

12th KOREA-ITALY WORKSHOP

Innovative Membrane Technology for Carbon Neutrality

Sun, Oct 20th - Tue, Oct 22nd 2024

Venezia Hotel in Yeosu



Program schedule

Sunday, 20th

19:00 - Registration and Welcome Reception

Monday, 21st

09:00 – 09:30 Opening and Welcome Remarks

Kew-Ho Lee (KRICT)

Alberto Figoli (ITM-CNR)

Session 1.

Chairs: Alberto Figoli
Kew-Ho Lee

09:30 – 10:10 Overview on characteristics of ion exchange membranes for various energy conversion processes

Seung-Hyeon Moon (GIST)

10:10 – 10:50 Membrane fabrication toward a more sustainable process

Alberto Figoli (ITM-CNR)

10:50 – 11:15 Crosslinked polybenzimidazole membrane for organic solvent nanofiltration

Youngmin Yoo (KRICT)

11:15 – 11:40 Novel aromatic separators for alkaline water electrolysis

Emanuele Di Nicolò
(Solvay Specialty Polymers)

11:40 – 13:30 Lunch Break

Session 2.

Chairs: Giuseppe Barbieri
Jaesung Park

13:30 – 13:55 Engineering membrane materials for gas separation

Ho Bum Park (HYU)

13:55 – 14:20 Membrane gas separation integrated in the process for the separation of CO₂ and/or H₂ contained in biogas and syngas streams

Giuseppe Barbieri (ITM-CNR)

14:20 – 14:45 Hollow fiber membrane contactor for CO₂ mineralization

Tae-Hyun Bae (KAIST)

14:45 – 15:10 UV-crosslinked polyimides: Enhancing CO₂ separation membrane platforms

Jaesung Park (KRICT)

15:10 – 15:40 Coffee Break

Session 3.

Chairs: Elena Tocci
Jeong F. Kim

15:40 – 16:05 Molecular insight into lithium recovery from spent batteries via membrane-assisted crystallization

Elena Tocci (ITM-CNR)

16:05 – 16:30 Membranes for white biotechnology

Jeong F. Kim (KHU)

16:30 – 16:55 Functionalized graphene and carbon nanotubes for water treatment

Enzo Menna (UNIPD)

16:55 – 17:20 How MEMBRARE is addressing the global issues of net zero and PFAS

Sung Il Jeon (Membrane)

17:20 – 17:55 Gas separation membranes for energy transition- Market trends and research developments

Sang Hoon Han (Airrane)

19:00 – 21:00 Banquet Dinner

Tuesday, 22nd

Session 4.

Chair: Lidieta Giorno
Sang Yong Nam

09:00 – 09:25 Biofunctional membranes to improve the selectivity and sensitivity of membrane-based biosensors for environmental monitoring

Lidieta Giorno (ITM-CNR)

09:25 – 09:50 Functional polymeric membranes for the production of green hydrogen using water electrolysis

Sang Yong Nam (GNU)

09:50 – 10:15 Optimal layer distribution in multilayered composite membranes driven by non-linear permeation power laws

Alessio Caravella
(DIMES-University of Calabria Italy)

10:15 – 10:40 Performance evaluation, reusability, and mechanistic insights of MXene-CNT oil removal membranes

Sanghyun Jeong (PNU)

10:40 – 11:05 Membrane-PSA hybrid process for production of high-purity (99.995 mol%) hydrogen from by-product gas in steel industry for fuel cell application

Jeong-Hoon Kim (KRICT)

11:05 – 11:50 Wrap-up and Closing Remarks

11:50 – Lunch Break