</sup>; <sup>1</sup> Northwestern University, Evanston/USA
- B 2.86 **Derivation of N-containing carbons from microporous coordination polymers for use in post-combustion flue gas capture**  
J. Espin<sup>1</sup>; V. Karve<sup>1</sup>; M. Asgari<sup>2</sup>; S. van Gele<sup>1</sup>; E. Oveisi<sup>1</sup>; W. Queen<sup>1</sup>; <sup>1</sup> EPFL Valais, Sion/CH; <sup>2</sup> University of Cambridge, Cambridge/UK
- B 2.87 **Advanced characterization of high performing next-generation membranes for gas separation**  
V. Guiotto<sup>1</sup>; <sup>1</sup> University of Turin, Dept. of Chemistry, Torino/I
- B 2.88 **Quantum Sieving Effects in Hofmann-type Metal-Organic Frameworks for Hydrogen Isotope Separation**  
J. Ha<sup>1</sup>; M. Jung<sup>2</sup>; J. Park<sup>2</sup>; H. Oh<sup>2</sup>; H. Moon<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), ULSAN/ROK; <sup>2</sup> Gyeongsang National University, JINJU/ROK
- B 2.89 **Preferential Adsorption of Water in Hydrophobic Metal-Organic Frameworks – the Impact of Entropic Separation Effects**  
A. von Wedelstedt<sup>1</sup>; M. Klauck<sup>1</sup>; G. Kalies<sup>1</sup>; <sup>1</sup> HTW Dresden University of Applied Sciences, Dresden/D
- B 2.90 **MOF-based temperature swing adsorption cycle for postcombustion CO<sub>2</sub> capture from wet flue gas**  
S. Peh<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP
- B 2.91 **Gas Separation for a Sustainable Future: a novel 3D MOF to update CO<sub>2</sub> capture technologies.**  
E. Andres-Garcia<sup>1</sup>; M. Clemente-León<sup>1</sup>; G. Mínguez Espallargas<sup>1</sup>; <sup>1</sup> Instituto de Ciencia Molecular (ICMol), Universitat de Valencia, Paterna/E
- B 2.92 **Separation of CO<sub>2</sub>/N<sub>2</sub> Mixture by Pressure Swing Adsorption Process using Shaped MI-160(Al) for CO<sub>2</sub> Post-Combustion Capture**  
M. Karimi<sup>1</sup>; A. Rodrigues<sup>1</sup>; A. Ferreira<sup>1</sup>; F. Nouar<sup>2</sup>; K. Cho<sup>3</sup>; U. Lee<sup>3</sup>; C. Serre<sup>2</sup>; J. Silva<sup>4</sup>; <sup>1</sup> University of Porto, Porto/P; <sup>2</sup> Institut des Matériaux Poreux de Paris, CNRS, Ecole Normale Supérieure, PSL University, Paris/F; <sup>3</sup> Korea Research Institute of Chemical Technology, Gajeong-ro/ROK; <sup>4</sup> b Centro de Investigação de Montanha, Bragança/P
- B 2.93 **Unraveling shape based selective adsorption of alkanes by MOFs**  
M. Wahiduzzaman<sup>1</sup>; A. von Wedelstedt<sup>1</sup>; G. Maurin<sup>1</sup>; H. Zhao<sup>2</sup>; A. Ghoufi<sup>2</sup>; P. F. Brântuas<sup>3</sup>; A. Henrique<sup>3</sup>; T. Maity<sup>3</sup>; J. A. C. Silva<sup>3</sup>; A. E. Rodrigues<sup>4</sup>; F. Nouar<sup>5</sup>; C. Serre<sup>5</sup>; <sup>1</sup> ICGM - Université Montpellier - CNRS, Montpellier/F; <sup>2</sup> Université de Rennes 1 - CNRS, Rennes/F; <sup>3</sup> Instituto Politécnico de Bragança, Bragança/P; <sup>4</sup> Faculty of Engineering - University of Porto, Porto/P; <sup>5</sup> Institut des Matériaux Poreux de Paris, ENS, ESPCI, PSL University, Paris/F
- B 2.94 **MXene assisted preparation of well-intergrown ZIF-67 membrane for helium separation**  
Z. Zhao<sup>1</sup>; L. Ding<sup>2</sup>; R. Hinterding<sup>1</sup>; A. Mundstock<sup>1</sup>; C. Belke<sup>1</sup>; R. Haug<sup>1</sup>; H. Wang<sup>3</sup>; A. Feldhoff<sup>1</sup>; <sup>1</sup> Leibniz University of Hannover, Hannover/D; <sup>2</sup> South China University of Technology, Guangzhou/CN; <sup>3</sup> Tsinghua University, Beijing/CN

