

LIST OF POSTERS

Poster session, Congress hall foyer 2nd floor

MONDAY, SEPTEMBER 9, 2024, 19:00–20:00

Membrane materials | T1

MM-P-1

A novel sawdust derived cnc-based composite membrane for effective removal of methylene blue dye from aqueous solutions

M. Bopape, M. Bopape, M.S. Onyango, C. Pochat (South Africa)

MM-P-2

Development of selective anion membranes for antimony recovery in the copper industry by electro dialysis

S.W. da Silva, M.A.S. Rodrigues, J.P. Pola, C.L.P. Carone, F. Celso, A.M. Bernardes (Brazil)

MM-P-3

Dessert beetle armor inspiration for PVDF-chitosan hybrid NIPS membrane materials for membrane emulsification

Z. Flanc¹, J. Kujawa¹, W. Kujawski¹, B. Tylkowski^{1,2} (¹Poland, ² Spain)

MM-P-4

A new class of polymerized ionic liquids for the production of ion exchange membranes

F. Galiano, E. Fontananova, D. Talarico, R. Mancuso, G. Di Profio, L. Guazzelli, C.S. Pomelli, B. Gabriele, A. Figoli (Italy)

MM-P-5

Cu (II)-phenolic complex incorporated hemodialysis membranes for efficient urea removal via enhanced adsorption strategy

Y. Liu, F. Liu (China)

MM-P-7

Selection of polymer binder for heterogeneous cation-exchange membrane with respect to its in-plane dimensional stability

Z. Meloun (Czechia)

MM-P-8

Development of 3D printable methacrylic acid/polyethylene glycol diacrylate-based membranes for water filtration

H.N. Kazerouni, G. Tayama, J. Frechette, Y. Messaddeq (Canada)

MM-P-9

Development of polyimide membranes in the department of polymers of UCT prague

P. Sysel (Czechia)

MM-P-10

Novel fluorinated microporous polymers for use in gas-separation membranes

K.J. Wu, J. Tobin, C. Ye, N. McKeown (United Kingdom)

2D materials (graphene, phosphorene, etc.) | T1

2DM-P-11

High-flux superhydrophilic silica-pillared 2D MXene membrane for the efficient separation of oily wastewater

I. Abdulazeez, I. Aljundi, B. Salhi, N. Baig (Saudi Arabia)

2DM-P-12

Sulfonated MXene-based ceramic membranes for separation of the surfactant stabilize oil-in-water emulsions

N. Baig, N.A. Khan¹, B. Salhi¹, I. Abdulazeez¹, N. Abu-Zahra², S. Abdelazem¹, I.H. Aljundi¹ (¹Saudi Arabia, ²USA)

2DM-P-13

Performance of GO laminated membranes in H₂/CO₂ separation as a function of the membrane thickness and feed pressure

J.A.G. Carrio¹, S.G. Echeverrigaray¹, VSSL P. Talluri¹, D.P. Sudhakaran¹, H.T. Gan¹, D. Gardenö², K. Friess², A.H.C. Neto¹ (¹Singapore, ²Czechia)

2DM-P-14

Efficient water-ethanol separation through ethylenediamine crosslinking nanoporous graphene oxide (NPGO) membranes

L. Jiang, P.R. Jin, B. V. der Brugge (Belgium)

2DM-P-15

Covalent organic framework-based graphene oxide blended membranes for molecular separation

N.A. Khan, I.H. Aljundi (Saudi Arabia)

2DM-P-16

MoS₂ nanosheet coatings on ceramic hollow fiber membranes for high selective nitride (HSN) treatment in semiconductor wastewater

H. Kim, C. Park (South Korea)

2DM-P-17

Retrievable ultrafast covalent triazine framework membranes for organic solvent nanofiltration

G. Li, F. Liu (China)

2DM-P-18

Air-gap-assisted solvothermal process for synthesizing unprecedented graphene-like two-dimensional titanium dioxide (TiO₂) nanosheets for Na⁺ electrosorption and desalination

B. Salhi, N. Baig, I. Abdulazeez (Saudi Arabia)

2DM-P-19

Highly selective oxidation of organic sulfides by covalent organic framework membrane

K. Shi, F. Liu (China)

2DM-P-20

Hydrogen Separation using 2D titanosilicate zeolites-based membranes

D.M. Wolf, A. Nijmeijer², O. Guillon¹, W. Meulenberg^{1,2}, M.A. Pizzoccaro-Zilamy^{1,2} (¹Germany, ²Netherlands)

2DM-P-21

Solvent responsive graphene based membrane

F. Yan, R. Owen, R.B. Peralta, R.R. Nair (United Kingdom)

Polymer, biopolymer membranes (formation, modification, characterization) | T1

BPM-P-22

Cellulose acetate nanofiber membrane prepared by using green solvent for methylene blue dye removal

M.A. Abbas, Y. Cho, H. Park (South Korea)

BPM-P-23

How the electrokinetic leakage can ruin your zeta potential determination.

A. Lizée, P. Loulergue, A. Szymczyk (France)

BPM-P-24

Unravelling hydrophobic deep eutectic solvents to prepare tailor-made eutectogel membranes

B. Alke¹, E. Gabirondo^{1,2}, J. Crespo¹, L.C. Tomé¹, C. Brazinha¹ (¹Portugal, ²Spain)

BPM-P-25

A new approach to enhance the water flux of standard nanofiltration membranes by altering the polysulfone layer and their potential use in salts removal and rejection of micropollutants

E.S. Alkhulaify, S.M.S. Jillani, K. Alhooshani (Saudi Arabia)

BPM-P-26

Accelerating synthesis of epoxide-based membrane

Z. Bozorgmehr, R. Verbeke, I. Vankelecom (Belgium)

BPM-P-27

Obtaining superhydrophobic surfaces by modification of PVDF membranes using a simple methodology

R.P. Carrillo-Gaytán¹, F.J.C. del Río², G. Falcón-Millán¹, G. Rangel-Porras¹, M. del P. González-Muñoz¹ (¹Mexico, ²Spain)

BPM-P-28

Revisiting the meaning of instantaneuos and delayed demixing and its link to membrane morphology and performance

S. Caspers, W. Verfaillie, R. Verbeke, I. Vankelecom (Belgium)

BPM-P-29

Hollow fiber membranes with polyelectrolyte layer prepared with bio-based solvent

A. Cespedes, H. Roth, N. Nebes (Netherlands)

BPM-P-30

Novel aryl-phthalimide based polymers of intrinsic microporosity as gas separation membranes

B. Comesaña-Gándara², F.E. Rodríguez-González¹, C. Soto², L. Palacio², A.L. Montero¹, N. Escalona¹, E. Schott¹, C. Terraza¹, A. Tundidor-Camba¹ (¹Chile, ²Spain)

BPM-P-31

Functionalization of polyethersulfone ultrafiltration membranes with linear and branched polymer brushes

T. Coves, E. Ziemann, J. Qin, R. Bernstein (Israel)

BPM-P-32

Sequential surface modifications of cellulose UF membrane for improved separation performance

B. Dahal, J. Nieminen, A. Pihlajamäki, M. Mänttari (Finland)

BPM-P-33

Diffusion bounds for membrane selective layer formation

A. Deshmukh, M. Elimelech, J.H. Lienhard (USA)

BPM-P-34

Development of ultra-stable TFC-membranes for SRNF and RFB

R. Dhondt, M. Lenaerts, F. Scavone, G.A. Margareta, I.F.J. Vankelecom, G. Koeckelberghs (Belgium)

BPM-P-35

Bio-based PHA membranes with semi-IPN architecture for enhanced water filtration and circular economy end-of-life management

S. Dutta¹, D.T. Tran², P. Loulergue², S. Bose¹ (¹India, ²France)

BPM-P-36

Analyzing mechanical reliability of physically aged cellulose hollow fiber membranes using Weibull weakest link models

G. Falca, G. Lubineau, S. Nunes (Saudi Arabia)

BPM-P-37

g-valerolactone as green solvent for poly(ether sulfone) ultrafiltration membrane preparation

O. Gronwald, A. Kunst (Germany)

BPM-P-38

Mussel-inspired superhydrophilic and antibacterial membranes for effective gravity-driven separation of oil-in-water emulsions

Q. Chen, R. Liu, J. Lin (Belgium)

BPM-P-39

Recycled HIPS (high impact polystyrene) micro/ultrafiltration membranes for wastewater regeneration.

