

Full Conference Program

Monday, June 22, 2026

3:00–8:00 p.m. **Registration**

6:00–9:00 p.m. **Welcome Reception**

Tuesday, June 23, 2026

08:00 a.m. **Opening Ceremony**

Session 1: Zeolite membrane preparation and characterization I

Chair: Hiroshi Madokoro

8:30 a.m. **INVITED TALK: Zeolite Membranes from Commercial Dehydration to Emerging Gas Separations**
Saki Moriya (Mitsubishi Chemical Corporation)

9:10 a.m. **Improved Synthesis of Hollow Fiber SSZ-13 Zeolite Membranes for High-Pressure CO₂/CH₄ Separation**
Xingyu Peng (Nanjing Tech University)

9:30 a.m. **Laminar CHA Zeolite Composite Membranes Integrating UV-Perforated Graphene Oxide for Enhanced Molecular Transport**
Xiangcheng Dai (Zhejiang University)

9:50 a.m. Coffee break

Session 2: Preparation and characterization of MOF and other membranes

Chair: Jürgen Caro

10:30 a.m. **INVITED TALK: Advances in Metal-Organic Frameworks based Membranes for Gas Separations**
Mohamed Eddaoudi (King Abdullah University of Science and Technology)

11:10 a.m. **Double self-assembly layer-by-layer fabrication of ultrathin graphene membranes on porous ceramics for the separation tasks in extreme alkaline conditions**
Guobin Jia (Leibniz Institute of Photonic Technology Jena)

11:30 a.m. **Light-Responsive Membranes for Low-Energy Molecular Separation**
Martin Presselt (Leibniz Institute of Photonic Technologies Jena)

11:50 p.m.	Lunch
Chair: Dan Zhao	
1:00 p.m.	KEYNOTE: Towards the Ultimate Membrane: Scalable, Green, and Rapid Synthesis of High-Performance MOF Films Kumar Varoon Agrawal (École Polytechnique Fédérale de Lausanne)
1:30 p.m.	Heterogenous growth: A new approach for synthesis of zeolite membranes with high performance Jianhua Yang (Dalian University of Technology)
1:50 p.m.	Evidence of Heteroepitaxy and Solid Solutions in lattice matched ternary COF Systems Juliane Lange (Martin-Luther-Universität Halle-Wittenberg)
2:10 p.m.	Coffee break

Session 1: Zeolite membrane preparation and characterization II

Chair: Saki Moriya

3:10 p.m.	KEYNOTE: Zeolite Membrane Preparation for Molecular Sieving Jungkyu Choi (Korea University)
3:40 p.m.	Fabrication of asymmetric MFI zeolite membrane layers via conversion of wet gel layers Zhengbao Wang (Zhejiang University)
4:00 p.m.	Synthesis of Sigma-1 zeolite membrane on hollow fiber for selective water separation from simulated CO₂ hydrogenation mixture Peng Du (Nanjing Tech University)
4:20 p.m.	Fabrication of Metal-Doping Zeolite Membranes for CO₂ Separation Li Peng (Nanjing Tech University)
4:40 p.m.	Heterogeneous synthesis of MFI-type zeolite membranes toward superior CO₂/N₂ separation performance Jun Li (Zhejiang University)
5:00 p.m.	Poster Session & Get Together with Snacks
8:00 p.m.	End of Day 1

Wednesday, June 24, 2026

08:20 a.m. Daily announcements

Session 3: Preparation and application of MOF and other membranes I

Chair: Mohamed Eddaoudi

8:30 a.m. **INVITED TALK: Covalent Organic Framework Membranes for Molecular Separations**
Dan Zhao (National University of Singapore)

9:10 a.m. **Low-cost stainless-steel mesh supports enabling high-permeance membranes for high-temperature gas separation**
Fabian Yuki Scheffler (École Polytechnique Fédérale de Lausanne)

9:30 a.m. **Design of MOF membranes towards practical hydrocarbon separations**
Guangwei He (Tianjin University)

9:50 a.m. Coffee break

Session 4: Novel materials, methods and applications

Chair: Xuehong Gu

10:20 a.m. **INVITED TALK: Crystal Growth as a Design Lever: Engineering Anisotropy in Porous Framework Composites**
Jia Min Chin (Universität Wien)

11:00 a.m. **Zeolite nanosheet-based ion exchange membranes: from brine desalination to proton and anion conduction in electrochemical cells**
Junhang Dong (University of Cincinnati)

