

	Sunday 4th December
Time 12.00 12.20 12.40 13.00 13.20 13.40 14.00 14.20 14.40 15.00 15.20 15.40	
16.00 16.20 16.40 17.00 17.20 17.40	<p style="text-align: center;"> Registration Location: Foyer G81 </p>
18.00 18.20 18.40 19.00 19.20 19.40 20.00	<p style="text-align: center;"> Welcome Reception (Chair: Mikel Duke and Xiwang Zhang) Location: Foyer G81 </p>

Monday 5th December				
8:00	Registration Location: Foyer G81			
9:00	Conference Welcome (Chair: Mikel Duke and Xiwang Zhang) Location: G81 Main Conference room			
9:10	Plenary 1 Prof. Jerry Lin (Arizona State) Location: G81 Main Conference room Chairs: Prof. Mikel Duke			
10:10	Morning Tea			
11:00	Plenary 2 Prof. Amy Childress (University of Southern California) Location: G81 Main Conference room Chairs: Prof. Stephen Gray			
12:00	Lunch			
13:00	<p>Session 1a Membrane Materials Location: Room 101 Chairs: Peter Budd and Mikel Duke Peter Budd, University of Manchester, KEYNOTE Ringing the changes in PIM topology</p> <p>Rika Lin, The University of Queensland Interfacial Engineering of Metal-Organic Framework Gels Composites</p> <p>Jianhua Zhang, Victoria University Study of MOF incorporated dual layer membrane with enhanced removal of ammonia and per-/poly-fluoroalkyl substances (PFAS) in landfill leachate treatment</p> <p>Yiqian Deng, UQ Lithium Salt Production using Membrane Peracrylfication</p> <p>Mitra Golegol, Edith Cowan University Microplastic fouling mitigation of polysulfone ultrafiltration membrane via incorporating metal-organic frameworks (MOFs)</p>	<p>Session 1b Membrane Processes Location: G03 Chairs: Faial Hai and Nicholas Low Suzana Nunes, King Abdullah University of Science and Technology, KEYNOTE REMOTE** Thin film nanofiltration membranes for the chemical industry: integrated asymmetric and interfacial polymerization approaches</p> <p>Faial Hai, University of Wollongong, KEYNOTE Coupling horseradish peroxidase based bioreactor with membrane distillation: elucidating antibiotics degradation and membrane fouling mitigation</p> <p>Hugo Tallrot, Aix Marseille Removal of viruses in fresh water by low pressure reverse osmosis : application to the water production for human consumption</p> <p>Stefan Koel, Pentair X-Flow Using selected natural viruses for a novel integrity method for capillary ultrafiltration membranes.</p> <p>Milton Chai, The University of Queensland Bilayer metal-organic framework membrane for lithium extraction</p>	<p>Session 1c Membrane Materials Location: G81 Chairs: Huanling Wang and Colin Scholes Huanling Wang, Monash University, KEYNOTE Nanofluidic membranes for molecular and ionic separations</p> <p>Qilei Song, Imperial College London, INVITED REMOTE** Innovation in Ion-Selective Membranes for Electrochemical Energy Storage</p> <p>Kyle Engel, The University of Auckland Additive Manufacturing of Ionically Conductive Polymer Membrane Artificial Muscles</p> <p>Helene Roussel, CEA-Grenoble Ionic Conductive Hybrid Polymer Membrane for Lithium Ion Batteries</p> <p>Yuta Nishino, Okayama University, INVITED Efficient and Controlled Preparation of Graphene-Based Materials and Their Application for Water Purification</p>	<p>Session 1d Inorganic Membranes and Gas Separation Location: Room 132 Chair: Sandra Kerisch and Kumar Agrawal Hideto Matsuyama, Kobe University, KEYNOTE REMOTE** Organic solvent mixture separation using Organic Solvent Reverse Osmosis (OSRO) membranes</p> <p>Sandra Kerisch, The University of Melbourne, KEYNOTE Greenhouse Gas Capture – Recent Results</p> <p>Wibke Zangler, RWTH Aachen Freestanding Fe3O4-incorporated porous carbon monoliths for application in heterogeneous electro-Fenton membrane contactors</p> <p>Dema Almasri, Hamad Bin Khalifa University A novel clay-based ceramic membrane for wastewater treatment.</p> <p>Kumar Agrawal, EPFL A-scale Chemistry & Engineering of Two-Dimensional Materials for Energy-Efficient Molecular Separation</p>
15:00	Afternoon Tea Registration Location: Foyer G81			