M.I. Iborra-Clar, J.L. Soler-Cabezas, G. Bai, J.A. Mendoza-Roca, J. Lora-García, A. Iborra-Clar, E. Ferrer-Polonio, S.C. Cardona-Navarrete (Spain)

BPM-P-40

Hot-pressed electrospun PVDF membranes with different solvents for dissolved CH₄ recovery in membrane contactors

M. Izquierdo (Spain)

BPM-P-41

Development and functionalization of supported liquid membranes with deep eutectic solvents on PVDF for gas-liquid decarbonization

M. Izquierdo, G. Marco-Velasco, F. Montero-Rocca, R. Jiménez-Robles, A. Cháfer, J.D. Badia (Spain)

BPM-P-42

Effect of polyvinyl alcohol on aerobic granular sludge cultivation, strength, and stability in a sequencing batch reactor treating industrial wastewater

A.H. Jagaba, D.U. Lawal, M.A. Yassin, I. Abdulazeez, I.H. Aljundi (Saudi Arabia)

BPM-P-43

Decoration of phosphate containing zeolite to the active layer of the nanofiltration membrane for chlorine resistance, desalination and micropollutant removal

S.M.S. Jillani (Saudi Arabia)

BPM-P-44

Use of TEP as green solvent for the preparation of hydrophobic flat-sheet and hollow fiber PVDF membranes with PEG and GLY as pore-formers for gas-liquid applications

R.J. Robles, A. Gálvez-Subiela, A. Cháfer, V. Martínez-Soria, J.D. Badia, M. Izquierdo (Spain)

BPM-P-45

Sustainability in membrane technology: membrane recycling and fabrication using recycled waste

N.K. Khanzada, R.A. Al-Juboori, M. Khatri, F.E. Ahmed, Yazan, N. Hilal (United Arab Emirates)

BPM-P-46

Microphase separation of copolymeric materials for gas separation membranes

D. Kösters, P. Vana (Germany)

BPM-P-47

2D metal-organic framework interlayered nanofiltration membrane for enhanced water permeance and organic micropollutant removal

R. Li, L. Zhang, C. Tang (China)

BPM-P-48

Enhancing microbial resistance of cellulosic ultrafiltration membrane via polyelectrolyte coatings

A. Liukkonen, J. Nieminen, A. Ora, M. Mänttari (Finland)

BPM-P-49

The impact of humidity on gas/vapor permeation through polymeric membranes

S. McIntyre, M. Guo, A. Foster, V. Razafindramanana, M. Naderi, P. Budd, P. Lacomis (United Kingdom)

BPM-P-50

Modification of PES membranes with urethane functional groups via electron beam irradiation

Z. Niavarani, D. Breite, A. Schulze (Germany)

BPM-P-51

Anti-biofouling modification of polyethersulfone membranes via airbrush spraying of natural phenolic compounds

A. Ora, F. Kayani, C. Sallomy, T. Rissanen, M. Lahtela-Kakkonen, T. Laitinen, M. Kallioinen-Mänttari (Finland)

BPM-P-53

Fabrication of PSS-PDADMAC membranes via salt dilution-induced aqueous phase separation

A. Sikach, V. Konovalova (Ukraine)

BPM-P-54

Study on the electrospinning of recycled HIPS (high impact polystyrene) films

J.L. Soler-Cabezas, G. Bai, J.A. Mendoza-Roca, J. Lora-García, A. Iborra-Clar, E. Ferrer-Polonio, S.C. Cardona-Navarrete, M.I. Iborra-Clar (Spain)

Mixed matrix membranes (formation, modification, characterization) | T1**MMM-P-55**

A novel nonpolyamide ZnFe layered double hydroxide incorporated loose nanofiltration membrane for effective dye/salt separation

C. Balcik¹, S.A. Guvem¹, B. Ozbey-Unal¹, A. Khataee² (¹Turkey, ²Iran)

MMM-P-56

Hematite-loaded composite membrane for arsenicIII/V removal

Y.A. Boussouga, A.I. Schäfer (Germany)

MMM-P-57

Improvements on the annealing and degassing procedure to obtain mixed matrix membranes showing more stable gas permeation

T. Çağlar, L. Yılmaz, H. Kalıpçılar (Turkey)

MMM-P-58

Sustainable fabrication and gas permeation performance of cellulose acetate mixed matrix membranes combining green solvent and greenish selected fillers

C. Casado-Coterillo¹, A. Torre-Celeizabal¹, F. Russo², F. Galiano², A. Figoli², A. Garea¹ (¹Spain, ²Italy)

MMM-P-59

Incorporation of metal organic frameworks in hybrid cellulose acetate-silica membranes for the removal of uremic toxins in haemodialysis fluids: synthesis and characterisation

M.N. de Pinho, J.F. Guerreiro, M.P. da Silva, M. Bordonhos, M. Minhalma, M.L. Pinto (Portugal)

MMM-P-60

Effect of carbon nanoparticles on the gas permeability of polyurethane mixed matrix membranes

A.C. Habert, A.V. Ramos (Brazil)

MMM-P-61

Novel PVDF Fe₃O₄ janus composite membranes

A.C. Habert, C.P. Borges, A.L. Hupsel, F.V. da Fonseca (Brazil)

MMM-P-62

Influence of polymer chain length and thermal annealing on polysulfone-based mixed matrix membranes

L. Hannes, X. Tan, I. Vankelecom (Belgium)

MMM-P-63

Metal-organic framework mixed matrix membranes for hydrogen purification

N. Hilmi, A. Laybourn, B. Tokay (United Kingdom)

MMM-P-64

Preparation and characterization of mixed matrix membranes based on 6FDA and mathematical modelling

K. Iablochkin, M. Bernauer, V. Fila (Czechia)

MMM-P-65

Polyacrylic acid-grafted carbon nitride - PVA MMM designed for effective pervaporation dehydration of ethanol-water mixtures

Y. Jeong, S. Chaudhari, S. Kim, M. Shon, Y. Park (South Korea)

MMM-P-66

Mixed matrix membranes (MMMs) using tailored porous organic polymers (POPs) networks for CO₂ efficient separations

J. Laguna Humayor¹, M. Longo², C. Rizzuto², A. Fuoco², J.A. Miguel¹, B. Comesaña-Gándara¹ (¹Spain, ²Italy)

MMM-P-67

Graphene oxide-poly(vinyl pyrrolidone)/poly(vinylidene fluoride) microporous composite membranes for removal of ionic dyes

S.J. Lue, J.W. Lee (Taiwan)

MMM-P-68

Investigating boron rejection in RO membranes: a comparative evaluation of LTA zeolite and MOF nanocomposites

R. Mahdavi Far, B. Van der Bruggen (Belgium)

MMM-P-69

Tailoring morphology of PES-based asymmetric membranes via temperature controlled non-solvent induced phase separation

B. Moore¹, P. López-Porfiri¹, P. Gorgojo², M. Perez-Page¹ (¹United Kingdom, ²Spain)

MMM-P-70

A comprehensive evaluation of the performance of mixed matrix membranes for hydrogen separation from light gases

R. Sabouri, N. Prasetya, B. Ladewig (Luxembourg)

MMM-P-71

Recovery of ethanol from water using graphene composite poly(1-trimethylsilyl-1-propyne) via pervaporation and its effect on ageing behaviour

P. Talluri, J.A.G. Carrio, A.H. Castro (Singapore)

MMM-P-72

Nano-cellulose based mixed matrix membranes for carbon dioxide capture

E. Tocci, M. Romeo, P. Bettotti, M. Scarpa, A. Fuoco (Italy)

MMM-P-73

Design and synthesis of hydrophilic polyamide polymer for decoration in the polyvinylidene difluoride (PVDF) microfiltration membrane for enhanced underwater oleophobicity for oil/water emulsion separation

A. Waheed, A. Younas, I.H. Aljundi (Saudi Arabia)

MMM-P-74

Correcting systematic underestimations of nanoporous membrane surface porosity in electron microscopy

S. Zeinali Danalou, D. Yu, J. Howe, P. Lee, J. Werber (Canada)

MMM-P-75

Efficient separation of methanol/methyl acetate azeotropic mixtures by UiO-66-(NH₂)₂ incorporated polyvinyl alcohol mixed-matrix membranes

H. Zhu, G. Liu, W. Jin (China)

MMM-P-76

A greener sustainable synthesis of a covalent organic framework for membrane applications

B. Zornoza, I. Martínez-Visus, J. Coronas, C. Téllez (Spain)

Molecular imprinted membranes, chiral membranes | T1

IM-P-77

Removal of arsenate and ammonia from water by adsorptive membranes

I. Marquez, E. Anang, A. Busari, C. Nichols, J. Myers, B. Fahlman, A. Mueller (USA)

Inorganic membranes (formation, modification, characterization) | T1

CM-P-78

Design of macroporous hydrophobic ceramic membranes for water desalination applications

F. Altinbaş¹, A. Nijmeijer¹, J. Huskens¹, M.W. J. Luiten-Olieman¹, M.A. Pizzoccaro-Zilamy^{1,2} (¹Netherlands, ²Germany)

CM-P-79

Porous ceramic flow battery composite membrane

K. Huang (China)

CM-P-80

Application of ceramic and polymeric membranes as microplastic filters for household laundry washing machines

S. Kim, C. Park (South Korea)

CM-P-81

Fabrication of single and bilayer MFI and BEA type zeolite membranes for catalytic membrane reactor

A.W. Sabir (South Korea)

Carbon membranes (formation, modification, characterization) | T1

BIO-P-82

Zeolite nanosheet carbon composite for photothermal evaporation

S.W. Kim, P.S. Lee (South Korea)

Biohybrid, biomimetic, bioinspired, bionic membranes (formation, modification, characterization) | T1

MOL-P-83

Gold nanoparticles-dynamic constitutional frameworks as adaptive hybrid membranes for enzyme immobilization