## POSTER PROGRAMME

- B 2.95 **DUT-67(Zr) and polystyrene: Synergetic effect on a hybrid material for the monitoring of personal care products in cosmetics**  
P. Napolitano-Tabares<sup>1</sup>; A. Gutiérrez-Serpa<sup>2</sup>; A. Jiménez-Abizanda<sup>1</sup>; F. Jiménez-Moreno<sup>1</sup>; J. Pasán<sup>1</sup>; V. Pino<sup>1</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E; <sup>2</sup> Technische Universität Dresden, Dresden/D
- B 2.96 **Silver wires as supports for MOF-based solid-phase microextraction fibers**  
I. Negrín-Santamaría<sup>1</sup>; A. Gutiérrez-Serpa<sup>2</sup>; M. Trujillo-Rodríguez<sup>1</sup>; F. Jiménez-Moreno<sup>1</sup>; A. Jiménez-Abizanda<sup>1</sup>; V. Pino<sup>1</sup>; J. Pasán<sup>1</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E; <sup>2</sup> Technische Universität Dresden (TUD), Dresden, 01069/D
- B 2.97 **Covalent organic frameworks as highly efficient sorbents in a micro-dispersive solid-phase extraction approach for the determination of organic pollutants**  
R. González-Martín<sup>1</sup>; P. Pachfule<sup>2</sup>; D. Díaz Díaz<sup>3</sup>; V. Pino<sup>3</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E; <sup>2</sup> Department of Chemical, Biological & Macro-Molecular Sciences, S. N. Bose National Centre for Basic Sciences, Kolkata/IND; <sup>3</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E
- B 2.98 **MOF-coated glass vials as novel thin film microextraction devices for analytical applications**  
I. Taima-Mancera<sup>1</sup>; J. Ayala<sup>1</sup>; J. Pasán<sup>1</sup>; V. Pino<sup>1</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E
- B 2.99 **Metal-organic frameworks for monitoring contaminants of emerging concern in waters of the Canary Islands (Spain)**  
E. Lodoso-Ruiz<sup>1</sup>; M. Trujillo-Rodríguez<sup>1</sup>; J. Pasán<sup>1</sup>; J. Ayala<sup>1</sup>; V. Pino<sup>1</sup>; <sup>1</sup> Universidad de La Laguna, San Cristóbal de La Laguna/E
- B 2.100 **Effect of electric field on the separation of CO<sub>2</sub> from CO<sub>2</sub>/N<sub>2</sub> and CO<sub>2</sub>/CH<sub>4</sub> mixtures by MIL-101(Cr) and MIL-53(Cr) metal-organic frameworks**  
N. R G<sup>1</sup>; A. Chandiran<sup>1</sup>; N. Kaisare<sup>1</sup>; <sup>1</sup> Indian Institute of Technology Madras, Chennai/IND
- B 2.101 **Lithium selectivity mediated by dense and confined sulfonic acid groups in all organic mixed-matrix membrane**  
N. Eden<sup>1</sup>; <sup>1</sup> Monash University, Research Way, Clayton/AUS
- B 2.102 **Continuous Flow polymerization of MOF polymer composite for gold E-waste recycling**  
J. Roth<sup>1</sup>; <sup>1</sup> EPFL Valais, sion/CH
- B 2.103 **Microporous Polyimide-Framework for CO<sub>2</sub>-Separation – characterization by dynamic sorption**  
J. Güllich<sup>1</sup>; J. Senker<sup>1</sup>; <sup>1</sup> Universität Bayreuth, Bayreuth/D
- B 2.104 **Mesoporous materials derived from MOFs as catalysts for fuel cells and electrolyzers**  
A. Díaz-Durán<sup>1</sup>; G. Iadarola-Pérez<sup>2</sup>; F. Viva<sup>1</sup>; F. Roncaroli<sup>3</sup>; <sup>1</sup> National Scientific and Technical Research Council, San Martín - Buenos Aires/RA; <sup>2</sup> University of Buenos Aires, Ciudad de Buenos Aires/RA; <sup>3</sup> National Scientific and Technical Research Council, San Martín - Buenos Aires/RA
- B 2.106 **MOFs based on pyrazolone connectors for the dye adsorption**  
C. Jiménez<sup>1</sup>; G. Ripoll<sup>2</sup>; P. Hidalgo<sup>2</sup>; J. Belmar<sup>2</sup>; B. Urbano<sup>2</sup>; J. Pasán<sup>3</sup>; <sup>1</sup> Universidad de Concepcion, Concepcion/RCH; <sup>2</sup> Universidad de Concepción, Concepcion/RCH; <sup>3</sup> Universidad de La Laguna, La Laguna, Tenerife/E
- B 2.107 **Sulfonic-functionalized MIL-100 for enhanced removal of pharmaceutical products from water**  
N. Crespi Sánchez<sup>1</sup>; G. Turnes Palomino<sup>1</sup>; C. Palomino Cabello<sup>1</sup>; <sup>1</sup> University of the Balearic Islands, Palma (Illes Balears)/E
- B 2.108 **MIL-100@carbon hybrid magnetic material for the removal of organic pollutants**  
M. del Rio Clar<sup>1</sup>; I. Pascual Massip<sup>1</sup>; G. Turnes Palomino<sup>1</sup>; C. Palomino Cabello<sup>2</sup>; <sup>1</sup> University of the Balearic Islands, Palma/E; <sup>2</sup> University of the Balearic Islands, Palma /E
- B 2.109 **Functionalized MIL-101 MOFs as efficient adsorbents for paraquat herbicide**  
N. Crespi Sánchez<sup>1</sup>; C. Palomino Cabello<sup>1</sup>; G. Turnes Palomino<sup>1</sup>; <sup>1</sup> University of the Balearic Islands, Palma de Mallorca/E
- B 2.110 **Cation-exchange in MOFs: Structure-CO<sub>2</sub> capture and conversion property relationship**  
M. Mazaj<sup>1</sup>; A. Krajnc<sup>1</sup>; N. Vrtovec<sup>1</sup>; N. Zabukovec Logar<sup>1</sup>; <sup>1</sup> National Institute of Chemistry, 1000 Ljubljana/SLO
- B 2.111 **Novel magnetic hybrid carbon-MOF for diclofenac sodium removal**  
M. Bauza<sup>1</sup>; G. Turnes Palomino<sup>1</sup>; C. Palomino Cabello<sup>1</sup>; <sup>1</sup> University of the Balearic Islands, Palma/E
- B 2.112 **Synthesis and characterizations of Bacteria and Metal-Organic Frameworks based biohybrids**  
A. Permyakova<sup>1</sup>; I. Christodoulou<sup>1</sup>; E. Gkaniatsou<sup>1</sup>; N. Steunou<sup>1</sup>; T. Coradin<sup>2</sup>; F. Fernandes<sup>2</sup>; C. Sicard<sup>1</sup>; <sup>1</sup> Université de Versailles Saint-Quentin-en-Yvelines, Versailles/F; <sup>2</sup> Sorbonne Université, CNRS, Collège de France, Laboratoire de Chimie de la Matière Condensée de Paris, Paris/F
- B 2.113 **Passive 3D MOF-derived-carbon sampler for estrogen extraction**  
A. Figuerola<sup>1</sup>; S. Mendiola-Alvarez<sup>2</sup>; L. Hinojosa-Reyes<sup>2</sup>; C. Palomino<sup>1</sup>; G. Turnes<sup>1</sup>; <sup>1</sup> University of Balearic Islands, Palma/E; <sup>2</sup> Universidad Autónoma de Nuevo León, Nuevo León/MEX