15:30	<p>Session 2a Membrane Applications Location: Room 101 Chairs: Yang Chang and George Chen Yang Chang, Chung Yuan Christian University, KEYNOTE Bio-inspired Zwitterionic Membranes: Design and Applications</p> <p>Arthi Karunanithi, Indian Institute of Technology-Bombay Electrospun Carbon based PVA Membrane for Oil Water Separation and its Antifouling properties.</p> <p>George Chen, The University of Melbourne, INVITED Organic Acid Separation Using Membrane Technology</p> <p>Radwan Alfahel, Qatar University Fabrication of Antifouling Forward Osmosis Membrane Using T3C2Tx (MXene)</p> <p>Shihong Lin, Vanderbilt University, INVITED Foundational Framework for Evaluating Performance of Nanofiltration-based Solute-solute Separation</p> <p>Mohd Hafiz Dzarfan Othman, Universiti Teknologi Malaysia, KEYNOTE REMOTE** Visible-Light Driven Photocatalytic Membrane for the Removal of Persistent Organic Pollutants</p>	<p>Session 2b Membrane Processes Location: G03 Chairs: Leonard Ting and Xiwang Zhang Enrica Drioli, University of Calabria, KEYNOTE REMOTE** Potentialities and limits of Membrane Distillation and related technologies</p> <p>Stefan Herrmann, RWTH Aachen Relevance of Radial Mixing in Tubular Membrane Reactors for Advanced Oxidation Processes</p> <p>Zhan Li, Kobe University Investigation on ammonia recovery and concentration via sweep gas membrane distillation process</p> <p>Sofiane Soukane, King Abdullah University of Science and Technology REMOTE** Reducing scaling proneness in large-scale MD modules using feed redistribution strategies</p> <p>Leonard Ting, University of Technology Sydney, INVITED Janus Membranes for High Salinity Brine Treatment via Membrane Distillation</p> <p>Emilie Gout, Aix-Marseille University Wet air oxidation as an option for industrial membrane concentrate remediation</p>	<p>Session 2c Membrane Materials Location: G81 Chairs: Ingo Pinnau and Jingwei Hou Ingo Pinnau, King Abdullah University of Science and Technology, KEYNOTE Defect-Free Submicroporous Interfacially Polymerized Thin-Film Composite Membranes: New Opportunities for Gas- and Liquid Separations</p> <p>Jingwei Hou, University of Queensland, INVITED Interfacial engineering of metal-organic framework nanocomposite membranes</p> <p>Chi Cheng, The University of Melbourne, INVITED Atomically thin membranes for molecular separations in organic liquid systems</p> <p>Ming Yu, The University of Manchester Exceptional CO2 separation performance from thin film composite membranes of acid-hydrolyzed PIM-1</p> <p>Machawe Motta, University of South Africa A Photo Membrane Bioreactor with a Self-forming Catalyst Layer for Nutrient and Pharmaceutical Removal from Municipal Wastewater</p> <p>Yun Chul Woo, Korea Institute of Civil Engineering and Building Technology, INVITED Thin film composite reverse osmosis membranes via co-solvent assisted interfacial polymerization</p>	<p>Session 2d Gas Separation Location: Room 132 Chairs: David Wang and Colin Scholes</p> <p>David Wang, The University of Sydney, INVITED Highly selective polyetherimide membranes via polymer nanocoordination for gas separation</p> <p>Colin Scholes, The University of Melbourne, INVITED Toxic gas separation through novel membrane mechanisms.</p> <p>Moutaz El-Okazy, The University of Melbourne The CO2/CH4 separation performance of perfluorobutylene vinyl ether polymeric membranes in the presence of toluene and xylene.</p> <p>Gholamreza Sarrigan, The University of Sydney Understanding the effects of multilayer assembly of tubular alumina-supported polyetherimide membranes on H2, CO2 and N2 separation performance</p> <p>Simon Smart, University of Queensland, INVITED Net Zero Emission Futures: What does it look like for Australia and what membrane technologies will we need?</p> <p>Ewan McAdam, Cranfield University, INVITED How temperature and pressure mediate mass transfer in microporous and dense-skin hollow fibre membrane contactors for CO2 absorption</p>