S. Daakour¹, R. Mazzei², F. Bazzarelli², G. Vitola², L. Giorno², M. Barboiu¹ (¹France, ²Italy)

MOL-P-84

Protein-incorporated filtration membrane for urea removal in portable peritoneal dialysis applications

M.Q. Seah, E. Posch, M. Pejman, F. Schmitz, M. Andersson (Sweden)

MOL-P-85

Exploring the role of monomer concentration and reaction alkalinity in polyesteramide thin film composite membranes

A. Taghipour¹, M.D. Firouzjaei^{1,2}, C. Ammann¹, M. Elliott², P. Karami¹, A. Rahimpour¹, M. Sadrzadeh¹ (¹Canada, ²USA)

MOL-P-86

PFAS-free cellulose-based membranes for green applications

S. Winter, K. Materna, S. Lander, A.H. Avci, F. Lipnizki (Sweden)

Nanostructured and multifunctional membranes | T1

NANM-P-87

Sustainable electrospun polymers: new strategies for the cleaning of paintings

M. Colombo, B. Keser, V. Sabatini, T. Della Vedova, C. Lucignano, P. Canonico, F. Ramacciotti, C. Gualandi, M.L. Focarete, G. Sciutto, R. Mazzeo, S. Prati (Italy)

NANM-P-88

Selenium based membranes for the deactivation of bacteria in water

S.P. Malinga, D. Sibiyi, B.C. Dlamini (South Africa)

NANM-P-89

Photocatalytic self-cleaning graphene oxide/ZnO hybrid membrane for ultrafast cyclic small organic molecule separation

N. Mazlan¹, A. Lewis¹, Z. Chen¹, F.S. Butt¹, J. Han², N. Radacsi¹, S. Yang², Y. Huang¹ (¹United Kingdom, ²China)

NANM-P-90

Layer-by-layer in situ synthesis of covalent organic framework-modified membranes for separation of organic micropollutants

S. Mishra, X. Tan, R. Kasher (Israel)

NANM-P-91

Interplay of the forces governing steroid hormone micropollutant adsorption in vertically aligned carbon nanotube membrane pores

A. Schäfer¹, M.N. Nguyen¹, M.L. Jue², S.F. Buchsbaum², S.J. Park², F. Fornasiero² (¹Germany, ²USA)

Microfiltration, Ultrafiltration | T2

MFUF-P-92

Magnetic active PVDF membranes for removal Fe²⁺ from water

H. Bubela, V. Konovalova (Ukraine)

MFUF-P-93

Performance comparison of two ceramic membrane concepts: example of crossflow microfiltration of skimmed milk

G. Césan-Guiziu, N. Leconte, F. Garnier-Lambrouin, G. Fouillard-Mairesse, L. Barrois (France)

MFUF-P-94

Fabricating anti-biofouling ultrafiltration membrane: zwitterionic polymer brush grafting via atom transfer radical polymerization

K. Jashrapuria, S.P. Singh (India)

MFUF-P-95

Dielectrophoresis-assistant membrane antifouling method toward neutral foulants

B. Liu, C.Y. Tang (China)

MFUF-P-96

Surface modification strategies for enhanced microplastic/nanoplastic fouling resistance in ultrafiltration membranes

M. Najafi Arani, J. Farahbakhsh, M. Zargar (Australia)

MFUF-P-97

Niobium carbide MXene composite membranes for nanoplastic separation

M. Ouda, F. Banat, C. Kui, S. Hasan (United Arab Emirates)

MFUF-P-98

Ultrafiltration of seawater to enhance microalgae cultivation on an industrial scale

S. Ragueneau, C. Cordier, A. Lange, L. Torres, P. Moulin (France)

MFUF-P-99

Fabrication of high-flux asymmetric polyethersulfone (PES) ultrafiltration membranes by H₂O additive in the dope

J.F. Su, N.T. Hiep (Taiwan)

MFUF-P-100

Effect of relative humidity on membrane preparation via phase inversion

S.R. Swarna, S.R. Hosseinabadi, L.A.J. Rutgeerts, I.F.J. Vankelecom (Belgium)

MFUF-P-101

Textile wastewater treatment by ultrafiltration for water reuse and elimination of dyes

M.C. Vincent Vela, C.M. Sánchez-Arévalo, C. Mercado-Almerich, S. Álvarez-Blanco, B. Cuartas-Urbe (Spain)

MFUF-P-102

Synthesis and optimization of nanofibrous-polyamide thin film nanocomposite (TFN) membrane for removal of salt ion

F. Yalcinkaya, V. Jhon, E. Altiok (Czechia)

Nanofiltration, reverse osmosis | T2

NFRO-P-103

The impact of initiators on the synthesis-structure-performance relationship of epoxide-based TFC membranes

I. Baert, R. Verbeke, D.V. Havere, S. Eyley, I.F.J. Vankelecom (Belgium)

NFRO-P-104

The effect of surfactants on polyelectrolyte multilayer nanofiltration membranes

P. Bakonyi, Á. Bóna, I. Galambos, N. Nemestóthy (Hungary)

NFRO-P-105

Exploring nanofiltration for the removal of AsIII/V and SeIV/VI oxyanions

Y.A. Boussouga, A.I. Schäfer (Germany)

NFRO-P-106

Epoxy-based high solvent-resistant nanofiltration membrane prepared via interfacial polymerization

Z. Bozorgmehr, R. Verbeke, I. Vankelecom (Belgium)

NFRO-P-107

Roll-to-roll vacuum deposition technology for membranes

M. Fahland, A. Schnieders (Germany)

NFRO-P-108

Design of nanofiltration (NF) hollow fiber membranes made from functionalized bore fluids containing polyethyleneimine (PEI) for heavy metal removal

J. Gao^{1,2}, K.Y. Wang¹, T.S. Chung¹ (¹Singapore, ²China)

NFRO-P-109

Testing of flat sheet nanofiltration membranes for their application in the valorization of desalination brines

P. González Costa, J.T. García, V. Fabregat (Spain)

NFRO-P-110

Enhanced Mg²⁺/Li⁺ separation by amino crown ether composite nanofiltration membrane with Mg²⁺ transport barrier

Y. He, F. Liu (China)

NFRO-P-111

Changing metal ions regulates the performance of organic solvent nanofiltration of M-BDC/P84 composite mixed matrix membranes

C.C. Hu, J.Y. Lai, E.G. Ajebe (Taiwan)

NFRO-P-112

Conductive reverse osmosis membrane for electrochemical chlorine reduction and sustainable desalination

N.K. Khanzada^{1,2}, D. Jassby³, A.K. An¹, N. Hilal² (¹China, ²United Arab Emirates, ³USA)

NFRO-P-113

Preparation and evaluation of RO membrane prepared according to various hydrophilic additives and curing condition

H.W. Kwon, K.S. Im, G.H.A. Wijaya, J.H. Park, D.J. Lee, S.M. Woo, S.Y. Lee, Y.S. Chung, S.Y. Nam (South Korea)

NFRO-P-114

Loose mixed matrix nanofiltration membrane based on metal organic framework (CAU-10-H)/P84 for dye/salt fractionation

J.Y. Lai, C.C. Hu, D.Y. Kang, N.K. Hundessa (Taiwan)

NFRO-P-115

Chemically robust epoxide-based TFC membranes: support influence on selective layer formation and performance

N. Lenaerts¹, D. Davenport¹, R. Verbeke¹, S. Eyley¹, K. Kantre¹, A. Volodin¹, R. Helm², S. Caspers¹, W. Thielemans¹, J. Meersschaut¹, M. Dickmann², I. Vankelecom¹ (¹Belgium, ²Germany)

NFRO-P-116

Development of polyelectrolyte-complex nanofiltration membranes for tertiary treatment and reuse of domestic wastewater

K. Li (Israel)

NFRO-P-117

Development of surface-patterned RO membranes with pronounced microstructures and their anti-scaling performance in feed spacer-filled channels

M. Patel, S. Panglisch, I.M.A. ElSherbiny (Germany)

NFRO-P-118

Determination of ammonia permeability coefficient in nanofiltration membranes

S. Shahgodari, J. Llorens, J. Labanda (Spain)

NFRO-P-119

Application of nanofiltration for the removal of homogeneous catalysts from aqueous systems

H. Schröter, U. Kragl (Germany)

Organic solvent nanofiltration | T2

OSN-P-120

Development poly(ether-ether-ketone) (PEEK) membranes for organic solvent nanofiltration application

N. Alqadhi, M.H. Abdellah, S. Nematulloev, O.F. Mohammed, M.A. Abdulhamid, G. Szekely (Saudi Arabia)

OSN-P-121

Novel approach to Li₂CO₃ recovery from spent lithium batteries

L. Bříza (Czechia)

OSN-P-122

Solvent exchange by application of membranes in the synthesis of AZD4625 – inline monitoring of the solvent exchange by IR

Y. Feng¹, H. Xiao², S. Karlsson¹, W. Goundry² (¹Sweden, ²United Kingdom)

OSN-P-123

Exploring the potential of organic nanofiltration: separation of terpenes from turpentine oil

