



16th International Conference on Catalysis in Membrane Reactors

October 16-18, 2023
Donostia-San Sebastián,
Spain

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ICCMR16 - Program and information

Directions & Venue

The ICCMR16 Conference will take place in the Centro Kursaal – Kursaal Elkargunea, S.at Donostia – San Sebastián, Spain
Entrance to the small cube (second entrance on the right from the street)

Centro Kursaal – Kursaal

Room 1 and Rooms 4+5

Zurriola Hiribidea, 1, 20002 Donostia – San Sebastián

Website: <http://www.iccmr16.org/>

Transportation from San Sebastian Airport to San Sebastian Bus Central Station

There are buses departing from San Sebastian Airport (located in Hondarribia, around 20 km from San Sebastián). Take Bus nº 21. It stops at Plaza Gipuzkoa 10 in Donostia-San Sebastian. Once arriving you can reach the Centro Kursaal in around 9 minutes by walking. Tickets for the bus can be purchased in advance. In addition, you can plan your travel through this website: <https://ekialdebus.eus/es/servicios-al-aeropuerto/>.

Transportation from Bilbao Airport

Bus D050B service runs every hour from airport and takes roughly 1h 20 minutes. Line D050B stop leaving from the airport towards Donostia/San Sebastián at Arrivals level. Tickets can be bought at the bus but better to buy in advance (one month in advance) (<https://www.pesa.net/pesa/en/compra>). Alternatively, you can download the LurTicket app on your phone and buy tickets as well.

Transportation from Biarritz Airport

There are buses departing from Biarritz to San Sebastián. Find further information at the following link <https://biarritz.aeroport.fr/en/parking-transport/buses/>

Presentations

Plenary: 50 minutes for speech.

Keynote: 25 minutes for speech and 5 minutes for discussion

Oral: 15 minutes for speech and 5 minutes for discussion

Poster: Recommended size: A0 (841 x 1189 mm, wide x high). Poster support panel size: 1 m x 2.5 m (including metallic frame)

Please display your poster on the poster board in hall during the conference.

Please stay in front of the poster board during the poster sessions: coffee breaks October 17th and 18th.

Monday, October 16 th , 2023			
08:45	Registration /Coffee		
09:45	Open remarks: J.L. Viviente		
10:00	Intro speech		
10:15	[PL1] Plenary session in Room 1: Membrane Reactors for chemical Production, Fausto Gallucci, TU/e		
11:20	Parallel 1 - Room 1		Parallel 2 - Room 4+5
	Session 1: Catalyst and membrane design 1 – Room 1 Chair: Alfredo Pacheco and Antonio Vita		Session 4: Integration with industrial processes– Room 4+5 Chair: Junya Okazaki
11:20	[D16-S1-R1-01] Keynote: Recent developments at Tecnalía and TUE on carbon molecular sieves membranes (CMSM) for gas separation and membrane reactors, Alfredo Pacheco, TECNALIA	11:20	[D16-S4-R4-01] Keynote: A new chapter begins: Zeolite membrane technology towards carbon neutrality, Junya Okazaki, NGK Insulators
11:50	[D16-S1-R1-02] Development of carbon molecular sieve membranes for ammonia decomposition in membrane reactors, Gaetano Anello, TU/e	11:50	[D16-S4-R4-02] Power-to-ammonia using a catalytic membrane reactor: influence of membrane properties and operating conditions on process performance, Simon Richard, ENGIE Lab CRIGEN & TU/e
12:10	[D16-S1-R1-03] Carbon membranes for H ₂ /H ₂ O: the importance of the polymeric precursor, Clara Coiana, TU/e	12:10	[D16-S4-R4-03]: Membranes for gas separation in the Energy Transition, Marija Saric, TNO (ID: 2)
12:30	[D16-S1-R1-04] Catalytic activation of Periodic Open Cellular Structures (POCSs) for the integration with membranes to enhance ammonia synthesis in membrane reactors, Antonio Vita, CNR-ITAE	12:30	
12:50			
13:00	Lunch		
	Session2: Catalyst and membrane design 2 – Room 1 Chair: David Alique and Camilla Brencio		Session 5: Membrane bioreactors - Room 4+5 Chair: Lidietta Giorno and Andrei Popkov
14:00	[D16-S2-R1-01] Keynote: Comparison of different reactor configurations for the direct dehydrogenation of propane, Camilla Brencio, TU/e	14:00	[D16-S5-R4-01] Keynote: Tuning membrane properties for the development of enzyme-loaded membranes, Lidietta Giorno, CNR-ITM
14:30	[D16-S2-R1-02] Adjustment of intermediate barriers to increase the permeation capacity of composite Pd-membranes: effect of constituent materials and asymmetry of the layer, Nagore Acha, Rey Juan Carlos University	14:30	[D16-S5-R4-02] Development of a Membrane Aerated Biofilm Reactor (MABR) for simultaneous COD and ammonia removal, Ilaria Rizzardi, Genoa University

