

1st Day, October 17, 2023

08.00-09.00	Registration
09.00-11.10	Opening Session
11.10-11.25	Group Photo
11.25-11.55	Coffee Break+Poster Session
11.55-13.25	Plenary Session 1 Chair Prof. Ismail KOYUNCU
11.55-12.25	Prof. Harsha RATNAWEERA (Norwegian University of Life Sciences, Norway) Development trends in digital tools in membrane processes
12.25-12.55	Prof. Izzet OZTURK (Istanbul Technical University, Türkiye) The Significance of membrane technologies on the management of sanitary landfill leachate
12.55-13.25	Prof. How Yong NG (National University of Singapore, Singapore) Development of vibrating membrane and quorum quenching technique for membrane fouling control in MBRs
13.25-14.25	Lunch+Poster Session

14.25-15.25	SESSION 1		
	Reuse and Concentrate Management Chair : Prof. Harsha RATNAWEERA Conference Hall	Ceramic Membranes Chair : Assoc. Prof. Chanhyuk PARK Senate Hall	Membrane Bioreactor Chair : Asst. Prof. Recep KAYA Seminar Hall
14.25-14.45	Post-treatment of high-rate activated sludge process effluent for irrigational use Hazal Gulhan, <u>Kadir Ozcelik</u> , Bahriye Eryildiz, Muhammed Nimet Hamidi, Ayse Yuksekdog, Ismail Koyuncu, Huseyin Guven, Mustafa Evren Ersahin, Hale Ozgun, Izzet Ozturk (Türkiye – 129)	Effect of calcination temperature in kaolin membranes structure <u>Atefeh Roozitalab</u> , Ali Kargari, Mansooreh Soleimani (Iran – 106)	Evaluating the performance of anaerobic membrane bioreactors and conventional systems with the LCA approach <u>Merve Yilmaz</u> , Ismail Koyuncu (Türkiye – 295)
14.45-15.05	Management of reverse osmosis concentrate of geothermal water by electro dialysis reversal method <u>Mustafa Burak Doganay</u> , Aseel Zaid, Esra Altıok, Aydın Cihanoğlu, Yakubu Abdullahi Jarma, Alper Baba, Nalan Kabay (Türkiye – 206)	Preparation of ceramic membranes from spherical coal fly ash and alumina nanofibers with conductive carbon coating <u>Ilya Ryzhkov</u> , Natalya Fadeeva, Ivan Kharchenko, Galina Akimochkina, Elena Fomenko (Russia – 298)	Investigation of innovative hybrid membrane bioreactor (If-Mbr) treatment technology for domestic wastewater <u>Elif Ceren Esen</u> , Muhammed Ahmet Demirbilekli, Turker Turken, Ismail Koyuncu (Türkiye-254)
15.05-15.25	Metal recovery from secondary sources by using green solvents <u>Gizem Tuncay</u> , Ayse Yuksekdog, Borte Kose Mutlu, Ismail Koyuncu (Türkiye- 255)	Synthesis ceramic membrane using fly ash and clay with the addition of sawdust to neutralize of peat water <u>Idral Amri</u> , Zuqni Meldha, Muhammad Dandy Tito Angkoso, Yosia Jumaga, Nirwana Hamzah (Indonesia- 145)	Evaluation of conventional and innovative immobilization bead applications in Quorum Quenching membrane bioreactors Semnur Korkusuz, Rabia Ardic, Merve Yilmaz, <u>Borte Kose Mutlu</u> , Ismail Koyuncu (Türkiye-251)
15.25-15.55	Coffee Break+Poster Session		