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- B 2.114 **Porous carbons derived from metal-organic frameworks as efficient adsorbents of pollutants**  
M. del Río Clar<sup>1</sup>; G. Turnes<sup>1</sup>; C. Palomino<sup>1</sup>; <sup>1</sup> University of the Balearic Islands, Palma/E
- B 2.115 **Enzyme@Metal-Organic Framework composites as novel approach for plastic degradation**  
P. Horcajada<sup>1</sup>; I. Rincón<sup>2</sup>; T. Hidalgo<sup>2</sup>; S. Rojas<sup>2</sup>; <sup>1</sup> IMDEA Energy Institute, Móstoles/E; <sup>2</sup> IMDEA Energy Institute, Mostoles/E
- B 2.116 **MIL-100(Fe)-based mixed matrix membrane supported on cellulose paper as novel device for analytical microextraction**  
I. Guerra-Martín<sup>1</sup>; A. Gutiérrez-Serpa<sup>1</sup>; J. Pasán<sup>1</sup>; A. Jiménez-Abizanda<sup>1</sup>; F. Jiménez-Moreno<sup>1</sup>; V. Pino<sup>2</sup>; <sup>1</sup> University of La Laguna, San Cristóbal de La Laguna/E; <sup>2</sup> University of La Laguna, San Cristobal de La Laguna/E
- B 2.117 **Open tubular MOF-based coatings for in-tube solid-phase microextraction**  
A. Gutiérrez-Serpa<sup>1</sup>; J. Pasán<sup>1</sup>; A. Jiménez-Abizanda<sup>1</sup>; V. Pino<sup>1</sup>; <sup>1</sup> University of La Laguna, San Cristóbal de La Laguna/E
- B 2.118 **Enhanced removal of Emerging pollutants on Zr porphyrinic Metal-organic framework**  
E. Jin<sup>1</sup>; J. Kim<sup>2</sup>; J. Nam<sup>2</sup>; D. Yang<sup>2</sup>; S. Kim<sup>2</sup>; E. Kang<sup>2</sup>; H. Cho<sup>2</sup>; S. Kaskel<sup>1</sup>; W. Choe<sup>2</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D; <sup>2</sup> Ulsan National Institute of Science and Technology, Ulsan/ROK
- B 2.119 **N<sub>2</sub> photoreduction Catalyzed by Bi-based Metal-Organic Frameworks**  
N. Shokouhfar<sup>1</sup>; <sup>1</sup> University of Lille, Villeneuve D'ASCQ/F
- B 2.120 **Multivariate Functionalization of UiO-66 for Photocatalytic Water Remediation**  
A. Valverde<sup>1</sup>; D. Payno<sup>1</sup>; J. Laza<sup>2</sup>; S. Wuttke<sup>1</sup>; R. Fernández<sup>2</sup>; <sup>1</sup> BCMaterials, Leioa/E; <sup>2</sup> UPV/EHU, Leioa/E
- B 2.121 **Molecular Insight into the NO<sub>x</sub> Capture by Metal(II)/Metal(III)-Catecholates Functionalized UiO-66 MOF**  
G. Karuppasamy<sup>1</sup>; W. Mohammad<sup>1</sup>; A. Daouli<sup>2</sup>; M. Badawi<sup>2</sup>; G. Maurin<sup>1</sup>; <sup>1</sup> University of Montpellier, Montpellier/F; <sup>2</sup> University of Lorraine, Nancy/F
- B 2.122 **Carbon Dioxide Capture at Nucleophilic Hydroxide Sites in Cyclodextrin-Based Metal-Organic Frameworks**  
M. Zick<sup>1</sup>; S. Pugh<sup>2</sup>; J. Lee<sup>3</sup>; A. Forse<sup>2</sup>; P. Milner<sup>1</sup>; <sup>1</sup> Cornell University, Ithaca/USA; <sup>2</sup> University of Cambridge, Cambridge/UK; <sup>3</sup> Korea Institute of Science and Technology (KIST), Seoul/ROK
- B 2.123 **Drinking water purification using Metal-Organic Frameworks: selective removal of disinfection by-products**  
G. Sánchez Cano<sup>1</sup>; A. Lastra<sup>1</sup>; L. Saez<sup>1</sup>; M. Amado<sup>1</sup>; E. Arozamena<sup>1</sup>; S. Rojas<sup>2</sup>; P. Horcajada<sup>2</sup>; <sup>1</sup> Canal de Isabel II, Madrid/E; <sup>2</sup> IMDEA Energy Institute, Móstoles/E
- B 2.124 **ZIF-71 as an efficient adsorbent for the removal of hazardous pollutants from wastewater**  
E. De Oliveira Jardim<sup>1</sup>; J. Silvestre Alberro<sup>2</sup>; <sup>1</sup> University of Alicante Alicante, San Vicent del Raspeig, Alicante/E; <sup>2</sup> University of Alicante, San Vicente del Raspeig, Alicante/E
- B 2.125 **Structural modifications induced in ZIF-8 by interaction with Cu<sub>2</sub><sup>+</sup> ions in water remediation applications**  
L. Barbata<sup>1</sup>; E. Sangiorgi<sup>1</sup>; S. Agnello<sup>1</sup>; F. Gelardi<sup>1</sup>; M. Cannas<sup>1</sup>; G. Buscarino<sup>1</sup>; <sup>1</sup> Università degli Studi di Palermo, Palermo/I
- B 2.126 **Promoting photocatalytic activity of NH<sub>2</sub>-MIL-125 for H<sub>2</sub> evolution reaction through creation of additional proton reduction sites**  
V. Kavun<sup>1</sup>; E. Uslamin<sup>2</sup>; S. Canossa<sup>3</sup>; E. Bos<sup>2</sup>; E. Repo<sup>1</sup>; M. Van der Veen<sup>2</sup>; <sup>1</sup> LUT University, Lappeenranta/FIN; <sup>2</sup> Delft University of Technology (TU Delft), Delft/NL; <sup>3</sup> Max Planck Institute for Solid State Research, Stuttgart/D
- B 2.127 **Light-Triggered Uptake and Release of Pb(II) from Water**  
D. Ward<sup>1</sup>; T. Easun<sup>1</sup>; <sup>1</sup> Cardiff University, Cardiff/UK
- B 2.128 **Exploring the influence of atomic level structure, porosity, and stability of bismuth(III) coordination polymers on electrocatalytic CO<sub>2</sub> reduction**  
S. Frank<sup>1</sup>; E. Grape<sup>2</sup>; E. Bøjesen<sup>1</sup>; R. Larsen<sup>1</sup>; P. Lamagni<sup>1</sup>; J. Catalano<sup>1</sup>; A. Inge<sup>2</sup>; N. Lock<sup>1</sup>; <sup>1</sup> Aarhus University, Aarhus/DK; <sup>2</sup> Stockholm University, Stockholm/S

## Novel Fundamental Phenomena, Properties and Characterisation

- B 3.01 **Electrically Conducting Metal-Organic Frameworks**  
S. Saha<sup>1</sup>; <sup>1</sup> Clemson University, Clemson/USA
- B 3.02 **Cooperative interplay of molecular machines embedded in metal-organic frameworks**  
E. Kolodzejski<sup>1</sup>; S. Amirjalayer<sup>1</sup>; <sup>1</sup> Westfälische Wilhelms-Universität Münster, Münster/D
- B 3.03 **Cooperative CO<sub>2</sub> adsorption mechanism in a perfluorinated CeIV-based metal organic framework**  
M. Cavallo<sup>1</sup>; <sup>1</sup> Torino University, Torino/I