14:50	[D16-S2-R1-03] On the development and testing of H ₂ selective Pd-Ag membranes supported on porous metal filters for ammonia cracking and steam methane reforming membrane reactors, Serena Agnolin , TU/e	14:50	[D16-S5-R4-03] Biocatalytic membrane reactors using immobilized phosphotriesterase for the biodegradation of organophosphate micropollutants, Lidietta Giorno , CNR-ITM
15:10	[D16-S2-R1-04] Elucidating the effect of permeate flux direction through supported metal membranes: golden ratio and swap-point revelation, David Alique , Rey Juan Carlos University	15:10	[D16-S5-R4-04] Simultaneous enzymatic synthesis and purification of prebiotic fructo-oligosaccharides in nanofiltration membrane module, Dejan Bezbradica , Belgrade University
15:30	[D16-S2-R1-05] Decomposition of diluted ammonia in conventional and membrane reactor, Salvatore Abate , Messina University, ERIC aisbl and INSTM/CASPE	15:30	[D16-S5-R4-05] Novel polyelectrolyte LbL assemblies for membrane modification in enzymatic membrane reactors, Andrei Popkov , Denmark Technical University
15:50	Coffee break		
	Session 3: Catalyst and membrane design 3 – Room 1 Chair: Masahiko Matsukata		Session 6: Electrochemical – Room 4+5 Chair: Arian Nijmeijer
16:35	[D16-S3-R1-01] Keynote: Membrane Reactor for Direct CO ₂ Fischer-Tropsch Synthesis: Effect of Operating Conditions, Masahiko Matsukata , Waseda University	16:35	[D16-S6-R4-01] Enhancing non-noble metal catalyst activity on Rotating Disk Electrode: investigating the influence of catalyst loading, Jorge Teixeira , Porto University, UNL and Bondalti Chemicals S.A
		16:55	[D16-S6-R4-02] Magnetron sputtering of GDC films for co-ionic membrane reactors, Marit Stange , SINTEF
17:05	[D16-S3-R1-02] Fischer-Tropsch synthesis via micro-structured ceramic flat-disc membranes, Jiaojiao Zheng , Aston University	17:15	[D16-S6-R4-03] Solid Oxide Fuel Cells for Sustainable Nitrous Oxide Valorization: Using Ammonia as a Valuable Byproduct, Celina Fernandes , Porto University
17:25	[D16-S3-R1-03]: Permeation behaviour and stability of BSCF/CGO MIEC oxygen membranes in presence of CO ₂ , Jaione Ollo , TECNALIA	17:35	End day1
17:45	End day 1		
19:30	Social Event. Bus departure near KURSAAL (passing the bridge to the left: República Argentina Kalea)		

Tuesday, October 17 th , 2023			
09:00	Open remarks: J.L. Viviente		
09:15	Plenary session in Room 1: [PL2] Inorganic proton conducting membrane-based membrane reactors, Arian Nijmeijer, Shell		
10:15	Coffee break and poster session		
11:00	Parallel 1 - Room 1		Parallel 2 - Room 4+5
	Session 7: Modelling and simulation 1 – Room 1 Chair: Jord Peter Haven		Session 10: European research projects 1 – Room 4+5 Chair: Kang Li
11:00	[D17-S7-R1-01] Keynote: Industrial production of propylene using dense ceramic membranes, Jord Peter Haven , Twente University	11:00	[D17-S10-R4-01] INNOMEM project: Open Innovation Test Bed for nano-enabled membranes, Jon Zuñiga , TECNALIA
11:30	[D17-S7-R1-03] Evaluation of membrane reactor performance for butadiene production from ethanol: Modelling study, Kamran Ghasemzadeh , University of Manchester	11:20	[D17-S10-R4-02] Additive Manufacturing for Zero-emission Innovative Green Chemistry – AMAZING, Julia Lucia Wolter , Forschungszentrum Jülich GmbH
11:50	[D17-S7-R1-05] Process simulation and cost evaluation of membrane systems for CO ₂ removal using a superstructure approach, Rouzbeh Ramezani , TU/e	11:40	[D17-S10-R4-03] Project MESOWAS: A solar-based membrane reactor for hydrogen production, Nicole C. Neumann , German Aerospace Center DLR
	Session 11: Photocatalytic membrane reactor – Room 1 Chair: Jord Peter Haven	12:00	[D17-S10-R4-04] Re-invent the catalytic converter with micro-structured hollow fiber substrate, Peng Yan , Imperial College London
12:10	[D17-S11-R1-01] Submerged photocatalytic membrane reactor utilizing membrane distillation for ketoprofen removal under simulated solar light, Kacper Szymański , West Pomeranian University of Technology	12:20	[D17-S10-R4-05] Ammonia and MOF Based Hydrogen storage for EuRoPE (AMBHER), Angela M. Thomas , TECNALIA
12:30		12:40	
13:00	Lunch		
	Session 8: Modelling and simulation 2 – Room 1 Chair: Carlos V. Miguel		Session 12: One phase and multiphase CMR 1 – Room 4+5 Chair: Toshinori Tsuru
14:00	[D17-S8-R1-01] Keynote: Modelling of carbon molecular sieve membranes for ammonia decomposition applications inside a catalytic membrane reactor, Zançat E. Sahin , TU/e	14:00	[D17-S12-R4-01] Keynote: Scaling-up of carbon membrane preparation and pilot-scale testing in reactions, Jörg Richter , Fraunhofer Institute for Ceramic Technologies and Systems IKTS