11:20 a.m. **Towards 2D Free-Standing Polymer Membranes for Compartmentalization from Laterally Linked Langmuir Monolayers**
Sarah Jasmin Finkelmeyer (Leibniz Institute of Photonic Technologies Jena)

11:40 a.m. **From UiO-66 Gel Membranes to Electrospun UiO-66@PCL Composites: Structure-Performance Control for PFAS Capture**
Joerg R. Jinschek (Technical University of Denmark)

12:00 p.m. Lunch

Chair: Jingwei Hou

1:00 p.m. **KEYNOTE: MOF-based thin film mixed matrix membranes for carbon capture**
Sui Zhang (National University of Singapore)

1:30 p.m. **Ultrafast Molecular Sieving via Two-Dimensional Fullerene Membrane**
Xiaofang Chen (East China Normal University)

1:50 p.m. **Non-thermal ultraviolet detemplation of DD3R zeolite membranes for high-selective CO₂ separation**
Yingpeng Ren (Nanjing Tech University)

2:10 p.m. Coffee break

Session 3: Preparation and application of MOF and other membranes II

Chair: Jia Min Chin

3:10 p.m. **KEYNOTE: Glassy MOF composite membranes for robust separation**
Jingwei Hou (The University of Queensland)

3:40 p.m. **Efficient and green synthesis of graphdiynes for membrane separation applications**
Hongwei Fan (Beijing University of Chemical Technology)

4:00 p.m. **A Sustainability Window – Strategies to Unlock Free-Standing ZIF-62-Glass Membranes for CO₂ Capture**
Alexander Knebel (Friedrich-Schiller-Universität Jena)

4:20 p.m. **Highly Crystalline and Oriented 2D Covalent Organic Framework Membranes for Molecular and Ionic Separations**
Zhiping Lai (King Abdullah University of Science and Technology)

4:40 p.m. End of Day 2

Thursday, June 25, 2026

08:50 a.m. Daily announcements

Session 5: Zeolite membrane separation and membrane reactors

Chair: Alexander Knebel

9:00 a.m. **INVITED TALK: Zeolite Membrane Reactors for Process Intensification**
Jürgen Caro (Leibniz Universität Hannover)

9:40 a.m. **KEYNOTE: Estimation of CO₂/CH₄ gas permeation characteristics of DDR-type zeolite membrane**
Hiroshi Madokoro (NGK Corporation)

10:10 a.m. Coffee break

Chair: Jonas Hedlund

10:40 a.m. **Microstructural Regulation of CHA-Type Zeolite Membranes for Molecular Sieving**
Bo Liu (Nanjing Tech University)

11:00 a.m. **Production and Process Evaluation of SSZ-13 Zeolite Membranes for CO₂ and H₂ Separation**
Alireza Taherizadeh (Fraunhofer IKTS)

11:20 a.m. **Dehydrogenation of a Liquid Organic Hydrogen Carrier Using a Zeolite Membrane Under Low-Temperature Conditions**
Seungmi Lee (Korea University)

11:40 a.m. **Effects of feed composition and support properties on the dehydration performance of LTA zeolite membranes in H₂O/IPA/ECH ternary mixtures**
Dain Ha (Korea University)

12:00 p.m. Lunch

12:50 p.m. Transfer to Fraunhofer IKTS, Hermsdorf

1:30 p.m. **Lab tour at Fraunhofer IKTS / Coffee break**

3:30 p.m. Transfer to Leuchtenburg Castle

4:30 p.m. **Guided Tour of Leuchtenburg Castle and Ceramics Museum**

6:00 p.m. **Conference Dinner Medieval Style**

9:00 p.m. Transfer back to Jena

9:30 p.m. End of Day 3

Friday, June 26, 2026

08:50 a.m. Daily announcements

Session 6: Industrial applications

Chair: Hannes Richter

9:00 a.m. **INVITED TALK: Hollow Fiber Supported Zeolite Membranes: Opportunities, Challenges and Industrialization**
Xuehong Gu (Nanjing Tech University)

9:40 a.m. **KEYNOTE: Potential industrial gas separations using zeolite membranes**
Jonas Hedlund (Luleå University of Technology)

10:10 a.m. Coffee break

Chair: Zhiping Lai

10:40 a.m. **Regeneration of TEG by pervaporation dehydration for hydrogen drying at the Bad Lauchstädt Energy Park**
Thomas Gallert (DBI - Gastechnologisches Institut gGmbH Freiberg)