## POSTER PROGRAMME

- B 3.04 **Tuning the high-pressure phase behaviour of highly compressible zeolitic imidazolate frameworks – From discontinuous to continuous pore closure by linker substitution**  
J. Song<sup>1</sup>; R. Pallach<sup>1</sup>; L. Frenzel-Beyme<sup>1</sup>; P. Kolodzejski<sup>1</sup>; G. Kieslich<sup>2</sup>; P. Vervoorts<sup>2</sup>; C. Hobday<sup>3</sup>; S. Henke<sup>1</sup>; <sup>1</sup> TU Dortmund, Dortmund/D; <sup>2</sup> Technical University of Munich, Munich/D; <sup>3</sup> The University of Edinburgh, Edinburgh/UK
- B 3.05 **Lanthanoid Metal-Organic Frameworks based on rods and hexagons with gated CO<sub>2</sub> sorption and temperature dependent chirality**  
F. Amombo Noa<sup>1</sup>; <sup>1</sup> Chalmers University of Technology, Gothenburg/S
- B 3.06 **Dynamic Response in an Ultramicroporous Sorbent under Direct Air Capture Conditions**  
M. Soukri<sup>1</sup>; D. O'Nolan<sup>1</sup>; Y. Belmabkhout<sup>2</sup>; <sup>1</sup> RTI International, Durham/USA; <sup>2</sup> Mohamed VI Polytechnic University, Lot 660 - Hay Moulay Rachid, 43150 Ben Guerir, Morocco /MA
- B 3.07 **DUT-8(Cu) vs. DUT-8(Ni) – impact of the metal node on the switching behavior**  
M. Maliuta<sup>1</sup>; I. Senkovska<sup>1</sup>; S. Ehrling<sup>1</sup>; V. Romaka<sup>1</sup>; V. Bon<sup>1</sup>; M. Roslova<sup>2</sup>; P. Petkov<sup>3</sup>; S. Kaskel<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D; <sup>2</sup> IFW Dresden, Dresden/D; <sup>3</sup> Sofia University "St. Kl. Ohridski", Sofia/BG
- B 3.08 **The guest- and temperature-depending responsiveness of flexible alkyl-functionalized DMOF-1 derivatives**  
R. Pallach<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> TU Dortmund, Dortmund/D
- B 3.09 **Towards All-Optical Switching: Reversible Photoalignment of Molecules in MOFs**  
F. Marlow<sup>1</sup>; T. Koehler<sup>1</sup>; A. Mundstock<sup>2</sup>; J. Caro<sup>2</sup>; <sup>1</sup> Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr/D; <sup>2</sup> Leibniz Universität Hannover, Hannover/D
- B 3.10 **Rigid vs. flexible metal-organic frameworks**  
S. Wang<sup>1</sup>; D. Zhao<sup>1</sup>; <sup>1</sup> National University of Singapore, Singapore/SGP
- B 3.11 **Capability of the In Situ Pulsed Field Gradient NMR to Explore n-Butane Diffusion in a Highly-Flexible MOF DUT-49(Cu)**  
M. Dvoyashkin<sup>1</sup>; F. Walenszus<sup>2</sup>; V. Bon<sup>2</sup>; J. Evans<sup>3</sup>; S. Kaskel<sup>2</sup>; <sup>1</sup> Universität Leipzig, Leipzig/D; <sup>2</sup> Technische Universität Dresden, Dresden/D; <sup>3</sup> The University of Adelaide, Adelaide/AUS
- B 3.12 **Single and multicomponent liquid phase adsorption on the switchable MOF DUT-8(Ni) and its analogs DUT-128(Ni) and DUT-131(Ni)**  
N. Bönisch<sup>1</sup>; S. Ehrling<sup>1</sup>; I. Senkovska<sup>1</sup>; S. Kaskel<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D
- B 3.13 **Pore Chemistry Engineering for Gas Sorption Tuning in New Coordination Networks**  
K. Koupepidou<sup>1</sup>; <sup>1</sup> Bernal Institute, University of Limerick, Limerick/IRL
- B 3.14 **Novel, Dynamic DNA/MOF Interface on SPR platform for ion sensing**  
S. Leisten<sup>1</sup>; H. Jiang<sup>1</sup>; S. Eiden<sup>2</sup>; D. Storelli<sup>1</sup>; T. Kurkina<sup>3</sup>; U. Schwaneberg<sup>3</sup>; S. Ingebrandt<sup>1</sup>; E. Weinhold<sup>2</sup>; V. Pachauri<sup>1</sup>; <sup>1</sup> RWTH Aachen - Institute of Materials in Electrical Engineering 1, Aachen/D; <sup>2</sup> RWTH Aachen - Institute of Organic Chemistry, Aachen/D; <sup>3</sup> RWTH Aachen - Institute of Biotechnology, Aachen/D
- B 3.15 **New procedure for calculating missing linker defects in Metal Organic Frameworks**  
D. Sannes<sup>1</sup>; S. Øien-Ødegård<sup>1</sup>; A. Nova<sup>1</sup>; U. Olsbye<sup>1</sup>; <sup>1</sup> University of Oslo, Oslo/N
- B 3.16 **Coordination Modulation as an Alternative Pathway to UiO-66 Electronic Structure Engineering for Photocatalytic Oxidative Desulfurization**  
R. Najafzade<sup>1</sup>; R. Khajavian<sup>1</sup>; M. Mirzaei<sup>1</sup>; <sup>1</sup> Ferdowsi University of Mashhad, Mashhad/IR
- B 3.17 **Exposition of Microporosity of Mechanically Compressed ZIF-62**  
C. Das<sup>1</sup>; S. Henke<sup>1</sup>; <sup>1</sup> TU Dortmund, Dortmund/D
- B 3.18 **Topological design of highly porous flexible frameworks by systematic variation of ligand geometry in tetracarboxylate ligands.**  
B. Felsner<sup>1</sup>; V. Bon<sup>1</sup>; N. Bönisch<sup>1</sup>; I. Senkovska<sup>1</sup>; S. Kaskel<sup>1</sup>; <sup>1</sup> Technische Universität Dresden, Dresden/D
- B 3.19 **In situ electron paramagnetic resonance spectroscopy as a tool to monitor structural phase transitions in flexible metal-organic frameworks from the local view of the metal unit**  
M. Mendt<sup>1</sup>; K. Thangavel<sup>1</sup>; P. Vervoorts<sup>2</sup>; S. Ehrling<sup>3</sup>; M. Maliuta<sup>3</sup>; A. Schneemann<sup>2</sup>; I. Senkovska<sup>3</sup>; R. Fischer<sup>2</sup>; S. Kaskel<sup>3</sup>; A. Pöppl<sup>1</sup>; <sup>1</sup> Universität Leipzig, Leipzig/D; <sup>2</sup> Technische Universität München, München/D; <sup>3</sup> Technische Universität Dresden, Dresden/D;
- B 3.20 **Understanding the electronic properties behind methane to methanol oxidation processes in MIL-100(Fe) MOF**  
M. Vandone<sup>1</sup>; L. Braglia<sup>2</sup>; T. Grell<sup>1</sup>; V. Colombo<sup>1</sup>; <sup>1</sup> University of Milan, Milan/I; <sup>2</sup> IOM-CNR, Istituto Officina dei Materiali, Elettra synchrotron, Trieste/I