14:30	[D17-S8-R1-03] Techno-economic assessment of a decentralized plant for hydrogen production from ammonia decomposition, Valentina Cechetto , TU/e	14:30	[D17-S12-R4-02] Fabrication of $Ba_{0.3}Sr_{0.7}Fe_{0.9}Mo_{0.1}O_{3-6}$ perovskite multichannel hollow fiber for oxygen separation and membrane reactor, Jinkun Tan , Nanjing Tech University
14:50	[D17-S8-R1-04] Simulation study for dry reforming of biogas using H ₂ -selective membrane reactors, Carlos V. Miguel , Fraunhofer Portugal AWAM	14:50	[D17-S12-R4-03] Long-term stability of OTMs for application in membrane reactors and separation modules, Francesca Drago , RSE SpA
15:10	[D17-S8-R1-05] Simulation and optimization of an ammonia synthesis catalytic membrane reactor, Iolanda Gargiulo , TU/e	15:10	[D17-S12-R4-04] Keynote 2: Subnano-tuning of silica-based membranes for process intensification of NH ₃ synthesis and decomposition, Toshinori Tsuru , Hiroshima University
15:30		15:40	
15:50	Coffee break and poster session		
	Session 9: Modelling and simulation 3 – Room 1 Chair: Jon Zuniga		Session 13: One phase and multiphase CMR 2 – Room 4+5 Chair: Giuseppe Barbieri
16:35	[D17-S9-R1-01] A theoretical analysis of CO ₂ methanation in a catalytic membrane reactor, Panagiotis Boutikos , FORTH/ICEHT	16:35	[D17-S13-R4-01] Keynote 3: In-Situ separation and purification of bioethanol from membrane bioreactors by two stage: hydrophobic pervaporation and then hydrophilic vapor permeation, Arash Rahimalimamaghani , TU/e
16:55	[D17-S9-R1-02] Modelling of fish oil enzymatic transesterification for w-3 fatty acids enrichment in membrane reactors, Michele Ongis , Politecnico di Milano & TU/e	17:05	[D17-S13-R4-02] High-purity H ₂ production from glycerol steam reforming in multifunctional reactors, Luis M. Madeira , Porto University
17:15	[D17-S9-R1-03] Modelling of double-skin Pd-based membranes – layer-by-layer approach, Wout J.R. Ververs , TU/e	17:25	[D17-S13-R4-03] Catalytic membrane contactors for methanol conversion to dimethyl ether, Giuseppe Barbieri , ITM-CNR
17:35	[D17-S9-R1-04] Numerical simulations of HI decomposition in metal alloy-based membrane reactor, Ritu Parashar , Homi Bhabha National Institute	17:45	[D17-S13-R4-04] Preliminary study on Ni-La-W based catalytic membrane reactors, feasibility and advantages, Andrea Pastorino , Genoa University & INSTM
17:55	End day 2		
		18:05	End Day 2
20:30	Dinner at MUKA. Avda de la Zurriola, 1 20002 Donostia - San Sebastián		

Wednesday, October 18 th , 2023			
08:45	Registration		
09:00	Open remarks: J.L. Viviente		
09:15	Plenary session in Room 1: [PL3] How to change the world with membrane reactors: high-purity hydrogen generation, Jon Meléndez, H2SITE		
10:15	Coffee break and poster session		
	Session 14: CMR and IMR – Room 1 Chair: Alfredo Pacheco		Session 15: European research project 2 – Room 4+5 Chair: Fausto Gallucci
11:00	[D18-S14-R1-01] Peroxymonosulfate/Janus Electrified Membrane Reactor for Fast Water Decontamination, Yumeng Zhao , Harbin Institute of Technology	11:00	[D18-S15-R4-01] MEASURED: Membrane Scale-up for chemical industries, Luca Di Felice , TU/e
11:20	[D18-S14-R1-03] Stimuli-responsive heterojunctions-based photo-electrocatalytic membrane reactors for reactive filtration of persistent organic pollutants, Priyanka Kumari , Deakin University and TDNBC	11:20	[D18-S15-R4-02] MEASURED Project: Membrane Scale-Up for Gas Separation, Mathilde Jégoux , ENGIE Lab CRIGEN
11:40	[D18-S14-R1-04] Fenton catalyst Iron Oxychloride (FeOCl) supported on ceramic membranes, Claudia-Andrea Revilla-Pacheco , Universidad Católica de Santa María	11:40	[D18-S15-R4-03] Polishing CH ₄ from a mixture product of the methanation of CO ₂ , Margot Llosa , TECNALIA
12:00		12:00	[D18-S15-R4-04] Advanced materials and Reactors for ENergy storage tHrough Ammonia (ARENHA), José Luis Viviente , TECNALIA
12:20	Closing session		
12:20	Next ICCMR17, Wanqin Jin, Nanjing Tech University		
12:35	Awards by Processes, Fausto Gallucci		
	Closing		
12:50	Lunch		
13:50	End		



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