17:30	<p>Online Session 1 Location: ZOOM Chairs: Andrea Merenda and Filicia Wikaksana Chun-Wei Wu, California Institute of Technology Tape/Freeze-cast PVDF-IPF/Silica Composite Membranes for Battery Separators</p> <p>Erlin Madeni, Suleyman Demirel University Cerium Oxide Nanoparticles Coated Ceramic Membranes</p> <p>Syed Shah, Kyungpook National University Novel and robust functional composite biomaterial for membrane biofouling control in anaerobic membrane bioreactor</p> <p>Ranqiang Xu, Nanjing University Oriented UiO-67 Metal-Organic Framework Membrane with Fast and Selective Lithium-Ion Transport</p> <p>Maria Grazia De Angelis, University of Edinburgh, INVITED Exploring sustainable alternatives for gas separation: testing and molecular screening of membranes from biopolymers and green solvents</p> <p>Hao Zhang, Monash University Engineering Stable Nanochannels in MOF Membranes for Water Purification</p> <p>Sudhaya Mahya, Indian Institute of Technology Zwitterionic microgel based anti-bio fouling smart membranes for tunable water filtration and molecular separation</p> <p>Tao He, Chinese Academy of Sciences, KEYNOTE Extrinsic compensation: key component for separation of layer-by-layer Nanofiltration membranes</p>			

Tuesday 6th December			
8.00	Registration Location: Foyer G81		
9.00	Prof. Tongwen Xu (University of Science and Technology of China) Location: G81 Main Conference room Chairs: Prof Xiwang Zhang		
10.00	Morning Tea		
10.30	<p>Session 3a Modelling and Processes Location: Room G81 Chairs: Ho Kyong Shon and Colin Scholes Ho Kyong Shon, University of Technology Sydney, KEYNOTE Nutrient Recovery in a Circular Economy using Membrane Technology</p> <p>Jia Wei Chew, Nanyang Technological University, INVITED Understanding membrane fouling by proteins through molecular dynamics simulations and optical coherence tomography</p> <p>Shaoheng Ma, CSIRO Effect of different draw solutions on concentration polarisation effect in the forward osmosis process: theoretical modelling and experimental validation</p> <p>Quang Qham, University of Melbourne Separation of water/methanol vapour from hydrogen and carbon dioxide gas at high temperature through polyimide membranes</p>	<p>Session 3b Membrane Applications Location: Room G03 Chairs: Edward Nzumalo and David Wang Edward Nzumalo, University of South Africa, KEYNOTE Opportunities for membrane technology in Africa</p> <p>Behnam Ghalei, Kyoto University, INVITED REMOTE** Nano-Featured Gas Separation Membranes for Energy and Environmental Applications</p> <p>Hanwei Yu, University of Technology Sydney Selective lithium extraction from brines using MOF-based membrane capacitive deionization</p> <p>Sarper Sarp, Swansea University INVITED REMOTE** Analysis of Synthetic Micro and Nano Particles and Chemical Contaminants using Organic and Inorganic Nanofiltration Membranes</p>	<p>Session 3c Membrane Materials Location: Room 101 Chairs: Amir Razmjou and Xiwang Zhang</p> <p>Amir Razmjou, Edith Cowan University, INVITED Membranes for Direct Lithium Extraction (DLE)</p> <p>Youwei Jia, The University of Melbourne Power from salt: effect of temperature on hydrogen generation from reverse electrodialysis</p> <p>Hashim Khan, The University of Sydney Designing bimetallic, Fenton-like, cobalt-based catalysts on silica for advanced oxidation membrane processes</p> <p>Xing Yang, KU Leuven INVITED REMOTE** Development of selective electrodialysis membranes in ion resource recovery</p>
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12.00	Lunch		
13.00	<p>Session 4a Membrane Modeling and Materials Location: Room G81 Chairs: Benny Freeman and Feng Li Benny Freeman, The University of Texas at Austin, KEYNOTE Emerging Basic Science Questions regarding Water and Ion Transport in Polymers for Water Purification and Resource Recovery</p> <p>Feng Li, National University of Singapore High recovery, energy efficient wastewater desalination using highly permeable and anti-fouling hollow fiber membrane: scaling-up from lab to pilot</p> <p>Luis Esteves, University of Duisburg-Essen Simulation of porous membrane boundary layer in a multi-phase fluid flow</p> <p>Hoseok Jang, Inha University Evaluation of Dominant Fouling Mechanisms Formed in Porous Membrane treating Greywater using Blocking Laws</p> <p>Wellidone Moyo, University of South Africa Modeling the antifouling properties of atomic layer deposition surface-modified ceramic nanofiltration membranes</p>	<p>Session 4b Membrane Applications Location: Room G03 Chairs: Mikel Duke and Elvis Saric</p> <p>Sandra Aristizabal, King Abdullah University of Science and Technology Closed-Loop Processing of Solvent-resistant Membranes from Commercially Available Polymers</p> <p>Hari Balakrishnan, Deakin University 3D printing for porous membrane integrated miniaturized fluidic devices</p> <p>Chen Wang, University of Technology