K. Göbel, G. Braun (Germany)

OSN-P-124

Hydrophobic polyamide nanofilms provide rapid transport for crude oil separation

Z. Jiang¹, R. Dong^{1,4}, A.M. Evans², N. Biere³, M.A. Ebrahim¹, S. Li¹, D. Anselmetti⁵, W.R. Dichtel², A.G. Livingston¹ (¹United Kingdom, ²USA, ³Germany, ⁴China)

OSN-P-125

Machine learning-based prediction model for pure solvent permeance of commercial OSN membranes

Y. Li, A.G. Livingston (United Kingdom)

OSN-P-126

Potentiality and limitation of separations in OSN and organophilic nanofiltration of homogeneous catalysis: from physico-chemistry and single stage separations to membrane cascades

M. Rabiller-Baudry, D.J.C. Batista, F.Z. Charik, P. Fan, T. Renouard (France)

OSN-P-127

Rejection of phenolic compounds during organic-solvent nanofiltration: major influence of the transmembrane pressure

M.C. Vincent-Vela¹, C.M. Sánchez-Arévalo¹, T. Croes², B. Van der Bruggen², S. Álvarez-Blanco¹ (¹Spain, ²Belgium)

OSN-P-128

Crosslinked polybenzimidazole (PBI) membrane for enhanced organic solvent nanofiltration

Y. Yoo, S.J. Shin, Y.I. Park, H. Park (South Korea)

Forward osmosis, pressure retarded osmosis | T2

FOPRO-P-129

Forward osmosis as an efficient strategy to recover dyes from textile wastewater

B. Cuartas-Uribe, A.P. García-Serrano, C.M. Sánchez-Arévalo, S. Álvarez-Blanco, M.C. Vincent-Vela (Spain)

FOPRO-P-130

Concentration of municipal solid waste leachate by forward osmosis

B. Cuartas-Uribe, I.P. Candel, J.A.M. Roca, M.J.L. Facundo (Spain)

FOPRO-P-131

Development of a selective layer via layer-by-layer on electrospun support for forward osmosis applications

A. Kinik, K. Nijmeijer, Z. Borneman (Netherlands)

FOPRO-P-132

Suppression of the reverse solute flux and enhancement of the water flux in forward osmosis by Cu²⁺ and Pb²⁺ in the feed solution

B. Kruczek, A. Atashgar, D. Emadzadeh (Canada)

FOPRO-P-133

Impact analysis of the forward osmosis process combined with ultrafiltration pretreatment in coconut water concentration

A. Pandey, A. Maiti (India)

FOPRO-P-134

Ammonia recovery and concentration of feed solution using forward osmosis for wastewater treatment

S. Shahgodari, Y. Yang, J. Llorens, J. Labanda (Spain)

Electromembrane processes (RED, ED, etc.) | T2

EMP-P-135

Effect of process conditions on N,N-dibutylimidazolium chloride recovery by electro dialysis method

D. Babilas¹, A. Mielańczyk¹, J. Chromikova² (¹Poland, ²Czechia)

EMP-P-136

Contrasting transport mechanism of two heterogeneous anion-exchange membranes

A.M. Bernardes¹, E.H. Rotta¹, P.C.M. Ramos¹, V. Pérez-Herranz² (¹Brazil, ²Spain)

EMP-P-137

Revealing the interaction of microbial biofilm with ion exchange membranes during electro dialysis and its effect on ion transport properties

K. Das, M. Herzberg, Y. Oren (Israel)

EMP-P-138

Desalination of formic acid via electro dialysis

A. Grabowski, Z. Xu, C. Li (Germany)

EMP-P-139

Evaluation of elution waste from ion-exchange columns using a combination of membrane technologies

M. Grošik (Czechia)

EMP-P-140**Enhancing round-trip efficiency and energy capacity in acid-base flow batteries (ABFB)**

M. Herrero-Gonzalez, N.E. Arroubi, M.F. San-Román, R. Ibañez (Spain)

EMP-P-141**pH gradient energy recovery: influence of acid, base and saline concentrations in the stack resistance**

M. Herrero-Gonzalez, N.E. Arroubi, M.F. San-Román, R. Ibañez (Spain)

EMP-P-142**Efficient lithium-ion separation using Al₂O₃-based lithium aluminium titanium phosphate (LATP) composite membranes via electrodialysis process**

S. Chen¹, J. Han², K. Wang², H. Lu², Z. Zhang², Z. Li², Y. Du², Q. Meng², A. Lewis¹, Y. Huang¹ (¹United Kingdom, ²China)

EMP-P-143**Investigation of operating conditions for high current efficiency in acid and alkali production bipolar membrane electrodialysis**

Y. Kakihana, S. Hirao, S. Kikuchi, M. Higa (Japan)

EMP-P-144**Preparation of composite-type ion exchange membranes and their electrochemical properties for electrodialysis and energy conversion**

J.H. Kim, H.C. Kang (South Korea)

EMP-P-145**Salt accumulation in bipolar membranes decreases power in acid/base flow batteries**

P. Loktionov, D.A. Vermaas (Netherlands)

EMP-P-146**Study on lithium recovery from wastewater of spent secondary battery using coffee ground electrodes in membrane capacitive deionization**

J. Park¹, J.W. Lee², J.W. Koo¹, I.T. Shim¹, Y.H. Shin¹, T.M. Hwang¹ (¹South Korea, ²Canada)

EMP-P-147**A preliminary techno-economic assessment on the simultaneous production of freshwater and hydrogen through electrodialysis**

A. Pellegrino, G. Campisi, A. Tamburini, A. Cipollina, G. Micale (Italy)

EMP-P-148**Lactic acid removal and demineralization of acid whey by coupling electrodialysis under pulsed electric fields and preconcentration by nanofiltration: impact on spray drying and powder quality**

V. Perreault¹, D. Poitras¹, S. Gaaloul¹, P. Schuck², L. Bazinet¹ (¹Canada, ²France)

EMP-P-149**Removal of steroid hormone micropollutants by electrochemical carbon nanotube membranes in a flow-through reactor: differentiation between electrochemical adsorption and degradation**

A.I. Schäfer¹, S. Liu¹, D. Jassby², D. Mandler² (¹Germany, ²USA)

EMP-P-150

Energy analysis of pilot-scale reverse electrodialysis power generation with various solutions

Y. Sugimoto, M. Higa (Japan)

EMP-P-151

Preparation and performance evaluation of anion-exchange membranes prepared by ion-track graft polymerization

M. Tanaka, Y. Kakihana, M. Higa (Japan)

EMP-P-152

Production of growth factors enriched fractions by electro-based membrane process

J. Thibodeau¹, S. Kadel¹, V. Nichka¹, B.R. Parjikkolaeic², L. Bazinet¹ (¹Canada, ²Denmark)

EMP-P-153

Improving WPC heat stability using electrodialysis

M. Vavro, H. Fárová (Czechia)

EMP-P-154

Design of profiled ion-exchange membranes through 3D printing

M. Venu, C. Galinha, J. Crespo, S. Pawlowski (Portugal)

EMP-P-155

Influence of the arrangement of segmented electrodes on the performance of a pilot scale RED unit

F. Volpe, E. Mangiaracina, G. Battaglia, A. Cipollina, A. Tamburini, G. Micale (Italy)

EMP-P-156

Ladder electrodialysis enables high up-concentration of brines

Y. Zhang, C. Liu, X. Ma, C. Wang, Y. Lin, Y. Li (China)

EMP-P-157

Removal of nitrogenous compounds from brackish water with different electrodialysis configurations

F. Adu-Boahene, A.I. Schäfer (Germany)

Membranes for energy, (microbial) fuel cells, batteries, electrolyzer | T2**ENER-P-158**

Ion-pair polymer membranes for high-temperature proton exchange membrane fuel cells.

M.F. Ali, J. Kim, H. Lee, D. Shin, B. Bae (South Korea)

ENER-P-159

Effective fluorine-free blend membranes made from sulfonated polyvinyl alcohol (S-PVA) and PEBA 1657 with titanium dioxide sulphate TiO_2SO_4 as nano filler: exploring the impact of various filler ratios on PEMFC applications

M. Al-Mashhadani^{1,2}, G.P. Szijjártó¹, A. Tompos¹ (¹Hungary, ²Iraq)

ENER-P-160**Anion exchange membranes for green hydrogen production**

M. Boerrigter¹, J. Gispert¹, S. Balakondareddy², M. Mamlouk², D. Morriolo¹ (¹Spain, ²United Kingdom)

ENER-P-161**Determination of the performance of humidifier membranes for water management in mobile fuel cell applications**

C. Hänel, D. Ilk, V. Frick, M. Schoemaker, T. Schiestel (Germany)

ENER-P-162**Improved fuel cell performance by the steric effect of a hydrocarbon-based binder**

J.E. Cha, Y. Yoo, N. Lee, C. Jung, Y.W. Choi (South Korea)

ENER-P-163**Impact of physical defects on the performance and durability of fluorine-based reinforced composite membrane in proton exchange membrane fuel cell**

J.E. Cha, S. Kim, S. Jang, J.M. Lee, Y.W. Choi (South Korea)

ENER-P-164**Effect of halogen atom on sulfonated poly(arylene ether sulfone) synthesis for the application to energy conversion systems**

Y.W. Choi, S. Jang, J.E. Cha (South Korea)