15.55-17.55	SESSION 2		
	Membrane Fabrication Chair : Prof. Mihail BARBOIU Conference Hall	Dynamic Membrane Technology Chair : Assoc. Prof. Mustafa Evren ERSAHIN Senate Hall	Innovative Membrane Processes Chair : Asst. Prof. Onur Isik Seminar Hall
15.55-16.15	Membrane preparation with TEMPO-CNC suspensions via crossflow membrane filtration <u>Berk Can Icten</u> , Emre Bukusoglu, Pinar Zeynep Culfaz Emecen (Türkiye – 230)	Pre-deposition of activated sludge on a steel mesh supported dynamic membrane filtration reactor <u>Ibrahim Uyanik</u> , Emine Busra Colakoglu, Adem Yurtsever, Hamdi Mihciokur, Erkan Sahinkaya (Türkiye – 86)	APTES-functionalized WO ₃ as potential filler for Nafion to improve Hydrogen-Air fuel cell performance: Influence of membrane structure <u>Asmaa Selim</u> , Andras Tompos (Hungary – 296)
16.15-16.35	Zinc oxide blended polymeric membranes <u>Evrin Celik Madenli</u> , Fulya Sen, Ahmet Ercin, Dilara Kesiktas, Halil Kandemir (Türkiye – 112)	Short and long-term NaOCl effect on the layer stability and viscoelastic properties of multilayered films <u>Goknur Donmez</u> , Aleyna Nur Basey, Hacer Yesim Cengiz, Ayca Muftuler, Fehime Nur Akyel, Eymen Konyali, Huseyin Deligoz (Türkiye-282)	Combined microfiltration-oxidation for treatment of per- and polyfluoroalkyl substances in wastewater <u>Fanjing Meng</u> , Philip Lein, Agnieszka Cuprys, Harsha Ratnaweera, Zakhar Maletskyi (Norway – 147)
16.35-16.55	High flux cellulose acetate desalination membranes modified by zwitterionic hybrid compounds <u>Selda Erkoc Ilter</u> (Türkiye – 121)	Innovative membrane with recovered carbon black (rCB) <u>Tugce Akca</u> , Gulmire Ilyasoglu, Ayse Yuksekdog, Borte Kose Mutlu, Ismail Koyuncu (Türkiye-257)	Post-treatment of biologically treated landfill leachate (LFL) using magnetic chitosan clay beads with adsorption process <u>Irem Ayranpinar</u> , Serdar Göcer, Melike Kozak, Ahmet Duyar, Kevser Cirik (Türkiye – 170)

<p>16.55-17.15</p>	<p>Carbon molecular sieve membranes with integrally skinned asymmetric structure for organic solvent nanofiltration (OSN) and organic solvent reverse osmosis (OSRO) <u>Mahmoud Atef Abdulhamid</u> (Saudi Arabia – 89)</p>	<p>Quorum quenching (QQ) enzyme effects on biofilm formation on biocatalytic membranes <u>Enise Pekgenc</u>, Elif Ceren Esen, Bahar Yavuzturk Gul, Ismail Koyuncu (Türkiye-237)</p>	<p>Removal of micropollutants in municipal wastewater using TiO₂-diatomite composite under uvc irradiation <u>Selda Murat Hocaoglu</u>, Aida Isma Mohamad Idris, Irfan Basturk, Recep Partal, Elmas Eva Oktem Olgun (Türkiye- 187)</p>
<p>17.15-17.35</p>	<p>Functionalized carbon nanotube embedded thin film nanocomposite membranes for simultaneous desalination and boron removal Suer Kurklu Kocaoglu, <u>Aysa Guvensoy Morkoyun</u>, Cansu Yıldırım, Sadiye Velioglu, S. Birgul Tantekin Ersolmaz (Türkiye- 193)</p>	<p>Synthesis of polyepichlorohydrin based anion exchange membranes for renewable energy harvesting by reverse electrodialysis: Effect of crosslinking degree <u>Aydin Cihanoglu</u>, Enver Güler, Nalan Kabay (Türkiye- 293)</p>	<p>Membrane module integrated with atmospheric cold plasma reactor for the degradation of Perfluoroalkyl substances in aqueous environment <u>Kubra Ulucan Altuntas</u>, Enrico Filippetto, Mubbshir Saleem, Giulia Tomei, Ester Marotta, Cristina Paradisi (Türkiye- 312)</p>
<p>17.35-17.55</p>	<p>Evaluate the impact of integrated 3D printed spacers into a cross-flow module on improving ultrafiltration fouling mitigation <u>Aws N. Al Tayawi</u>, Tamás Szabó, József Richárd Lennert, Szabolcs Kertész (Iraq-287)</p>		<p>Water quality and resilience of decentralised renewable energy powered membrane filtration system <u>Andrea Iris Schäfer</u>, Youssef Amine Boussouga, Bryce Sydney Richards (Germany-309)</p>