Sydney Novel organic solvent nanofiltration membrane based on inkjet printing-assisted layer-by-layer assembly</p> <p>Shiyang Huang, The University of New South Wales Developing a novel three-dimensional printing approach for polyamide-based thin-film composite membranes by electrospray technique</p> <p>Sanghyun Jeong, Pusan National University Fabrication of joule-heating electrospun polymeric sorbent to improve adsorption/desorption performance of high-viscosity oil</p>	<p>Session 4c Materials Location: Room 101 Chairs: Zongli Xie and Rakesh Joshi Zongli Xie, CSIRO, KEYNOTE Nanomaterials Enhanced Mixed Matrix Membranes for Efficient Separation of Aqueous Mixtures</p> <p>Derrick Ng, CSIRO Fabrication of dual-layer hollow fibre membranes with intrusion anchored structure for highly stable separation performance in DCMO</p> <p>Seonguk Ha, Pusan National University Optimizing membrane distillation process for regeneration of high concentration liquid desiccants</p> <p>Seongeom Jeong, Pusan National University Improvement of membrane distillation performance with 3D printed spacer containing carbon nanotubes</p> <p>Mahdi Shahrooz, Victoria University Effect of surface interactions on oil adhesion and wetting resistance of poly(acrylic acid)-grafted PVDF membranes in membrane distillation</p>
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14.50	Afternoon Tea Registration Location: Foyer G81		
15.20	<p>Session 5a Materials and Demonstrations (Online) Location: Room G81 Chairs: Mikel Duke and Ludovic Dumez Tzzy Chong, Nanyang Technological University, KEYNOTE REMOTE** High Recovery Water Reclamation Process</p> <p>Chuyang Tang, University of Hong Kong, KEYNOTE REMOTE** Transport phenomena in thin film composite membranes with an interlayer (TFNI)</p> <p>Jianquan Luo, Chinese Academy of Sciences, INVITED REMOTE** Reversing divalent salt and small organics retentions of polyamide nanofiltration membrane by regulating charge distribution</p> <p>Roqaya Ismail, Khalifa University REMOTE** Zwitterionic Polydopamine as an Antifouling Agent in Ultrafiltration System</p> <p>Tao Hua, Nanyang Technological University REMOTE** Organic matter removal for reverse osmosis fouling mitigation: from lab prototype to pilot plant</p>	<p>Session 5b Miscellaneous Membranes Location: Room G03 Chairs: Huacheng Zhang and Michel Lefebvre Uwe Beuscher, W. L. Gore & Associates, KEYNOTE REMOTE** Membrane Applications for Flue Gas Remediation</p> <p>Huacheng Zhang, RMIT, INVITED Enhanced gating effects in sub-nanofluidic channels</p> <p>Michel Lefebvre, Steripak Pty Ltd Recent Applications of Fractal Geometry to Membrane Technology</p> <p>Emile Cornelissen, Ghent University, INVITED REMOTE*** Using Natural Virus Markers to Safeguard the Integrity of Membrane Plants</p>	<p>Session 5c Materials Location: Room 101 Chair: Simon Smart and Li Gao Wanlin Jin, Nanjing Tech University, KEYNOTE REMOTE** Exploring novel separation-sensing membrane for clinical diagnosis</p> <p>Parashuram Kalleem, Khalifa University Environmentally friendly amino sulfonic acid zwitterion grafted 2D MXene (Ti3C2Tx) robust composite membranes with improved permeability and self-cleaning properties</p> <p>MhdAmmar Hafiz, Qatar University Evaluating the performance of forward osmosis as a pre-treatment process for multi-stage flash seawater desalination at a pilot scale</p> <p>Masoumeh Zargar, Edith Cowan University Peculiar membranes for efficient removal of microplastics from water</p> <p>Joao Crespo, FCT-NOVA University of Lisbon, INVITED REMOTE** Protein fractionation by membrane processing: please be gentle</p>
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	Poster Session 1 Location: Room 101		

Wednesday 7th December				
Time				
8.00	Registration Location: Foyer G81			
9.00	Plenary 4 Dr. Lidieta Giorno (University of Calabria) Location: G81 Main Conference room Chair: Dr Zongli Xie			
10.00	Morning Tea			