ENER-P-165**Development and characterization of crosslinked pore-filling anion exchange membranes with superior mechanical performance for application in anion exchange membrane electrolysis**

K. Im, J.H. Park, D.J. Lee, S.Y. Nam (South Korea)

ENER-P-166**Preparation of tri-directional poly(2,5-benzimidazole) membrane using direct casting for vanadium redox flow battery**

J.-K. Jang, T.H. Kim (South Korea)

ENER-P-167**Nanocomposite membranes comprising polybenzimidazole and functionalized UiO-66 nanocrystals for high-temperature proton exchange membrane fuel cells**

L.C. Jheng, M.H. Tran, Z.L. Zhao (Taiwan)

ENER-P-168**Bipolar membranes with MOF catalyst-containing 3D junction for highly efficient water splitting**

D. Kwak, J. Lee (South Korea)

ENER-P-169**Prepare of anion exchange membrane with excellent mechanical strength through polymer blend and application of water electrolysis**

D.J. Lee, K.S. Im, J.H. Park, H.W. Kwon, S.Y. Nam (South Korea)

ENER-P-170**Enhanced compatibility and durability of PTFE-reinforced hydrocarbon membranes for PEMFCs**

H. Lee, J.N. Pratama, D. Shin, B. Bae (South Korea)

ENER-P-171**Novel PEEK-based ion exchange membranes for electrochemical devices**

M. Longo, E. Esposito, M. Monteleone, J.C. Jansen, A. Figoli (Italy)

ENER-P-172**Nafion/GO-APTS mixed matrix membranes to reduce unwanted crossover in all-vanadium redox flow batteries**

P. Lopez-Porfiri, E. Craddock, R.C. Franca, M. Perez-Page (United Kingdom)

ENER-P-173**Poly(aryl piperidinium)-based anion exchange membranes for high-performance water electrolyzers**

N. Meng, A. Wang, A. Kucernak, Q. Song (United Kingdom)

ENER-P-174**Fluorine-free aromatic hydrocarbon-based proton exchange membranes for fuel cell application**

T. Nemeth¹, Y. Choi¹, E. Sandru¹, M. Sandru¹, F. Van Schalkwyk², P. Fortin¹ (¹Norway, ²South Africa)

ENER-P-175**Multi-block copolymer membranes consisting of sulfonated poly(p-phenylene) and naphthalene containing poly(arylene ether ketone) for proton exchange membrane water electrolysis**

K.H. Oh, S. So (South Korea)

ENER-P-176**Preparation of SEBS triblock copolymer membranes with high anion exchange capacity**

M. Otmar, J. Žitka, L. Brožová (Czechia)

ENER-P-177**Fabrication of hydrocarbon polymer based reinforced composite membrane for fuel cell application**

D. Shin, A. Pathania, H. Lee, B. Bae (South Korea)

ENER-P-178**Catalyst layer thickness optimization in proton exchange membrane fuel cells (PEMFCs)**

G.P. Szijjártó, R. Kunstár, E. Lévai, A. Tompos (Hungary)

ENER-P-179**Nanocellulose-polymerizable ionic liquid composites: a greener approach for the preparation of ion exchange membranes**

D. Talarico, F. Galiano, G.D. Profio, A. Figoli, R. Mancuso, B. Gabriele, G. Angellotti, G. LiPetri, F. Meneguzzo, M. Pagliaro, E. Fontananova (Italy)

ENER-P-180

Stability and performance of crosslinked PVA/SPS membranes for acid and alkaline organic redox flow batteries (RFBs)

C. Van Cauwer, Y. Li, I. Vankelecom (Belgium)

ENER-P-181

Microporous polymer membranes enable efficient redox flow batteries for energy storage

T. Wong, Y. Yang, K.E. Jelfs, Q. Song (United Kingdom)

ENER-P-182

Zwitterionic channels within covalent organic frameworks facilitate proton-selective transport for flow battery membrane

W. Xu, J. Xu, Y. Wang, Z. Xu (China)

Membrane contactors, membrane condenser, membrane dryer | T2**CON-P-183**

A computational study on the simultaneous CO₂ and H₂S removal using DEA solution in gas-liquid membrane contactors

G. Pantoleontos, D. Koutsonikolas, A. Asimakopoulou, G. Karagiannakis (Greece)

CON-P-184

Membrane contactor: a platform technology for bubble-free gas-liquid mass transport

A. Pérez, K. Werder, R. Diewald, W. Riedl (Switzerland)

Membrane distillation, osmotic distillation, membrane crystallization | T2**MDOD-P-185**

Surface heated membrane distillation using electrically conducting materials

F. Ahmed, N. Hilal (United Arab Emirates)

MDOD-P-186

Helical hollow fiber membrane modules for membrane distillation

A. Ali, T. Odgaard, C. Quist-Jensen (Denmark)

MDOD-P-187

Nanobubble-assisted chemical free pre-treatment for delay wetting and scaling in membrane distillation

A.K. An, M. Jia, P.W. Wong, M.U. Farid (Hong Kong)

MDOD-P-188

Lithium ion battery recycling – recovery of cobalt sulfate and sulfuric acid with seeded membrane distillation crystallization

S. Flatscher, A. Keller, M.W. Hlawitschka (Austria)

MDOD-P-189

Fabrication of janus-engineered reversed thin film composite membrane with cellulose nanocrystals (CNC) for enhanced anti-fouling membrane distillation

B.O. Unal, C. Blacik (Turkey)

MDOD-P-190

Direct contact membrane distillation for effective PFOA removal from water by using a modified Hydrophobic SiO₂-PVDF membrane

A. Yousefi, M. Sadrzadeh (Canada)

Membrane emulsification, membrane nanoprecipitation | T2

MEMU-P-191

Industrial wastes utilization for CO₂ capture and accelerated carbonation in a hollow-fiber membrane contactor

A. Asimakopoulou¹, E. Gkagkari¹, C. Matsouka¹, G. Kastrinaki¹, G. Pantoleonos¹, G. Skevis¹, K.V. Tian², G. Chass³, G. Karagiannakis¹, D. Koutsonikolas¹ (¹Greece, ²Italy, ³United Kingdom)

MEMU-P-192

Analyzing potential heavy metal contamination after emulsification with a nickel-based nanoporous membrane

C. Heidenreich, D. Jupke, J.M. Lück, J. Rösler, A. Kwade, J.H. Finke, H. Bunjes (Germany)

Membrane-based solvent extraction | T2

MBSE-P-193

Separation and recovery of Co and Ni by liquid membrane technology (PIM's)

M. Aguilar-Moreno, M. Uriburu, M. Boerrigter, D. Morillo (Spain)

Membrane reactors, photocatalytic membrane reactors | T2

MREA-P-194

Photoactive polymer membranes enable the degradation of triclosan under artificial sunlight

J. Becker-Jahn, J. Griebel, A. Prager, A. Abdul Latif, A. Schulze, D. Enke (Germany)

MREA-P-195

Breaking through the permeability-reactivity trade-off in catalytic membranes through controlled diffusion-reaction

F. Liu, N. Lu, H. Lin, Ji. Wang, Q. Han (China)

MREA-P-196

In-situ water removal by polymer hollow fiber membrane for enhanced catalytic reactions

S.Y. Moon, M.H. Hyeon, E.Y. Kim, C.I. Kong, Y.S. Bae (South Korea)

Membrane bioreactors, submerged MBR | T2

MBR-P-197

Extracellular polymeric substances attributes to biofouling of anaerobic membrane bioreactor: adhesion and viscoelastic properties

K.M. Haile, M. Shental-Isaacs, M. Herzberg (Israel)

Immobilized enzymes and biocatalytic membrane reactors | T2

BIOREA-P-198

The influence of enzymes on the filtration of microalgae using functionalized membranes

T. Schreiber¹, M. Schmidt¹, A. Poidevin², J. Becker-Jahn¹, K. Leopold¹, E. Couallier², A. Schulze¹ (¹Germany, ²France)

Pervaporation, vapor permeation | T2

PERV-P-199

Electrically-conductive, joule-heated pervaporation membranes for desalination: investigating energy-saving, self-cleaning and anti-swelling trirecta

J. Aburabie, S. Mohammed, H. Nassrullah, R. Hashaikeh (United Arab Emirates)

PERV-P-200

On the use of pervaporation to adjust the water content in coolant liquids

D. Gorri, A. Martín-Quijano, M. Revuelta, D. González-Revuelta, M. Fallanza, A. Ortiz (Spain)

PERV-P-201

Polyethylenimine/tungstophosphoric acid composite pervaporation membranes for isopropanol dehydration

S.H. Huang, Y.R. Liu (Taiwan)

PERV-P-202

Integrating separation and reaction in pervaporation for glycerol carbonate production

A.S. Iyer, L. Patricia (Belgium)

PERV-P-203

Regeneration of TEG in natural gas dehydration using pervaporation

I. Lammerink, R. de Lange, M. Nikbakht, I. Tyraskis, S. Sluijter, O. Salazar, A. Ismail (Netherlands)

PERV-P-204

Investigating the influence of intercalating UiO-66-PEI metal organic frameworks on a graphene oxide membrane for the pervaporation dehydration of isopropanol