2nd Day, October 18, 2023

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08.00-09.00	Registration		
09.00-10.20	SESSION 3		
	<p>Forward Osmosis Chair : Prof. Vedat UYAK Conference Hall</p>	<p>Membrane Fabrication Chair : Prof. Ahmet KARAGUNDUZ Senate Hall</p>	<p>Industrial Wastewater Treatment Chair : Assoc. Prof. Kubra ULUCAN ALTUNTAS Seminar Hall</p>
09.00-09.20	<p>Selection of suitable draw solution for anaerobic osmotic membrane bioreactor using AHP analysis method <u>Ilknur Yalcin Guney</u>, Sumeyye Hasanoglu, Coskun Aydiner, Ilda Vergili, Zeren Beril Gönder, Gulsum Yilmaz, Yasemin Kaya (Türkiye - 102)</p>	<p>Clinoptilolite zeolite modified with different plasma gas pressures as a hydrophilic additive in fabrication of PES membrane for wastewater treatment <u>Nazanin Nasrollahi</u>, Vahid Vatanpour, Mahdie Safarpour, Maryam Yousefpoor, Ismail Koyuncu (Iran- 97)</p>	<p>Impact of draw solution (DS) concentration on the performance of anaerobic osmotic membrane bioreactors (AnOMBR) for slaughterhouse wastewater treatment <u>Sumeyye Hasanoglu</u>, Ilknur Yalcin Guney, Gulsum Yilmaz, Yasemin Kaya, Coskun Aydiner, Ilda Vergili, Zeren Beril Gönder (Türkiye - 103)</p>
09.20-09.40	<p>ZIF-67 enabled ultrasselective polyamide membrane for desalination and boron removal Suer Kurklu Kocaoglu, Benny D. Freeman, <u>S. Birgül Tantekin Ersolmaz</u> (Türkiye - 207)</p>	<p>Production of superhydrophobic membrane from waste biomass for water-oil separation: Example of spent coffee grounds <u>Yagmur Meltem Aydin Kizilkaya</u>, Gorkem Gedik , Vedat Uyak (Türkiye-258)</p>	<p>A novel, dual-layer nanofiber membrane for industrial textile wastewater treatment by direct contact membrane distillation <u>Mohammad Mahdi A. Shirazi</u>, Saeed Bazgir, Fereshteh Meshkani (Iran- 111)</p>

09.40-10.00		Fate of nanomaterials in the fabrication of polymeric membranes for water and wastewater treatment <u>Vahid Vatanpour</u> (Türkiye- 157)	Can the RO concentrate from process water preparation units of industries be directly reused? <u>Mehmet Kitis</u> , Nevzat Ozgu Yigit, Emrah Ozturk, Hasan Koseoglu, Bilgehan Ilker Harman, Sehnaz Sule Kaplan Bekaroglu, Evrim Celik Madenli (Türkiye- 85)
10.00-10.20		Removal of pharmaceutical by MOF doped UF membrane <u>Gulmire Ilyasoglu</u> , Ismail Koyuncu (Türkiye-250)	
10.20-10.50	Coffee Break+Poster Session		
10.50-11.50	Plenary Session 2 Chair Assoc. Prof. Mustafa Evren ERSAHIN		
10.50-11.20	Prof. Volodymyr V. TARABARA (Michigan State University, USA) Virus removal in water treatment systems: The role of virus adhesion		
11.20-11.50	Prof. Mihail BARBOIU (Institut Européen des Membranes, University of Montpellier, France) Artificial water channels-toward biomimetic membranes for desalination		
11.50-13.00	Lunch+Poster Session		

13.00-15.00	SESSION 4		
	Resource Recovery Using Membrane Processes Chair : Prof. Volodymyr V. TARABARA Conference Hall	Membrane Fabrication Chair : Prof. Vahid VATANPOUR Senate Hall	Modelling of Membrane Processes Chair : Prof. Mehmet KITIS Seminar Hall
13.00-13.20	Appropriate roof selection in rainwater harvesting for irrigation purposes Muhammed Nimet Hamidi, <u>Shayan Shitreh</u> , Ali Izzet Cengiz, Kadir Ozcelik, Bahriye Eryildiz, Omer Ekmekcioglu, Mehmet Cuneyd Demirel, Berk Canberk, Onur Isik, Ismail Koyuncu, Huseyin Guven, Hale Ozgun, Mustafa Evren Ersahin (Türkiye-286)	Effect of non-woven layer on thin film composite (TFC) reverse osmosis (RO) membrane performance <u>Sevde Korkut</u> , Ayse Yuksekdog, Ismail Koyuncu (Türkiye-256)	Computational modeling of porous membranes for gas separations <u>Seda Keskin Avcı</u> (Türkiye-263)
13.20-13.40	Quercetin recovery with ceramic membranes Evrin Celik Madenli, <u>Dilara Kesiktas</u> , Halil Kandemir, Mehmet Kitis (Türkiye - 114)	Impact of the temperature and humidity in the fabrication of nanofiber membrane on hollow-braided rope <u>Hamza Bakar</u> , Muhammed Furkan Aras, Mehmet Emin Pasaoglu, Ismail Koyuncu (Türkiye-259)	Dynamic modelling of a leachate treatment plant with membrane bioreactor process <u>Cansu Delibas</u> , Hazal Gulhan, Izzet Ozturk (Türkiye - 133)
13.40-14.00	Performance of polymer inclusion membranes on gold adsorption <u>Basak Keskin</u> , Bihter Zeytuncu, Ismail Koyuncu (Türkiye -243)	Synthesizing and process electrospun polyacrylic acid (PAAc)/hexadecyl acrylate (HDA) hydrogel nanofiber and its application in emerging contaminant as a novel adsorption <u>Gulmire Ilyasoglu</u> , Turdimuhammet Abdulla, Ismail Koyuncu, Oguz Okay (Türkiye- 302)	Explaining organic solvent permeation through cellulose membranes of distinct morphologies <u>Ilker Kaygusuz</u> , Pınar Zeynep Culfaz Emecen (Türkiye - 225)