## POSTER PROGRAMME

- B 3.21 **Toolkit for the Characterization of Mesoporous Zeolite Catalysts by Physical Adsorption**  
C. Fettkenhauer<sup>1</sup>; J. Hundt<sup>1</sup>; K. Cychosz Struckhoff<sup>2</sup>; <sup>1</sup> Anton Paar Germany GmbH, Ostfildern/D; <sup>2</sup> Anton Paar QuantaTec Inc., Boynton Beach/USA
- B 3.22 **Syntheses and refractive index measurements of MOF single crystals**  
A. Deutsch<sup>1</sup>; E. Agócs<sup>1</sup>; R. Fischer<sup>2</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D; <sup>2</sup> Universität Bremen, Bremen/D
- B 3.23 **Elemental Depth Profiling of Intact Metal–Organic Framework Single Crystals by Scanning Nuclear Microprobe**  
B. McCarthy<sup>1</sup>; T. Liseev<sup>1</sup>; M. Sortica<sup>1</sup>; V. Paneta<sup>1</sup>; W. Gschwind<sup>1</sup>; G. Nagy<sup>1</sup>; S. Ott<sup>1</sup>; D. Primetzhofer<sup>1</sup>; <sup>1</sup> Uppsala University, Uppsala/S
- B 3.24 **Operando XAS investigation of Pd and Zr local environment in catalytic hydrogenation of CO<sub>2</sub> over Pd-UiO-67 MOF**  
A. Skorynina<sup>1</sup>; A. Bugaev<sup>1</sup>; E. Kozyr<sup>1</sup>; A. Soldatov<sup>1</sup>; A. Lazzarini<sup>2</sup>; U. Olsbye<sup>3</sup>; C. Ahoba-Sam<sup>3</sup>; E. Borfecchia<sup>4</sup>; S. Bordiga<sup>4</sup>; K. Lomachenko<sup>5</sup>; <sup>1</sup> Southern Federal University, Rostov-on-Don/RUS; <sup>2</sup> University of L'Aquila, L'Aquila/I; <sup>3</sup> University of Oslo, Oslo/N; <sup>4</sup> University of Turin, Turin/I; <sup>5</sup> ESRF, Grenoble/F
- B 3.25 **Combination of synchrotron X-ray diffraction and X-ray absorption spectroscopy for operando characterization**  
A. Bugaev<sup>1</sup>; A. Skorynina<sup>1</sup>; E. Kozyr<sup>1</sup>; <sup>1</sup> Southern Federal University, Rostov-on-Don/RUS
- B 3.26 **In-situ <sup>129</sup>Xe NMR studies of Xe/Kr mixture adsorption on flexible MOFs**  
C. Bachetzky<sup>1</sup>; M. Maliuta<sup>1</sup>; I. Senkovska<sup>1</sup>; S. Kaskel<sup>1</sup>; E. Brunner<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- B 3.27 **Light-Metal Organic Framework Interactions: Oddities that arise from taking the molecular to the solid state**  
A. Morris<sup>1</sup>; <sup>1</sup> Virginia Tech, Blacksburg, VA/USA
- B 3.28 **Low-frequency vibrational spectroscopy of DUT-8 (Me) in the open and closed pore phases**  
S. Krylova<sup>1</sup>; V. Zykova<sup>2</sup>; I. Senkovska<sup>3</sup>; I. Yushina<sup>4</sup>; A. Vtyurin<sup>1</sup>; A. Krylov<sup>1</sup>; <sup>1</sup> Kirensky Institute of Physics Federal Research Center KSC Siberian Branch Russian Academy of Sciences, Krasnoyarsk/RUS; <sup>2</sup> Institute of Automation and Electrometry of the SB RAS, Novosibirsk/RUS; <sup>3</sup> Technische Universität Dresden, Dresden/D; <sup>4</sup> South Ural State University, SEC Nahenotechnology, Chelyabinsk/RUS
- B 3.29 **Using solid-state NMR spectroscopy to investigate mixed-metal MIL-53**  
E. Borthwick<sup>1</sup>; Z. Davis<sup>1</sup>; D. Dawson<sup>1</sup>; S. Ashbrook<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- B 3.30 **X-ray absorption spectroscopy study of metal-organic frameworks functionalized by Pd: Formation and growth of Pd nanoparticles.**  
E. Kozyr<sup>1</sup>; A. Bugaev<sup>2</sup>; A. Skorynina<sup>2</sup>; A. Soldatov<sup>2</sup>; <sup>1</sup> University of Torino; Southern Federal University, Torino/I; <sup>2</sup> Southern Federal University, Rostov-on-Don/RUS
- B 3.31 **NMR insights into alcohol adsorption by metal–organic frameworks: adsorption state, selectivity, and adsorption-induced phase transitions**  
S. Amanzadeh Salout<sup>1</sup>; <sup>1</sup> Technical University of Dresden, Dresden/D
- B 3.32 **Unraveling the reduced-nature of cerium sites in Ce(IV)-MOFs: From advanced to more accessible techniques**  
S. Rojas Buzo<sup>1</sup>; D. Salusso<sup>1</sup>; S. Bordiga<sup>1</sup>; <sup>1</sup> NIS Center and INSTM Reference Center/University of Turin, Turin/I
- B 3.33 **Characterization of Cu-ZIF-8 by CW and pulsed electron paramagnetic resonance techniques**  
M. Lukman<sup>1</sup>; P. Bruzzese<sup>1</sup>; W. Böhlmann<sup>1</sup>; A. Pöppel<sup>1</sup>; <sup>1</sup> University of Leipzig, Leipzig/D
- B 3.34 **Two-Photon Absorption in Metal–Organic Frameworks**  
Y. Cui<sup>1</sup>; S. Weishäupl<sup>1</sup>; A. Pöthig<sup>1</sup>; R. Fischer<sup>1</sup>; J. Hauer<sup>1</sup>; <sup>1</sup> Technical University of Munich, Garching/D
- B 3.35 **Optimum BF (OBF) STEM using the SAAF Detector**  
T. Harzer<sup>1</sup>; <sup>1</sup> JEOL Germany GmbH, Freising/D
- B 3.36 **A rapid and direct method to sense the capture of pollutants in water by magnetic MOFs**  
N. Barroso García<sup>1</sup>; <sup>1</sup> BCMaterials, Leioa/E
- B 3.37 **Polar Molecule Confinement Effects on Dielectric Modulations of Metal–Organic Frameworks**  
M. Usman<sup>1</sup>; <sup>1</sup> Delft University of Technology, Delft/NL
- B 3.38 **Dielectric Properties of Guest Molecule-loaded MOFs with Dipolar Rotors**  
B. Farhadi Jahromi<sup>1</sup>; R. Schmid<sup>1</sup>; <sup>1</sup> Ruhr-Universität Bochum, Bochum/D
- B 3.39 **Dipolar Molecular Rotors in Surface-Anchored Metal Organic Frameworks**  
X. Zhang<sup>1</sup>; S. Hamer<sup>2</sup>; R. Haldar<sup>3</sup>; D. Reuter<sup>4</sup>; F. Paneff<sup>1</sup>; D. Volkmer<sup>4</sup>; P. Lunkenheimer<sup>4</sup>; A. Beyer<sup>1</sup>; I. Howard<sup>3</sup>; R. Herges<sup>2</sup>; <sup>1</sup> Bielefeld University, Bielefeld/D; <sup>2</sup> Christian-Albrechts-University of Kiel, Kiel/D; <sup>3</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe/D; <sup>4</sup> University of Augsburg, Augsburg/D