K.R. Lee, M. Gallardo, H.A. Tsai (Taiwan)

PERV-P-205

Enhancing pervaporation flux in desalination: integrating membrane structure and self-heating capabilities

H. Nassrullah^{1,2}, N. Hilal², R. Hashaikeh² (¹USA, ²United Arab Emirates)

PERV-P-206

Acid resistant hybrid silica (HybSi) membrane for enhanced esterification reaction by pervaporative dehydration of acrylic ester reaction mixture

M. Nikbakht Fini¹, M. van Tuel¹, Y. van Delft¹, D. Dhaler², D. Tournigant², S. Tretjak² (¹Netherlands, ²France)

PERV-P-207

Dehydration performance of isopropanol aqueous solution using a hybrid membrane with bio-inspired MoS₂ nanosheets

H.A. Tsai, J.S. Ciou, M. Gallardo, K.R. Lee (Taiwan)

Membranes in gas and vapor separation | T2

MGV-P-208

Technical study on the application of a polydimethylsiloxane membrane for the separation of CO₂/CH₄ gas mixtures in a 1-stage, permeate recirculation system

P. Bakonyi, B. Bokor, K. Bélafi-Bakó, N. Nemestóthy (Hungary)

MGV-P-209

Ageing of CO₂ separation membranes in the form of hollow fibres with a PEBAX separation layer

L. Brožová, G.S. Medeiros, Z. Pientka, P. Izák (Czechia)

MGV-P-210

Molecular simulation of the adsorption of CO₂/CH₄/H₂S/N₂ gases on nitrogen-rich porous polymers: the role of monomer building blocks

A. Elhussien, I. Abdulazeezb (Saudi Arabia)

MGV-P-211

PIM-1 copolymers towards propene/propane separation, the comparison between single-gas and mixed-gas transport properties

P. Hajivand¹, M. Longo¹, M. Monteleone¹, A. Fuoco¹, E. Esposito¹, D. Armentano¹, N.B. McKeown², M.K. Amin², J.C. Jansen¹ (¹Italy, ²United Kingdom)

MGV-P-212

Development of high flux membranes for the separation of f-gases

N. Charchi, L. Yilmaz, H. Kalıpçılar (Turkey)

MGV-P-213

Hollow fiber membranes for harsh conditions via chemistry in a spinneret

K.K. Menon, H. Roth, N. Benes (Netherlands)

MGV-P-214

Preparation and characterization of composite-type facilitated transport membranes for gas separation

J.H. Kim, H.C. Kang (South Korea)

MGV-P-215

Metal-doped polyimide-based membranes for light olefin/paraffin separations

H. Kulak, W. Swings, I.F.J. Vankelecom (Belgium)

MGV-P-216

Boosted hydrogen permeation in graphene oxide membranes deposited on spinel hollow fiber substrate

M.H.M. Reis, G.A. Guimarães, S.R.F.L. Ribeiro, V.L. Cardoso, C.E. Hori (Brazil)

MGV-P-217

Mixed matrix membranes for CO₂ capture: the case of F4_MIL-140(Ce) in Hyflon AD60x

C. Rizzuto, E. Tocci, E. Esposito, L. Calucci, F. Nardelli, M. Taddei, M. Lessi, F. Costantino, V. Guiotto, V. Crocellà, M. Signorile, A. Caravella, G. Prenesti, A. Fuoco (Italy)

MGV-P-218

Using isoporous supports to improve supported ionic liquid membrane performance for light paraffin fractionation

J.J. Rosenthal, N.P. Wamble, T. Song, J.F. Brennecke, B.D. Freeman (USA)

MGV-P-219

The effects of poly(ethylene glycol) grafting on graphene oxide mixed matrix membranes for CO₂ separation

H.J. Son, C.S. Lee (South Korea)

Membranes in hydrogen production and separation | T2

HYDR-P-220

Potential application of commercial Pd-based membranes for NH₃ decomposition in a highly efficient membrane reactor

D. Koutsonikolas, C. Matsouka, N. Lazaridou, A. Asimakopoulou, G. Karagiannakis (Greece)

HYDR-P-221

Biogas to hydrogen: catalytic membrane reactor development and system integration inside the MACBETH project

C. Tregambe (Italy)

HYDR-P-222

Enhancing the separation efficiency of ultra-selective 3D CANAL hydrocarbon polymeric membranes for hydrogen-based separations after long-term aging

J.Y. Yeo, F.M. Benedetti, H. Lai, A. Robinson, Y. Xia, Z.P. Smith (USA)

Mass transport in membranes | T3

TRANS-P-223

Equilibrium ion sorption in graphene oxide membranes

M.A. Geren, G.Q. Chen, D. Li, S.E. Kentish (Australia)

TRANS-P-224

Energy losses by co-ion crossover in the acid-base flow battery: effect of state of charge and current density

N. Boulif, R. Evers, A. Nawaz, Z. Borneman, K. Nijmeijer (Netherlands)

Modelling and simulation in membrane science and engineering | T3

MOD-P-225

Machine learning and data science for organic solvent nanofiltration

A.K. Beke, G. Ignacz, G. Szekely (Saudi Arabia)

MOD-P-226

Influence of membrane intrusion on the flow-field in reverse osmosis permeate channels

A. Cipollina¹, G. Battaglia¹, L. Ranieri², B. Blankert², A. Tamburini¹, G. Micale¹, C. Picioreanu² (¹Italy, ²Saudi Arabia)

MOD-P-227

Effect of side chain length on perfluorinated ionomer for anion exchange membrane water electrolysis (AEMWE) by MD simulation

P. Chi Hoon (South Korea)

MOD-P-228

Automated small molecule parameterisation in martini 3 via mixed-variable PSO

M. Kelidou, H.J. Risselada (Germany)

MOD-P-229

Evolutionary optimization of a bacterial toy model membrane

M. Krebs¹, H.J. Risselada^{1,2} (¹Germany, ²Netherlands)

MOD-P-230

Utilizing Evo-MD for the optimal targeting membrane interfaces with small molecules

S. Luetge, H.J. Risselada (Germany)

MOD-P-231

Modeling and experimental analysis of pH influence in boron separation in reverse osmosis

F.D. Martinez-Jimenez, F.S. Quintana, S. Cespedes-Zuluaga, B. Bastiaan, P. Cristian (Saudi Arabia)

MOD-P-232

Elucidating ion transport mechanisms in polyelectrolyte membranes through non-equilibrium molecular dynamics simulations

J. Mehlis, E. Evdochenko, M. Wessling (Germany)

MOD-P-233

Reevaluate practical performance and inefficiencies in close-circuit reverse osmosis (CCRO) design using time-dependent RO modelling

Z. Mo, Q. She (Singapore)

MOD-P-234

Ammonia removal and recovery from wastewater streams via membrane distillation process: a theoretical investigation on two applications

A.N. Tabasian, E. Bertozzi, M. Morciano, G. Boscheri, R. Perelli, M. Fasano, A. Tiraferri (Italy)

MOD-P-235

Experimental testing and computational modelling of concentration polarisation in nanofiltration membranes

E. Papaioannou, A.P. Noguerras, A. Kazakidi (United Kingdom)

MOD-P-236

Molecular insight on diffusion of small molecules in polyesters

K. Papchenko, E. Ricci, M.G. De Angelis (United Kingdom)

MOD-P-237

Process design of the recovery of refrigerant gases with hollow fiber membranes based on rubbery and glassy polymers

F. Pardo, S.V. Gutiérrez-Hernández, G. Zarca, A. Urtiaga (Spain)

MOD-P-238

Study of separation behavior of polyamide reverse osmosis membrane using multi-scale simulation

J.H. Park, K.S. Im, T.K. Lee, S.Y. Nam (South Korea)

Multi-scale modelling in membrane science and engineering | T3

MULTI-P-239

Membrane enhanced valorisation of spent lavender material from the essential oil industry for production of rosmarinic acid

D. Peshev, C. Chilev, Y. Stoyanova (Bulgaria)

Artificial intelligence methodologies in membrane science and engineering | T3

AI-P-240

The open membrane database: a data hub for membrane technology (and an experiment with community involvement)

R. Verbeke¹, T. Stassin¹, S. Van Buggenhout¹, G. Ignacz², G. Szekely², M. Elimelech³, G. Ramon⁴, C. Tang⁵, I. Vankelecom¹ (¹Belgium, ²Saudi Arabia, ³USA, ⁴Israel, ⁵China)

Membrane fouling, biofouling, scaling, ageing, cleaning and maintenance | T3

FOUL-P-241

Enhancing water filtration efficiency: oil-infused spacers for reduced pressure drop and biofouling control

A. Boyko, J.A. Epstein, A. Larin, G.Z. Ramon (Israel)

FOUL-P-242

Binary nanofibrous membranes with independent oil/water transport channels for durable emulsion separation

Y. Ding, J. Wang, F. Liu (China)

FOUL-P-243

Fouling and cleaning monitoring of UF membranes by electrochemical impedance spectroscopy

Z.E. Hammache, A. Penseil, A. Szymczyk (France)

FOUL-P-244

Regeneration of reverse osmosis membranes from the textile industry

F. López, S.C. Cardona, J. Lora-García, V. Fombuena (Spain)

FOUL-P-245

Fouling investigation of the bipolar membrane during electro-acidification of skim milk using X-ray micro-computed tomography