11:00 a.m. **Ultra-thin CHA membranes for natural gas upgrading**
Liang Yu (Luleå University of Technology)

11:20 a.m. **Interfacial Chemistry tunes Performance in a Polysulfone-based MUF-16 Mixed Matrix Membrane for Pre-Combustion CO₂-Capture**
Laura Calderon Rodriguez (Friedrich-Schiller-Universität Jena)

11:40 a.m. **MOF UiO-66 membranes for hydrocarbon separation**
Xinlei Liu (Tianjin University)

12:00 p.m. Lunch

Session 7: Modeling and upscaling

Chair: Kumar Varoon Agrawal

12:40 p.m. **INVITED TALK: Multiscale modelling of gas adsorption and separation in metal-organic framework/polymer membranes**
Rocio Semino (Sorbonne Université)

1:20 p.m. **Probing complex interfaces in metal-organic frameworks via adaptive multiscale simulations**
Hari Haran Sudhakar (Sorbonne Université)

1:40 p.m. **Fundamental understanding of gas mass transport in zeolites: the role of outer surface resistance**
Saman Salehian (Luleå University of Technology)

2:00 p.m.	Fabrication of meter-scale perforated graphene oxide nanofiltration membranes Kemal Celebi (Zhejiang University)
2:20 p.m.	Study of water adsorption within zeolite pores and its influence on gas separation performance Mehdi Tarkhani (Luleå University of Technology)
2:40 p.m.	Embryonic Zeolite-Mediated Suture Synthesis of Thin and Scalable Zeolite Membranes for Tailored Gas Separation Xuerui Wang (Nanjing Tech University)
3:00 p.m.	Closing ceremony
3:30 p.m.	End of conference

Poster Session

1	Light-Controlled Reaction Kinetics and Stacking in a Porphyrin-Based COF Membranes Synthesized at the Air–Water Interface Maximilian Hupfer (Leibniz-Institute of Photonic Technology)
2	Development of commercial-grade zeolite membrane fabrication technology for industrial applications Lee Sungyoun (EMST Co. R&D Institute)
3	A Method for Fabricating High-Quality Chabazite Zeolite Membranes Without the Use of Organic Structure-Directing Agents Seungmi Lee (Korea University)
4	Impact of water contact and seed layer deposition on the dehydration performance of LTA zeolite membranes Dain Ha (Korea University)
5	Catalytic Membrane Reactors for chemical reactions and product gas purification/separation with Zeolite, Carbon, Pd & PdAg membranes Mohit Jain (Fraunhofer IKTS)
6	KFI zeolite membrane on tubular Al₂O₃ for separation of ethanol/water mixtures via pervaporation Johannes Lehmann (TU Dresden)
7	Efficient separation of SO₂/NO₂ on in-situ synthesized NaA zeolite membrane Ziyi Li (University of Science and Technology Beijing)
8	Stimuli-Responsive Lattice Dynamics in Azobenzene-Loaded UiO-66-NH₂ Svetlana Miliutina (Friedrich-Schiller-Universität Jena)
9	Ultrathin Phase Inversion Mixed Matrix Membranes from Polysulfone and MIL-125(Ti)-NH₂ for CO₂ Capture Sevda Alinezhad (Friedrich-Schiller-Universität Jena)
10	Liquid-based activation of MFI and CHA zeolite nanosheets for aggregation-free membrane fabrication Kemal Celebi (Zhejiang University)
11	Zeolite Nanosheet–Polymer Composite IEMs: Toward Scalability, Manufacturability, and Affordability Jan Gabski (University of Cincinnati)
12	Molecular Sieving vs. Adsorption-Diffusion: Helium Separation in Carbon and Zeolite Membranes Adrian Simon (Fraunhofer IKTS)
13	Carbon-containing membranes for hydrogen separation Ralf Wyrwa (Fraunhofer IKTS)
14	In-situ FTIR Investigation of Water Adsorption–Desorption in Metal Poly(heptazine imides) for Sorption-Based Thermal Energy Storage Yisak Tsegazab Gerase (Friedrich-Schiller-Universität Jena)

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- 15 **Development of extruded ceramic membrane support, nanopore coating technology and hydrogen membrane module**
In-Hyuck Song (Korea Institute of Materials Science KIMS)
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- 16 **Performance Comparison of Oxide and Pd Membranes for Hydrogen Purification in Ammonia Decomposition Systems**
Junghoon Park (Dongguk University)
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