## POSTER PROGRAMME

- B 3.40 **MOF-VR: A Virtual Reality Program for Performing and Visualizing Immersive Molecular Dynamics Simulations of Guest Molecules in Metal-Organic Frameworks**  
A. von Wedelstedt<sup>1</sup>; G. Goebel<sup>1</sup>; G. Kalies<sup>1</sup>; <sup>1</sup> HTW Dresden University of Applied Sciences, Dresden/D
- B 3.41 **Mean-field model for pure and mixed gas adsorption. The effects of lateral interactions**  
K. Sillar<sup>1</sup>; A. Kundu<sup>2</sup>; J. Sauer<sup>2</sup>; <sup>1</sup> University of Tartu, Tartu/EST; <sup>2</sup> Humboldt Universität zu Berlin, Berlin/D
- B 3.42 **Atomistic insight in the flexibility and heat transport properties of MIL-53(Al) for water-adsorption applications**  
A. Lamaire<sup>1</sup>; J. Wieme<sup>1</sup>; A. Hoffman<sup>1</sup>; V. Van Speybroeck<sup>1</sup>; <sup>1</sup> Ghent University (UGent), Zwijnaarde/B
- B 3.43 **Isotope-selective responsivity of a flexible metal-organic framework**  
J. Fiorio<sup>1</sup>; J. Evans<sup>2</sup>; J. Joswig<sup>1</sup>; T. Heine<sup>1</sup>; <sup>1</sup> TU-Dresden, Dresden/D; <sup>2</sup> University of Adelaide, Adelaide/AUS
- B 3.44 **Cu&Ag benzenehexathiolate coordination polymer family as a structure and spin playground**  
T. Liu<sup>1</sup>; M. Polozij<sup>1</sup>; Z. Wang<sup>1</sup>; X. Huang<sup>1</sup>; R. Dong<sup>1</sup>; T. Heine<sup>1</sup>; <sup>1</sup> TU Dresden, Dresden/D
- B 3.45 **Theoretical insights on the conducting properties of a iodine-doped perylene-based Metal Organic Framework.**  
M. Esteve-Rochina<sup>1</sup>; G. Valente<sup>2</sup>; M. Souto<sup>2</sup>; E. Ortí<sup>1</sup>; J. Calbo<sup>1</sup>; <sup>1</sup> Institute of Molecular Science (ICMol), University of Valencia, Paterna/E; <sup>2</sup> Department of Chemistry, CICECO-Aveiro Institute of Materials, University of Aveiro, Aveiro/P
- B 3.46 **Assembly-induced electronic properties of surface-anchored metal-organic frameworks**  
M. Kozłowska<sup>1</sup>; M. Mostaghimi<sup>1</sup>; H. Schopmans<sup>1</sup>; L. Heinke<sup>2</sup>; C. Wöll<sup>2</sup>; W. Wenzel<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT)/Institute of Nanotechnology, Eggenstein-Leopoldshafen/D; <sup>2</sup> Karlsruhe Institute of Technology (KIT) - Institute of Functional Interfaces, Eggenstein-Leopoldshafen/D
- B 3.47 **Modelling dynamic effects to determine transport properties in semiconducting MOFs containing 1D pentacene stacks**  
R. Steentjes<sup>1</sup>; N. Taghizade<sup>1</sup>; S. Wieser<sup>1</sup>; E. Zojer<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A
- B 3.48 **MOF Synthesis Prediction Enabled by Automatic Data Mining and Machine Learning**  
Y. Luo<sup>1</sup>; S. Bag<sup>2</sup>; O. Zaremba<sup>3</sup>; A. Cierpka<sup>4</sup>; J. Andreato<sup>3</sup>; S. Wuttke<sup>3</sup>; P. Friederich<sup>2</sup>; M. Tsotsalas<sup>1</sup>; <sup>1</sup> Karlsruhe Institute of Technology (KIT) - Institute of Functional Interfaces, Eggenstein-Leopoldshafen/D; <sup>2</sup> Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D; <sup>3</sup> Basque Center for Materials, Applications & Nanostructures, Leioa/E; <sup>4</sup> Karlsruhe Institute of Technology (KIT), Karlsruhe /D
- B 3.49 **Machine-Learning assisted large-scale MOFs screening and ranking for CH<sub>4</sub>/N<sub>2</sub> separation**  
X. Zhang<sup>1</sup>; <sup>1</sup> EPFL Valais Wallis, Sion/CH
- B 3.50 **The Computational Screening & Machine Learning Approaches for Investigation of Separation of Xylene Isomers**  
M. Suyetin<sup>1</sup>; <sup>1</sup> Institute of Nanotechnology, Karlsruhe Institute of Technology., Eggenstein-Leopoldshafen, Germany/D
- B 3.51 **SynMOF: A database of MOF synthesis information generated via text mining**  
K. Gubsch<sup>1</sup>; R. Bence<sup>1</sup>; L. Glasby<sup>1</sup>; P. Moghadam<sup>1</sup>; <sup>1</sup> The University of Sheffield, Sheffield/UK
- B 3.52 **Diversifying databases of metal organic frameworks for high-throughput computational screening**  
S. Majumdar<sup>1</sup>; S. Moosavi<sup>1</sup>; K. Jablonka<sup>1</sup>; D. Ongari<sup>1</sup>; B. Smit<sup>1</sup>; <sup>1</sup> École Polytechnique Fédérale de Lausanne (EPFL), Sion/CH
- B 3.53 **Exploring the performance limits of MOF/polymer mixed matrix membranes for a large variety of gas separations**  
H. Daglar<sup>1</sup>; S. Aydin<sup>1</sup>; S. Keskin Avci<sup>1</sup>; <sup>1</sup> Koç University, Istanbul/TR
- B 3.54 **App-based Quantification of Crystal Phases and Amorphous Content in ZIFs Biocomposites**  
M. Hafner<sup>1</sup>; L. Villanova<sup>1</sup>; F. Carraro<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A
- B 3.55 **Towards a Robust Evaluation of Nanoporous Materials for Carbon Capture Applications**  
E. Moubarak<sup>1</sup>; <sup>1</sup> Ecole Polytechnique Fédérale de Lausanne, Sion/CH
- B 3.56 **Specific Heat Capacity in Metal-Organic Frameworks: A High-Throughput Simulation Study**  
G. Huang<sup>1</sup>; P. Moghadam<sup>1</sup>; <sup>1</sup> University of Sheffield, Sheffield/UK
- B 3.57 **Understanding the thermal expansion of MOF-74**  
T. Kamencek<sup>1</sup>; B. Schrode<sup>2</sup>; R. Ricco<sup>3</sup>; R. Resel<sup>1</sup>; E. Zojer<sup>1</sup>; <sup>1</sup> Graz University of Technology, Graz/A; <sup>2</sup> Anton Paar GmbH, Graz/A; <sup>3</sup> Asian Institute of Technology, Pathum Thani/T
- B 3.58 **Machinery Components inside Zeolitic Imidazolate Frameworks**  
J. Nam<sup>1</sup>; E. Jin<sup>1</sup>; S. Lee<sup>1</sup>; D. Yang<sup>1</sup>; H. Cho<sup>1</sup>; W. Choe<sup>1</sup>; <sup>1</sup> Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK
- B 3.59 **Li<sup>+</sup> conductivity in meltable dinitrile-based coordination polymers**  
K. Kageyama<sup>1</sup>; S. Horike<sup>1</sup>; <sup>1</sup> Kyoto University, Kyoto/J

## POSTER PROGRAMME

- B 3.60 **Inducing anhydrous and water-assisted high proton conductivity in metal-organic frameworks CPO-27/MOF-74 by mechanochemical approach**  
M. Lupa<sup>1</sup>; P. Kozyra<sup>1</sup>; D. Matoga<sup>1</sup>; <sup>1</sup> Jagiellonian University in Krakow, Krakow/PL