10.30	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 6a Applications Location: G81 Chair: Elvis Saric and Kecheng Guan Elvis Saric, Veolia Environmental Services, INVITED Application of NF Membranes to Rebuffer Alkalinity in Treated Water for a Produced Water Treatment Process Maedeh Nadimi, Victoria University Membrane distillation of high-strength saline dye solution: effects of salting-out, solution chemistry, and oxidation Fanmengjing Wang, Monash University Homochiral polymer-graphene oxide nanocomposite membrane for enantioselective separation Kecheng Guan, Kobe University Composite membrane structure with asymmetric wetting properties for membrane distillation </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 6b Gas Separation and Materials Location: G03 Chairs: Noredidine Ghaffour and Aaron Thornton Noredidine Ghaffour, King Abdullah University of Science and Technology, INVITED Novel feed spacer designs and membrane cleaning using carbon dioxide nucleation for (bio)fouling control Aaron Thornton, CSIRO, INVITED Discovering direct air capture materials using computational modelling Seungju Kim, The University of Melbourne Thermally Rearranged Nanofibre Membranes for CO2 Stripping Yi-Chen Lin, The University of Sydney High nitrogen impermeability of polyetherimide (PEI) membrane via interfacial nanoconfinement effect </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 6c Materials Location: Room 101 Chairs: Ludovic Dumee and Matthew Hill Matthew Hill, Monash University, KEYNOTE Reversible Oxygen Sorption in MOFS Ludovic Dumee, Khalifa University, INVITED Photo-responsive functional membrane-adsorbents for water desalination - advances and challenges Noel Kaleekkal, National Institute of Technology Calicut Evaluating the role of nanomaterials in tuning the performance of hydrophobic membranes for membrane distillation Yumin Oh, Pusan National University Optimization of gold nanoparticle-plasmonic membrane fabrication for membrane distillation process </td> </tr> </table>	Session 6a Applications Location: G81 Chair: Elvis Saric and Kecheng Guan Elvis Saric, Veolia Environmental Services, INVITED Application of NF Membranes to Rebuffer Alkalinity in Treated Water for a Produced Water Treatment Process Maedeh Nadimi, Victoria University Membrane distillation of high-strength saline dye solution: effects of salting-out, solution chemistry, and oxidation Fanmengjing Wang, Monash University Homochiral polymer-graphene oxide nanocomposite membrane for enantioselective separation Kecheng Guan, Kobe University Composite membrane structure with asymmetric wetting properties for membrane distillation	Session 6b Gas Separation and Materials Location: G03 Chairs: Noredidine Ghaffour and Aaron Thornton Noredidine Ghaffour, King Abdullah University of Science and Technology, INVITED Novel feed spacer designs and membrane cleaning using carbon dioxide nucleation for (bio)fouling control Aaron Thornton, CSIRO, INVITED Discovering direct air capture materials using computational modelling Seungju Kim, The University of Melbourne Thermally Rearranged Nanofibre Membranes for CO2 Stripping Yi-Chen Lin, The University of Sydney High nitrogen impermeability of polyetherimide (PEI) membrane via interfacial nanoconfinement effect	Session 6c Materials Location: Room 101 Chairs: Ludovic Dumee and Matthew Hill Matthew Hill, Monash University, KEYNOTE Reversible Oxygen Sorption in MOFS Ludovic Dumee, Khalifa University, INVITED Photo-responsive functional membrane-adsorbents for water desalination - advances and challenges Noel Kaleekkal, National Institute of Technology Calicut Evaluating the role of nanomaterials in tuning the performance of hydrophobic membranes for membrane distillation Yumin Oh, Pusan National University Optimization of gold nanoparticle-plasmonic membrane fabrication for membrane distillation process
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13.00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 7a Water Location: G81 Chairs: Johannes Vrouwenvelder and Mihail Barboiu Johannes Vrouwenvelder, KAUST, KEYNOTE Reverse Osmosis Biofouling: Emerging Assessment Tools and Control Mihail Barboiu, Institut Europeen des Membranes, KEYNOTE Artificial Water Channels - towards Biomimetic Membranes for Desalination Arash Zamyadi, The University of Melbourne Assessing Algae-based Desalination Technologies Using WaterVal National Validation Framework Ralph Gonzales, Research Center for Membrane and Film Technology Amine grafting and quaternization of thin film composite membrane for osmotic ammonium enrichment