A. Merkel¹, G. Rudolph-Schöpping², S. Suwal¹, F. Lipnizki², S.K. Lillevang¹, L. Ahrné¹ (¹Denmark, ²Sweden)

FOUL-P-246

3D printed wavy composite membranes for organic fouling mitigation in membrane distillation

R. Navarro-Tovar, G. Zoumpouli, J. Chew, D. Mattia, M. Perez-Page, **P. Lopez-Porfiri** (United Kingdom)

FOUL-P-247

RO membrane fouling prediction using localized surface plasmon resonance sensing

N. Stein, M. Halakarni, R. Bernstein, M. Herzberg (Israel)

FOUL-P-248

Revealing the fouling tendency of α and β polymorphic forms of PVDF membranes using QCM-D monitoring

Q. Wang, Z. Cui (China)

FOUL-P-249

Hydraulic cleaning of PES membranes at different temperatures

B. Yergeldinov¹, D. Nygmetova¹, A. Satayeva¹, J. Kim¹, S. Pouloupoulos¹, V. Gitis², E. Arkhangelsky¹ (¹Kazakhstan, ²Israel)

Membranes for CO₂ capture | T4

CO₂-P-250

CO₂-separation performance of vinyl-addition polynorbornenes with ester groups

E. Bermesheva, E. Medentseva, A.P. Khrychikova, I. Borisov, M.V. Bermeshev (Russia)

CO₂-P-251

Encapsulation of hollow polystyrene nanoparticles in PDMS for mixed matrix membranes with enhanced CO₂/CH₄ separation performance

C. Guo, Y. Yang, J. Wu, Y. Lan (United Kingdom)

CO₂-P-252

Aging-resistant thin-film composite membranes from functionalised polymers of intrinsic microporosity

S. Iguodala, A. Wang, Z. Fan, N. McKeown, Q. Song (United Kingdom)

CO₂-P-253

Ionic conversion of contorted-rigid polymeric backbones: extraordinary membrane promises toward CO₂/light gas separation applications

I. Kammakakam, Y. Sarbassov¹, J.E. Bara² (¹Kazakhstan, ²USA)

CO₂-P-254

Composite membranes with amine facilitated transport for CO₂ removal

F. Kronemberger, M.L. Felisberto, F.B. de S. Mendes, C.P. Borges (Brazil)

CO₂-P-255

Thin-film composite polyether block amide membranes for high-flux CO₂ separation

J.H. Lee, C.Y. Part, C.I. Kong, E.Y. Kim, S.Y. Moon (South Korea)

CO₂-P-256

Influence of the surface charge density on the performance of nanocellulose based facilitated transport membranes for carbon capture

E. Medri, L. Fascia, S. Rossini, F. Doghieri, M. Giacinti Baschetti (Italy)

CO₂-P-257

Preparation of CO₂-selective hollow fiber membrane modules

S. Mitani, I. Taniguchi (Japan)

CO₂-P-258

Metal-anchored gas separation mixed matrix membranes for C₃H₆/C₃H₈ separation

S. Rico-Martínez, C. Álvarez, J.A. Miguel, Y.M. Lee, A.E. Lozano (Spain)

CO₂-P-259

Thin-film-composite anion exchange membranes for increased OH-selectivity in CO₂-electrolysis

M. Seling, K.V. Petrov, D.A. Vermaas (Netherlands)

CO2-P-260

Investigation on hybrid unit operation for post combustion carbon capture

A. Storione, M. Minelli, F. Miccio, E. Landi, V. Medri, E. Papa, S. Rossini, L. Fascia, M.G. Baschetti, F. Doghieri (Italy)

CO2-P-261

One-step preparation of nanofibrous material based on polyacrylonitrile and cellulose acetate for CO₂ capture

M. Syrový, P. Čapková, P. Ryšánek, K. Hamalová, O. Benada (Czechia)

CO2-P-262

Highly permeable carbon membranes derived from 6FDA-based polyimide for gas separation

K. Wang^{1,2}, X.Z. He^{1,2} (¹China, ²Israel)

CO2-P-263

Feasibility study of post combustion capture using facilitated transport membranes as a contributor towards blue hydrogen production

P. Wheatley, M.C. Ferrari (United Kingdom)

CO2-P-322

Block copolymers modifications: Enhancing properties for CO₂ capture

K. Hamalová (Czechia)

Membranes for seawater and brackish water desalination | T4

SEAW-P-264

Thin-film composite forward osmosis membranes using electrospun nanofibers as substrate and graphene oxide as porous modifier

M. Argaiž¹, C. Monteserin¹, S. Herrero¹, A. Kinik², L. Ruiz-Rubio¹, E. Aranzabe¹, M. Blanco¹ (¹Spain, ²Netherlands)

SEAW-P-265

Transmission of organic pollutants in RO brackish and sea waters : exploring solute-membrane-solvent interactions and enhancing rejection through membrane cascades

F.Z. Charik¹, S.A. Younssi², M. Rabiller-Baudry¹ (¹France, ²Morocco)

SEAW-P-266

Turn the water watersystem upside down: RO facilitated ecological gain, water savings and drinking water production

R. Jong, F. Smits, R. van der Aa, M. Colin (Netherlands)

SEAW-P-267

Separation performance evaluation of mosaic charged membrane prepared by ion-track graft polymerization

H. Yoshida, M. Higa, Y. Kakihana, M. Higa (Japan)

Membranes in drinking water | T4

DRIN-P-268

Sophia: sustainable off-grid technologies for drinking and deionised water for hospitals in Africa
S. De^{1,2}, D.N. Dinh¹, J. Hoinkis¹ (¹Germany, ²Italy)

DRIN-P-269

Ultrafiltration and nanofiltration for removing PhACs from drinking water

A. Giacobbo¹, S.W. da Silva¹, L.L. Albornoz¹, M.A.S. Rodrigues¹, M. N. de Pinho², A.M. Bernardes¹ (¹Brazil, ²Portugal)

DRIN-P-270

Highly stable catalytic PVDF hollow fibers for nitrite remediation

A. Ortiz Sainz de Aja, E. Abascal, L. Gómez-Coma, I. Ortiz (Spain)

Membranes in agro-food processing and food packaging | T4

AGRO-P-271

Purification of polyphenols from mandarin segments production wastewater by ultrafiltration and nanofiltration

P. Alonso Vázquez¹, C. Valle², C. Sánchez-Arévalo¹, M.C. Vincent-Vela¹, B. Cuartas-Uribe¹, M.A. Bes-Piá¹, S. Álvarez-Blanco¹ (¹Spain, ²Italy)

AGRO-P-272

Exploring membrane technology: a promising sustainable strategy for purifying plant-based starch hydrolysate products

C. Cabeza, A.E.G. Admed, M. Minauf, K. Wieland, M. Harasek (Austria)

AGRO-P-273

Membrane-based process for the recovery of polyphenols from forced chicory roots extracts

L. Firdaous, E. Diemer, M. Chadni, N. Grimi, L. Firdaous (France)

AGRO-P-274

Increasing resistance to water in biodegradable arabinoxylan films

V. Weng, V. Alves, I. Coelho, C. Brazinha (Portugal)

Membranes in wastewater treatment | T4

WWT-P-275

Unpacking opportunities of the hybrid advanced oxidation and membranes systems for addressing pharmaceutical problems in wastewater

R. Al-Juboori¹, N. Hilal¹, K. Golovko², A. Mikola² (¹United Arab Emirates, ²Finland)

WWT-P-276

Separation of antibiotics using two commercial nanofiltration membranes – experimental study and modelling

O. Anike, J. Cuhorka, P. Mikulášek (Czechia)

WWT-P-277

Combination of anaerobic membrane bioreactor and reverse osmosis for water reuse: fouling analyses and micropollutant removal efficiency

A.B. Sanchez, J. Teychenne, S. Laborie-Manton, C. Guigui (France)

WWT-P-278

Integration of diffusion dialysis for recovery of sulfuric acid excess in rare earth concentrate from ion-exchange processes

Ó. Cespo Villegas, O. Gibert, M. Hermassi, J. Cama, J. López, J.L. Cortina (Spain)

WWT-P-279

Enhanced removal of microplastics and dye from wastewater via advanced membranes integrated with PSF/MIL-53 (Fe) metal-organic frameworks

J. Farahbakhsh, M. Najafi, M. Golgoli, M. Zargar (Australia)

WWT-P-280

Beyond-reuse – a novel approach integrating dense membranes in municipal wastewater treatment schemes

M. Futterlieb, A.R. Abunafisa, A. Rasslan, L.C. Phan, P. Jageman, B. Teichgräber, S. Panglisch (Germany)

WWT-P-281

Biodegradation of persistent compounds by anaerobic reduction on graphene oxide membranes supported on tubular ceramic filtration elements.