## Towards Industrial Application

- B 4.01 **A database to identify economically feasible MOF structures for volumetric H<sub>2</sub> storage from their composition and porous properties**  
J. Villajos Collado<sup>1</sup>; <sup>1</sup> Feredal institute for materials research and testing, Berlin/D
- B 4.02 **Using non-invasive Raman spectroscopy to elucidate the mechanism of MOF formation**  
M. Chong<sup>1</sup>; A. Parrott<sup>1</sup>; A. Nordon<sup>1</sup>; A. Fletcher<sup>1</sup>; <sup>1</sup> University of Strathclyde, Glasgow/UK
- B 4.03 **Upscaling aluminum MOF synthesis: exploring a more sustainable approach by solvent replacement and re-use**  
P. So<sup>1</sup>; P. Tang<sup>1</sup>; C. Lin<sup>1</sup>; <sup>1</sup> National Taiwan Normal University, Taipei City/RC
- B 4.04 **Sol-Gel Processing of a Covalent Organic Framework for the Generation of Hierarchically Porous Monolithic Adsorbents**  
M. Carrington<sup>1</sup>; N. Rampal<sup>1</sup>; D. Madden<sup>1</sup>; D. O'Nolan<sup>2</sup>; N. Casati<sup>3</sup>; G. Divitini<sup>1</sup>; J. Martin-Illan<sup>4</sup>; M. Tricarico<sup>5</sup>; R. Cepitis<sup>1</sup>; C. Camur<sup>1</sup>; T. Curtin<sup>6</sup>; J. Silvestre Alberio<sup>7</sup>; J. Tan<sup>5</sup>; F. Zamora<sup>4</sup>; S. Taraskin<sup>1</sup>; K. Chapman<sup>2</sup>; D. Fairen-Jimenez<sup>1</sup>; <sup>1</sup> University of Cambridge, Cambridge/UK; <sup>2</sup> Stony Brook University, Stony Brook/USA; <sup>3</sup> Paul Scherrer Institute, Villigen/CH; <sup>4</sup> Universidad de Madrid, Madrid/E; <sup>5</sup> University of Oxford, Oxford/UK; <sup>6</sup> University of Limerick, Limerick/IRL; <sup>7</sup> Universidad de Alicante, Alicante/E
- B 4.05 **Cost-effective and Environment-Friendly Synthesis, Shaping and Selective CO<sub>2</sub> Capture Property of Al-based MOFs**  
S. Nandi<sup>1</sup>; D. Chakraborty<sup>2</sup>; N. Heymans<sup>3</sup>; G. Weireld<sup>4</sup>; F. Nouar<sup>5</sup>; G. Mouchaham<sup>6</sup>; C. Serre<sup>7</sup>; <sup>1</sup> Institut des Matériaux Poreux de Paris, UMR 8004 Ecole Normale Supérieure, ESPCI Paris, Paris, France/F; <sup>2</sup> Institut des Matériaux Poreux de Paris, UMR 8004 Ecole Normale Supérieure, ESPCI Paris, Paris/F; <sup>3</sup> Service de Thermodynamique et Physique Mathématique, Faculté Polytechnique, Université de Mons, Mons/B; <sup>4</sup> Service de Thermodynamique et Physique Mathématique, Faculté Polytechnique, Université de Mons, Mons/B; <sup>5</sup> Institut des Matériaux Poreux de Paris, UMR 8004 Ecole Normale Supérieure, ESPCI Paris, CNRS, PSL University 75005 Paris, France, Paris/F
- B 4.06 **MOFs with Benzophenone Units: Shaping and Postsynthetic Modification towards Various Application**  
K. Hindricks<sup>1</sup>; J. Erdmann<sup>1</sup>; C. Marten<sup>1</sup>; P. Behrens<sup>1</sup>; <sup>1</sup> Leibniz Universität Hannover, Hannover/D
- B 4.07 **Industrial Scale, Continuous Flow Synthesis of Metal-Organic Frameworks for CCUS Applications**  
J. Turner<sup>1</sup>; <sup>1</sup> Promethean Particles Ltd, Nottingham/UK
- B 4.08 **MOF shaping strategies towards stable MOF monoliths**  
V. Karve<sup>1</sup>; W. Queen<sup>2</sup>; M. Soutrenon<sup>1</sup>; <sup>1</sup> HES-SO VS, Sion/CH; <sup>2</sup> EPFL Valais Wallis, Sion/CH
- B 4.09 **Additive Manufacturing of Metal-Organic Frameworks for Advanced Applications in Electrocatalysis and Regenerative Medicine**  
S. Dummert<sup>1</sup>; S. Mansi<sup>2</sup>; Z. Hussain<sup>1</sup>; P. Mela<sup>2</sup>; O. Lieleg<sup>3</sup>; A. Casini<sup>4</sup>; R. Fischer<sup>1</sup>; <sup>1</sup> Technical University of Munich, Chair of Inorganic and Metal-Organic Chemistry, Garching bei München/D; <sup>2</sup> Technical University of Munich, Chair of Medical Materials and Implants, Garching bei München/D; <sup>3</sup> Technical University of Munich, Associate Professorship of Biomechanics, Garching bei München/D; <sup>4</sup> Technical University of Munich, Chair of Medicinal and Bioinorganic Chemistry, Garching bei München/D
- B 4.10 **Process optimization of mechanochemical synthesis for the production 4,4 bi-pyridine based MOF using twin screw extrusion and multivariate data analysis**  
A. Metawe<sup>1</sup>; <sup>1</sup> SSPC, Limerick/IRL
- B 4.11 **The Study of Cyclodextrin-based Metal Organic Frameworks (COFs) for Encapsulating the Glabridin**  
H. Ji<sup>1</sup>; Y. Park<sup>1</sup>; S. Son<sup>1</sup>; H. Ji<sup>1</sup>; <sup>1</sup> H&A PHARMACHEM, Bucheon-si/ROK
- B 4.12 **Metal-organic framework based encapsulation – A strategy towards protection of fiberoptic immunosensor probes.**  
S. Dutta<sup>1</sup>; D. M<sup>1</sup>; S. Menon<sup>1</sup>; V. Janakiraman<sup>1</sup>; V. Sai<sup>1</sup>; <sup>1</sup> Indian institute of technology, Madras, Chennai/IND
- B 4.13 **The synthesis of the HKUST-1 material for selective ethane adsorption using MW activation and ionic liquids as a reaction medium**  
G. Deyko<sup>1</sup>; V. Isaeva<sup>1</sup>; L. Glukhov<sup>1</sup>; V. Chernyshev<sup>2</sup>; V. Vergun<sup>1</sup>; G. Kapustin<sup>1</sup>; L. Kustov<sup>1</sup>; <sup>1</sup> Zelinsky Institute of Organic Chemistry RAS, Moscow/RUS; <sup>2</sup> Moscow State University, Department of Chemistry, Moscow/RUS
- B 4.15 **Advances in MOFs and MOF-Composites synthesis and performance evaluation for H<sub>2</sub>S and NH<sub>3</sub> Capture**  
C. Piscopo<sup>1</sup>; <sup>1</sup> Fraunhofer ICT, Pfinztal/D