and recovery from industrial wastewater Wangxi Fang, Chinese Academy of Sciences REMOTE** Hydrophilic Microporous Polymer Membranes with High Permselectivity for Ionic and Molecular Separations </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 7b Applications Location: G03 Chairs: Ranil Wickramasinghe and Sally El Maeragawi Ranil Wickramasinghe, University of Arkansas, KEYNOTE Promoting a circular economy through sustainable wastewater and agricultural residue management Tiezheng Tong, Colorado State University, INVITED REMOTE** A tale of two scales: The contrast behaviors and mitigation strategies of gypsum and silica scaling in membrane distillation Sally El Meragawi, Monash University High-Performance Nanofiltration Membranes from Polyphenol-Graphene Oxide Liquid Crystals Prepared Using Natural Extract Sena Yaltur, NX Filtration Resource recovery using direct nanofiltration membranes Maryse Drouin, Aix-Marseille University SIC membrane performances for marine scrubber water treatment </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 7c Materials Location: Room 101 Chairs: Joe da Costa and Rakesh Joshi Joe da Costa, The University of Queensland, KEYNOTE Membrane Percrystallisation of Mineral Brines, Food and Pharmaceutical Compounds Rakesh Joshi, University of New South Wales, INVITED Graphene oxide membranes for purification and separation Matthias Hesselmann, RWTH Aachen University Why membranes matter: Influence of the ion exchange membrane in holistic process optimization of electrochemical CO2 reduction Gongping Liu, Nanjing Tech University, INVITED REMOTE** New approach to fabricate PDMS thin-film composite membrane toward CO2 capture Shouliang Yi, US Department of Energy National Energy Technology Laboratory, INVITED Advanced Membranes for Selective Ion/Molecular Separation and Bio-electrochemical CO2 Conversion </td> </tr> </table>	Session 7a Water Location: G81 Chairs: Johannes Vrouwenvelder and Mihail Barboiu Johannes Vrouwenvelder, KAUST, KEYNOTE Reverse Osmosis Biofouling: Emerging Assessment Tools and Control Mihail Barboiu, Institut Europeen des Membranes, KEYNOTE Artificial Water Channels - towards Biomimetic Membranes for Desalination Arash Zamyadi, The University of Melbourne Assessing Algae-based Desalination Technologies Using WaterVal National Validation Framework Ralph Gonzales, Research Center for Membrane and Film Technology Amine grafting and quaternization of thin film composite membrane for osmotic ammonium enrichment and recovery from industrial wastewater Wangxi Fang, Chinese Academy of Sciences REMOTE** Hydrophilic Microporous Polymer Membranes with High Permselectivity for Ionic and Molecular Separations	Session 7b Applications Location: G03 Chairs: Ranil Wickramasinghe and Sally El Maeragawi Ranil Wickramasinghe, University of Arkansas, KEYNOTE Promoting a circular economy through sustainable wastewater and agricultural residue management Tiezheng Tong, Colorado State University, INVITED REMOTE** A tale of two scales: The contrast behaviors and mitigation strategies of gypsum and silica scaling in membrane distillation Sally El Meragawi, Monash University High-Performance Nanofiltration Membranes from Polyphenol-Graphene Oxide Liquid Crystals Prepared Using Natural Extract Sena Yaltur, NX Filtration Resource recovery using direct nanofiltration membranes Maryse Drouin, Aix-Marseille University SIC membrane performances for marine scrubber water treatment	Session 7c Materials Location: Room 101 Chairs: Joe da Costa and Rakesh Joshi Joe da Costa, The University of Queensland, KEYNOTE Membrane Percrystallisation of Mineral Brines, Food and Pharmaceutical Compounds Rakesh Joshi, University of New South Wales, INVITED Graphene oxide membranes for purification and separation Matthias Hesselmann, RWTH Aachen University Why membranes matter: Influence of the ion exchange membrane in holistic process optimization of electrochemical CO2 reduction Gongping Liu, Nanjing Tech University, INVITED REMOTE** New approach to fabricate PDMS thin-film composite membrane toward CO2 capture Shouliang Yi, US Department of Energy National Energy Technology Laboratory, INVITED Advanced Membranes for Selective Ion/Molecular Separation and Bio-electrochemical CO2 Conversion