14.00-14.20	<p>A high-performance polydopamine coated polysulfone based ultrafiltration membrane: Application in the concentration of whey proteins <u>Ecem Onuk</u>, Elif Güngörmüş, Aydın Cihanoğlu, Sacide Alsoy Altinkaya (Türkiye- 179)</p>	<p>Sudden development and applications of silicon carbide membranes for liquid filtration Farshid Bandi, Erdem Görgün, <u>Osman Ayalp</u> (Türkiye - 305)</p>	<p>Variability in nitrogen removal performance of a full-scale MBR plant operated under biomass induced kinetic limitation <u>Eda Aktan</u>, Goksin Ozyildiz, Elvan Bulutoglu, Zeynep Ece Kayas, Tuncay Yilmazcelik, Güclü Insel (Türkiye- 290)</p>
14.20-14.40	<p>Ideal bipolar membrane manufacture via catalyst and different solvents for BMED system applications <u>Aytekin Celik</u>, Halil Hasar (Türkiye- 139)</p>	<p>Purification and characterization of Aquaporin from thermophilic Geobacillus thermoleovorans ARTR1 using cell-free protein synthesis system <u>Kadircan Civelek</u>, Hande Mumcu, Enise Pekgenc, Nevin Gul Karaguler, Esra Ates Genceli, İsmail Koyuncu (Türkiye- 189)</p>	<p>Aquaporin-inspired functionalization of carbon nanotubes: Computational and experimental assessment of their desalination performance <u>Aysa Güvensoy Morkoyun</u>, Sadiye Velioglu, M. Goktug Ahunbay, S. Birgul Tantekin Ersolmaz (Türkiye- 218)</p>
14.40-15.00		<p>Synthesis of silica-graphene oxide doped membranes for dye removal from aqueous solutions via polymer-assisted approach <u>Utkan Cinar</u>, Edanur Gebecik, Elif Demirel (Türkiye- 107)</p>	<p>Enhancing gas separation performance of poly (ether-block-amide) membranes by molecular rearrangement: a molecular simulation study <u>Foad Monemian Esfahani</u>, Ali Kargari (Iran- 156)</p>
15.00-15.20		<p>A Study on mono- and divalent cation separation using various polymeric films and membranes <u>Hacer Yesim Cengiz</u>, Ayca Muftuler, Serkan Acar, Eymen Konyali, Hüseyin Deligoz (Türkiye - 289)</p>	<p>Effect of module geometry on the performance of direct contact membrane distillation (DCMD) in hollow fiber modules <u>Mohammadreza Momeni</u>, Ali Kargari, Mitra Dadvar, Arezou Jafari (Iran- 192)</p>
15.20-15.50	Coffee Break+Poster Session		