## POSTER PROGRAMME

- B 4.16 **Immobilized PNP-Pincers as Solid Molecular Catalysts for Hydrogen Storage and Release**  
K. Birkelbach<sup>1</sup>; I. Kappel<sup>2</sup>; P. Hausoul<sup>1</sup>; R. Palkovits<sup>1</sup>; <sup>1</sup> RWTH Aachen, Aachen/D; <sup>2</sup> MPI für Kohlenforschung, Mülheim/D
- B 4.17 **Chemoselective Cu and Ni-MOFs as pre-catalysts for the hydrogenation of furfural to furfuryl alcohol**  
P. Moyo<sup>1</sup>; <sup>1</sup> University of Johannesburg, Johannesburg/ZA
- B 4.18 **Propylene Dimerization using Ni-ZIF-8**  
M. Alalouni<sup>1</sup>; X. Dong<sup>2</sup>; C. Chen<sup>2</sup>; Y. Han<sup>2</sup>; <sup>1</sup> Saudi Aramco/ Catalyst Center of Excellence (CCoE), Research and Development Center, Dhahran/SAR; <sup>2</sup> King Abdullah University of Science and Technology (KAUST) / Advanced Membranes and Porous Materials Center, Thuwal/SAR
- B 4.19 **Development of Recyclable Multifunctional Metal Organic Framework Catalysts for Organic Synthesis**  
S. Ndlovu<sup>1</sup>; <sup>1</sup> University of St Andrews, St Andrews/UK
- B 4.20 **Metal-Organic Framework-Pellet Catalyst Composites for Continuous Flow Operations**  
A. Griffiths<sup>1</sup>; T. Chamberlain<sup>1</sup>; S. Collins<sup>2</sup>; K. Wu<sup>3</sup>; M. Muldowney<sup>4</sup>; W. Reynolds<sup>4</sup>; <sup>1</sup> University of Leeds, LEEDS/UK; <sup>2</sup> University of Leeds, Leeds/UK; <sup>3</sup> Zhejiang University, Hangzhou/CN; <sup>4</sup> Sterling Pharmaceuticals, Newcastle/UK
- B 4.21 **Metal Organic Framework scintillators for radioactive gas detection**  
S. Mauree<sup>1</sup>; V. Villemot<sup>1</sup>; G. Bertrand<sup>1</sup>; M. Hamel<sup>1</sup>; B. Sabot<sup>1</sup>; <sup>1</sup> CEA Saclay, Palaiseau/F
- B 4.22 **MOF-based micro-cavity/capacitor dual-read-out gas sensor**  
M. Verstreken<sup>1</sup>; M. Tietze<sup>1</sup>; A. Matavž<sup>1</sup>; R. Ameloot<sup>1</sup>; <sup>1</sup> Katholieke Universiteit Leuven, Leuven/B
- B 4.23 **Metal-organic framework coated optical fiber for detection of Cr<sub>6+</sub> ions**  
S. Menon<sup>1</sup>; S. V V Raghavendra<sup>1</sup>; <sup>1</sup> Indian Institute of Technology Madras, Chennai/IND
- B 4.24 **Electrochemically synthesized ultra-thin film of Cu-HHTP MOF as Chemi-resistive Gas Sensor**  
Y. Wang<sup>1</sup>; <sup>1</sup> University of Oxford, Oxford/UK
- B 4.25 **MOF-based sensors for water quality assessment: the fluoride case.**  
E. Ota<sup>1</sup>; <sup>1</sup> Shinshu University, Ueda/J
- B 4.26 **Room-temperature methane detection using a metal-organic framework-functionalized quartz crystal microbalance sensor**  
J. Malhotra<sup>1</sup>; M. Kubus<sup>2</sup>; K. Pedersen<sup>2</sup>; S. Andersen<sup>1</sup>; J. Sundberg<sup>1</sup>; <sup>1</sup> DTU Offshore, Technical University of Denmark, Kongens Lyngby/DK; <sup>2</sup> Department of Chemistry, Technical University of Denmark, Kongens Lyngby/DK
- B 4.27 **Atomic-scale quantum sensing of ensembles of guest molecules in MOF with intrinsic electron spin centers**  
A. Kultaeva<sup>1</sup>; A. Pöppel<sup>2</sup>; W. Schmidt<sup>3</sup>; T. Biktagirov<sup>4</sup>; <sup>1</sup> Universität Leipzig, Leipzig/D; <sup>2</sup> Universität Leipzig, Leipzig/D; <sup>3</sup> Universität Paderborn, Paderborn/D; <sup>4</sup> Paderborn University, Paderborn/D

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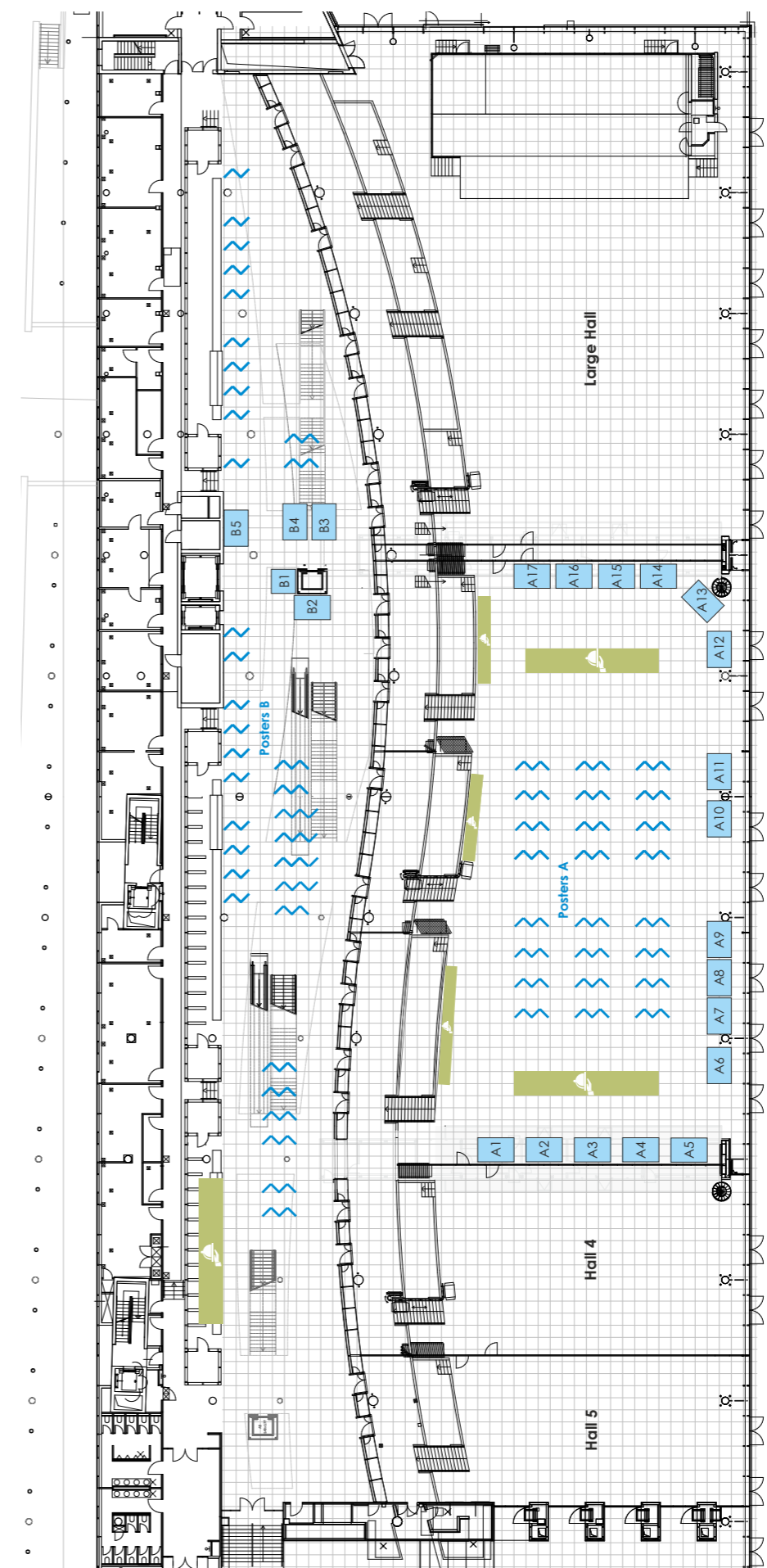
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