Session 7a Water Location: G81 Chairs: Johannes Vrouwenvelder and Mihail Barboiu Johannes Vrouwenvelder, KAUST, KEYNOTE Reverse Osmosis Biofouling: Emerging Assessment Tools and Control Mihail Barboiu, Institut Europeen des Membranes, KEYNOTE Artificial Water Channels - towards Biomimetic Membranes for Desalination Arash Zamyadi, The University of Melbourne Assessing Algae-based Desalination Technologies Using WaterVal National Validation Framework Ralph Gonzales, Research Center for Membrane and Film Technology Amine grafting and quaternization of thin film composite membrane for osmotic ammonium enrichment and recovery from industrial wastewater Wangxi Fang, Chinese Academy of Sciences REMOTE** Hydrophilic Microporous Polymer Membranes with High Permselectivity for Ionic and Molecular Separations	Session 7b Applications Location: G03 Chairs: Ranil Wickramasinghe and Sally El Maeragawi Ranil Wickramasinghe, University of Arkansas, KEYNOTE Promoting a circular economy through sustainable wastewater and agricultural residue management Tiezheng Tong, Colorado State University, INVITED REMOTE** A tale of two scales: The contrast behaviors and mitigation strategies of gypsum and silica scaling in membrane distillation Sally El Meragawi, Monash University High-Performance Nanofiltration Membranes from Polyphenol-Graphene Oxide Liquid Crystals Prepared Using Natural Extract Sena Yaltur, NX Filtration Resource recovery using direct nanofiltration membranes Maryse Drouin, Aix-Marseille University SIC membrane performances for marine scrubber water treatment	Session 7c Materials Location: Room 101 Chairs: Joe da Costa and Rakesh Joshi Joe da Costa, The University of Queensland, KEYNOTE Membrane Percrystallisation of Mineral Brines, Food and Pharmaceutical Compounds Rakesh Joshi, University of New South Wales, INVITED Graphene oxide membranes for purification and separation Matthias Hesselmann, RWTH Aachen University Why membranes matter: Influence of the ion exchange membrane in holistic process optimization of electrochemical CO2 reduction Gongping Liu, Nanjing Tech University, INVITED REMOTE** New approach to fabricate PDMS thin-film composite membrane toward CO2 capture Shouliang Yi, US Department of Energy National Energy Technology Laboratory, INVITED Advanced Membranes for Selective Ion/Molecular Separation and Bio-electrochemical CO2 Conversion		
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15.20	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 8a Applications Location: G81 Chairs: Geoffrey Johnston-Hall and Andrea Merenda Geoffrey Johnston-Hall, DuPont, INVITED Energy Savings with Membrane Technologies in Wastewater Treatment Andrea Merenda, RMIT University, INVITED Catalytic membrane reactors: current challenges and future outlook in water treatment technologies Weonjung Sohn, University of Technology Sydney Membrane bioreactor and reverse osmosis hybrid process for a green fertiliser production Dongjin Sim, Pusan National University Removal of poly-and perfluorinated compounds using combined process of magnetic activated carbon and ceramic nanofiltration Kaiqiang He, Monash University Ultrathin carbon-nanoporous metal oxide composite molecular sieve membrane for hydrogen separation </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 8b Fouling Location: G03 Chairs: Stephen Gray and Filica Wicaksana Stephen Gray, Victoria University, KEYNOTE Membrane Processes for the Circular Economy Juyoung Lee, Kookmin University Control of Inorganic Fouling in Direct Contact Membrane Distillation by Membrane Vibration: Effect of Vibration Types Filicia Wicaksana, The University of Auckland, INVITED Membrane Fouling Mitigation with Water Hammer Mikel Duke, Victoria University Harnessing solar energy for sustainable water treatment by photocatalytic membranes: innovative developments overcoming practical limitations Yuan Liao, Nankai University, INVITED REMOTE** Mitigation of membrane biofouling via immobilizing Ag-MOFs on composite membrane surface for extractive membrane bioreactor </td> <td style="width: 33%; text-align: center; vertical-align: top;"> Session 8c Gas Separation Location: Room 101 Chairs: Ryan Lively and Qiang Fu Ryan Lively, Georgia Institute of Technology, KEYNOTE