SESSION 5			
15.50-17.50	Resource Recovery Using Membrane Processes Chair : Prof. Izzet OZTURK Conference Hall	Gas Separation Chair : Assoc. Prof. Evrim Celik MADENLI Senate Hall	Industrial Wastewater Treatment Chair : Assoc. Prof. Hale OZGUN Seminar Hall
15.50-16.10	Separation of drugs of the caine family from wastewaters using commercial nanofiltration membranes <u>Tamás Szabó</u> , Péter Gyenes, Máté Sütö, Alberto Tiraferri (Hungary- 88)	Revealing membrane-based H ₂ /CO ₂ separation performances of MXene family via molecular simulations <u>Sirin Massoumilari</u> , Melih Dogancı, Sadiye Velioglu (Türkiye – 175)	Examination of the Quorum Quenching mechanism in membrane bioreactors for the treatment of industrial wastewater <u>Rabia Ardic</u> , Semanur Korkusuz, Merve Yilmaz, Borte Kose Mutlu, Ismail Koyuncu (Türkiye-253)
16.10-16.30	Membrane treatment for water recycling and resource recovery in a textile district <u>Francesca Tuci</u> , Michele Allocca, Donatella Fibbi, Riccardo Gori (Italy – 165)	Novel high-free volume polymeric membranes for separation of CO ₂ from natural gas <u>Sadiye Velioglu</u> , Tugba Baysal, Aysa Güvensoy Morkoyun, Goktug Ahunbay, Serife Birgul Tantekin Ersolmaz, D. Bezgin, Victoria Ryzhikh, A. Kuznetsov (Türkiye – 191)	Occurrence and toxic impact of antiviral drugs <u>Bahriye Eryildiz</u> , Bahar Yavuzturk Gul, Ece Polat, Ismail Koyuncu (Türkiye – 242)
16.30-16.50	Electro-baromembrane separation of ions with the same charge: experiment and modeling <u>Victor Nikonenko</u> , Dmitrii Butylskii, Semyon Mareev, Andrey Kislyi, Vasiliy Troitskiy (Russia-245)	The effect of number of metal layer in Mxene membranes on CO ₂ /CH ₄ separation performances <u>Eyup Yazkan</u> , Sadiye Velioglu (Türkiye – 197)	Efficient removal of water from oily aqueous mixtures by vacuum filtration using bacterial cellulose membranes <u>Aslihan Calhan</u> , Ayca Hasanoglu, Ilknur Kucuk, Oguzhan Gunduz (Türkiye -276)
16.50-17.10	Promising ways to improve the efficiency of electro dialysis recovery of phosphates from wastewater <u>Natalia Pismenskaya</u> , Olesya Rybalkina, Kseniya Solonchenko (Russia-246)	Deoxygenation of alkanolamine CO ₂ solvents using composite membranes in gas- liquid membrane contactor <u>Stepan Bazhenov</u> , Sergey Shirokikh, Denis Kalmykov, Petr Safronov, Alexey Yushkin, Tatiana Anokhina (Russia-264)	Steroid hormone micropollutant removal by single-walled carbon nanotubes incorporated in nanofiber-ultrafiltration composite membranes <u>Han Ya Lin</u> , Minh Nhat Nguyen, Rabia Ardic, Ismail Koyuncu, Andrea Iris Schäfer (Germany- 306)

17.10-17.30	Resource recovery in anaerobic microfiltration osmotic membrane bioreactors <u>Dilara Akyildiz</u> , Sümeyye Hasanoglu, Ilknur Yalcin Guney, Mirac Nur Ciner, Yasemin Kaya, Gulsum Yilmaz, Zeren Beril Gönder, Coskun Aydiner, Ilda Vergili (Türkiye – 104)	Molecular design of poly (ether-block-amide) copolymers for gas separation <u>Foad Monemian</u> , Ali Kargari (Iran -115)	Investigation of a real industrial zone wastewater treatment with JLMBR system <u>Suleyman Uzuner</u> , Behice Yagmur Aydin, Burhanettin Farizoglu (Türkiye-261)
17.30-17.50	Membrane filtration of soft drink wastewater for reuse in cooling tower <u>Goksen Capar</u> , Mustafa Caglar Gürbüz (Türkiye - 236)	Separating nitrogen from vapor phase ethanol/isopropanol mixture by mixed matrix membranes <u>Fatma Sahin</u> , Halil Kalipcilar (Türkiye- 205)	
17.50-18.10		Thin film composite/nanocomposite membranes for helium recovery and purification Cansu Yıldırım, Melis Tok Simsek, <u>Birgül Tantekin Ersolmaz</u> (Türkiye - 221)	
18.20	Closing Session Oral and Poster Presentation Awards		
18.45	Bus Transport to Gala Dinner		
19.00	Gala Dinner		

3rd Day, October 19, 2023

09.00-17.00

Technical Visit:

1. Komurcuoda Landfill Leachate Treatment Plant (MBR+NF)
2. Agva Municipal Wastewater Treatment Plant (MBR)