D. Guevara Correa, J. Font, F. Stüber (Spain)

WWT-P-282

Microplastic fiber removal via ultrafiltration membranes: influence of fiber size distribution, concentration, and operational parameters on membrane fouling

F. Hamidavi, S. Gadkari, J. Lee (United Kingdom)

WWT-P-283

Saline mine water as a source of water and critical raw materials

J. Chromíková, P. Malíková, S. Heviánková (Czechia)

WWT-P-284

Reusable cellulose-based electrospun nanocomposite for cationic dye removal

M. Khatri, F.E. Ahmed, R.A. Al-Juboori, N.K. Khanzada, N. Hilal (United Arab Emirates)

WWT-P-285

Concentration of polyphenols from Rosa x damascena Mill residual water via nanofiltration

N. Lazarova-Zdravkova, S. Petrin, Y. Stoyanova, C. Chilev, D. Peshev (Bulgaria)

WWT-P-286**Study on acid and base resources generation from high-conductivity wastewater in the steel Industry**

P. Liu, T.J. Yang, C.H. Ho (Taiwan)

WWT-P-287**Water reclamation in the wine sector: impact of operating conditions on the filtration performance of ceramic membranes**

V. Mendes, F. Pereira, B. Esteves, C.V. Miguel (Portugal)

WWT-P-288**Tertiary treatment of urban wastewater by ultrafiltration for water reuse: two case studies in France**

M. Monnot¹, E. Gout¹, J. Yang^{1,2}, R. Kuhn¹, M. Blanc¹, L. Ercolei¹, P. Moulin¹ (¹France, ²China)

WWT-P-289**A MXene-based ternary photocatalytic heterostructure embedded on cellulose membrane for the removal of emerging pollutants from wastewater**

D. Mwangangi¹, J.C. Ngila^{1,2}, T.A. Makhetha¹, L.N.Dlamini¹ (¹South Africa, ²Kenya)

WWT-P-290**Separation of microplastics in centrifuge effluent applying multi-tubular ceramic membranes**

S. Navajas Valiente, S. Álvarez-Blanco, M.A. Bes-Piá, J.A. Mendoza-Roca (Spain)

WWT-P-291**Application of membrane processes in the nuclear industry for liquid radioactive waste treatment**

Q.T. Nguyenová, P. Kůs, A. Sears, S. Gogulin, M. Do Thi, P. Hladík (Czechia)

WWT-P-292**Ceramic biomimetic coatings to boost PVDF membrane performance in treating low surface tension wastewater streams**

A. Corozzi¹, **M. Caruso**¹, F. Russo¹, F. Galiano¹, M.C. Carnevale¹, A. Gordano¹, R. Conti¹, F. Gallucci², E. Curcio¹, A. Criscuoli¹, A. Figoli¹, **M. Raimondo**¹ (¹Italy, ²Netherlands)

WWT-P-293**Experimental scale-up of membrane bubble aeration unit**

I. Rizzardi, A. Bottino, G. Capannelli, M. Pagliero, C. Costa, D. Matteucci, A. Comite (Italy)

WWT-P-294**Achieving stability and visible light activity: Bi₂WO₆ immobilized on polymer membranes for photocatalytic micropollutant removal from water**

A. Schulze, K. Fischer, A.A. Latif, J. Griebel, A. Prager, O. Shayestehpour, S. Zahn (Germany)

WWT-P-295**Processing of biologically active wastewater from the distillation of clove essential oil via nanofiltration**

Y. Stoyanova, N. Lazarova-Zdravkova, S. Petrin, C. Chilev, D. Peshev (Bulgaria)

WWT-P-296

Sintered stainless-steel cross flow membrane with internal catalytic layer: characterization and preliminary test

R. Tinivella, A. Callegari, A.G. Capodaglio, D. Dondi, D. Vadivel, R. Bargiggia (Italy)

WWT-P-297

Development of an in situ-grown PDA-stabilized MOF (UiO-66-NH₂) membrane for efficient low-pressure separation of emulsified oily wastewater

J. Usman (Saudi Arabia)

WWT-P-298

Valorisation of precipitated silica wastewater: pre-industrial scale results & replicability studies at lab-scale

J. Canellas, C. Sielfeld, M. Cano (Spain)

Membranes in biotechnology, bioprocessing, bioseparations, biorefinery, biosensors | T5

BIOTEC-P-299

Engineering membranes for complex mixture separation

S. Chisca, E. Sandru, M. Sandru, H. Johnsen (Norway)

BIOTEC-P-300

Membrane in bioprocessing to optimize water purification, harvesting and compound extraction: case of the microalgae production chain

S. Ragueneau, C. Cordier, A. Lange, L. Torres, P. Moulin (France)

BIOTEC-P-301

Optimization of tubing dialysis process for biosurfactant recovery

X. Vecino, A. Martínez-Arcos, M. Reig, J.L. Cortina, J.M. Cruz, A.B. Moldes (Spain)

BIOTEC-P-302

Characterization and evaluation of dialysis membranes life-time for biosurfactant recovery from corn steep water

X. Vecino, A. Martínez-Arcos, M. Reig, J.L. Cortina, J.M. Cruz, A.B. Moldes (Spain)

Membranes in controlled delivery/release | T5

CTDEL-P-303

Pied-piper liposome-encapsulated drugs: mastering the permeability, retention, and tumor suppression pharmacodynamics

T. Deb (France)

Membranes for air treatment (purification, dehumidification) | T5

AIR-P-304

Encapsulated ionic liquids in PEBAX® membranes for indoor air quality

I. Souza, P.J. Carvalho (Portugal)

Integrated membrane processes | T6

IMP-P-305

Introducing hydromine, a new EU RFCS research project on waste to hydrogen conversion technologies

A. Brunetti³, K. Kapusta¹, T. Kempka², G. Barbieri³, L. Tekeli¹, F. Maseri⁴, P. Boutsen⁴, G. De Weireld⁴ (¹Poland, ²Germany, ³Italy, ⁴Belgium)

IMP-P-306

Sequential use of UV/H₂O₂-(PSF/TiO₂/MWCNT) mixed matrix membranes for dye removal in water purification: membrane permeation, fouling, rejection, and decolorization

N. Koutahzadeh (USA)

IMP-P-307

Removal of micropollutants by dicarboxymethyl cellulose

M. Moniz Pinto, D. Gago, R. Chagas, L.M. Ferreira, I. Coelho (Portugal)

IMP-P-308

Biocompounds recovery from corn steep water by electrodialysis

M. Reig, A. Martínez-Arcos, J.L. Cortina, J.M. Cruz, A.B. Moldes, X. Vecino (Spain)

IMP-P-309

Influence of water quality on bacterial growth in drinking water distribution networks: influence of membrane processes

H. Taligrot, S. Wurtzer, M. Monnot, J. Geslin, L. Moulin, P. Moulin (France)

IMP-P-310

Application of membrane separation processes for the production of ultra-pure water from petrochemical effluent

M.A. Siqueira Rodrigues, A.B. Santos, A. Giacobbo, A.M. Bernardes (Brazil)

Hybrid, novel membrane processes, new trends in membrane science and technology | T6

TREND-P-311

Novel technique for removal of polymeric flocculant from the surface of hollowfibre microporous polyvinylidene fluoride membranes

R. Fomin, R.B. Thorpe, J. Lee (United Kingdom)

TREND-P-312

Seawater desalination by batch reverse osmosis (RO)

E. Hosseinipour, P.A. Davies (United Kingdom)

TREND-P-313

Anionic polyamide-based conductive polymers and their metallic oxide composite membranes for gas sensor applications

I. Kammakakam, S. Kalybekkyzy, B. Soltabayev (Kazakhstan)

TREND-P-314

Efficient resource recycling and water reuse from high-salinity brines using advanced membrane technologies

C. Kleffner, G. Braun (Germany)

TREND-P-315

Novel polyelectrolyte-based draw solute that overcomes the trade-off between the forward osmosis performance and ease of regeneration

B. Kruczek, A. Atashgar, D. Emadzadeh (Canada)

TREND-P-316

Lithium recovery from spent lithium-batteries through nanofiltration operations

G. Prenesti, A. Tagarelli, R. Elliani, A. Napoli, A. Caravella, E. Tocci, C. Conidi, A. Cassano (Italy)

TREND-P-317

Removal of per- and poly-fluoroalkyl substances from water by specialized membranes made via molecular layer-by-layer synthesis of oligoamide on a porous support

S. Sahu, R. Kasher (Israel)

TREND-P-318

Development of virus concentration membrane methods for accurate assessment of virus retention by reverse osmosis

H. Taligrot, S. Wurtzer, M. Monnot, L. Moulin, P. Moulin (France)

Membrane process intensification, techno-economic analysis, life cycle assessment | T6**INTENS-P-319**

Techno-economic evaluation of IPA dehydration: a hybrid process of distillation and pervaporation

E. Boorsma¹, M. Khan², I. Lammerink¹, P. Vandezande², R. de Lange¹, A. Buekenhoudt² (¹Netherlands, ²Belgium)

INTENS-P-320

Multiparametric optimisation of membrane hybrid systems for biocatalytic production of phenylacetaldehyde using genetic algorithm

M. Mihaľ, E.J. Paleš, I. Červeňanský (Slovakia)

INTENS-P-321

Scaling-up the synthesis protocol for polyimide-based biogas purification membranes using green solvents

A. Shenoy, R. Thur, P.R. Van den Mooter, I. Vankelecom (Belgium)