Membrane-based fractionation of complex mixtures Qiang Fu, University of Technology Sydney Polymeric Materials for Efficient Solar Vapour Generation Yiming Zhang, Massey University Mixed matrix membranes (MMMs) using an emerging metal-organic framework (MUF-15) for CO2 separation Muhammad Zulkifli, University of Queensland Metal Organic Framework Glass Composite Membranes for Gas Separation Nicholas Low, Monash University REMOTE** Pyro-layering Heterostructured Nanosheets as Molecular Sieving Membrane for Selective Hydrogen Transport </td> </tr> </table>	Session 8a Applications Location: G81 Chairs: Geoffrey Johnston-Hall and Andrea Merenda Geoffrey Johnston-Hall, DuPont, INVITED Energy Savings with Membrane Technologies in Wastewater Treatment Andrea Merenda, RMIT University, INVITED Catalytic membrane reactors: current challenges and future outlook in water treatment technologies Weonjung Sohn, University of Technology Sydney Membrane bioreactor and reverse osmosis hybrid process for a green fertiliser production Dongjin Sim, Pusan National University Removal of poly-and perfluorinated compounds using combined process of magnetic activated carbon and ceramic nanofiltration Kaiqiang He, Monash University Ultrathin carbon-nanoporous metal oxide composite molecular sieve membrane for hydrogen separation	Session 8b Fouling Location: G03 Chairs: Stephen Gray and Filica Wicaksana Stephen Gray, Victoria University, KEYNOTE Membrane Processes for the Circular Economy Juyoung Lee, Kookmin University Control of Inorganic Fouling in Direct Contact Membrane Distillation by Membrane Vibration: Effect of Vibration Types Filicia Wicaksana, The University of Auckland, INVITED Membrane Fouling Mitigation with Water Hammer Mikel Duke, Victoria University Harnessing solar energy for sustainable water treatment by photocatalytic membranes: innovative developments overcoming practical limitations Yuan Liao, Nankai University, INVITED REMOTE** Mitigation of membrane biofouling via immobilizing Ag-MOFs on composite membrane surface for extractive membrane bioreactor	Session 8c Gas Separation Location: Room 101 Chairs: Ryan Lively and Qiang Fu Ryan Lively, Georgia Institute of Technology, KEYNOTE Membrane-based fractionation of complex mixtures Qiang Fu, University of Technology Sydney Polymeric Materials for Efficient Solar Vapour Generation Yiming Zhang, Massey University Mixed matrix membranes (MMMs) using an emerging metal-organic framework (MUF-15) for CO2 separation Muhammad Zulkifli, University of Queensland Metal Organic Framework Glass Composite Membranes for Gas Separation Nicholas Low, Monash University REMOTE** Pyro-layering Heterostructured Nanosheets as Molecular Sieving Membrane for Selective Hydrogen Transport
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17.00				
18.30	Conference Dinner Location: Park Royal Monash			

Thursday 8th December																			
8.00	Registration Location: Foyer G81																		
9.00	Plenary 5 Tina Arrowood, DuPont REMOTE** Innovative Brine Concentration Membranes Enable Lower Cost MLD/ZLD Treatment Location: G81 Main Conference room Chairs: Dr Geoffrey Johnston-Hall																		
10.00	Morning Tea																		
10.40	<table border="1"> <thead> <tr> <th>Session 9a Applications Location: G03 Chairs: Aditya Sharma and Chi Cheng</th> <th>Session 9b Processes Location: G81 Chairs: Mark Mullett and Sui Zhang</th> <th>Session 9c Operation and Module Location: Room 101 Chairs: Xiwang Zhang and Muhammad Baig</th> </tr> </thead> <tbody> <tr> <td>Long Nghiem, University of Technology Sydney, KEYNOTE REMOTE** Electrochemical oxidation and UV irradiation to target organic foulants during pressure driven membrane operation</td> <td>Mark Mullett, Veolia Australia Technical and Innovation, KEYNOTE Application of nanofiltration for enhancing water recovery from mine tailing water: a case study</td> <td>Hassan Arafat, Khalifa University, KEYNOTE **REMOTE The evolving role of feed spacer in membrane systems – from passive bystander to active participant</td> </tr> <tr> <td>Aditya Sharma, Indian Institute of Technology Kanpur Investigating performance of Integrated Permeate Channel membranes for sewage treatment 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