

8th IWA Membrane Technology Conference & Exhibition for Water and Wastewater Treatment and Reuse

5 – 9 September 2017, Suntec Singapore International Convention & Exhibition Centre

CONFERENCE PROGRAMME

5 SEPTEMBER 2017 (TUESDAY)	
18.00 - 20.00	WELCOME RECEPTION Venue: Room 309-311, Suntec Singapore International Convention & Exhibition Centre
6 SEPTEMBER 2017 (WEDNESDAY)	
	CONFERENCE OPENING & PLENARY Venue: Room 300-302
09.00 - 09.20	Welcome Addresses: <i>Prof. How Yong Ng, Chair, IWA-MTC2017 Organising Committee and President, Environmental Engineering Society of Singapore</i> <i>Prof. Dr.-Ing. Franz-Bernd Frechen, Chair, IWA Membrane Technology Specialist Group</i> <i>Prof. Jiang Yong Hu, Director, Centre for Water Research, National University of Singapore</i>
09.20 - 09.40	Sponsors Addresses: <i>Mr. Brett Andrews, CEO, Memstar USA</i> <i>Mr. Siah Keng Boon, Chief Technology Officer, Sembcorp Industries Ltd</i>
09.40 - 10.10	Plenary 1: Unfinished voyage of quorum quenching MBR for biofouling control and energy savings: Let microorganisms handle their business <i>Professor (Emeritus) Chung-Hak Lee, Seoul National University, Republic of Korea</i>
10.10 - 10.40	Plenary 2: Applications of anaerobic membrane bioreactors in municipal wastewater treatment plants <i>Professor Wayne Parker, University of Waterloo, Canada</i>
10.40 - 11.10	Morning Break
	PLENARY & PANEL DISCUSSION Venue: Room 300-302
11.10 - 11.40	Plenary 3: Novel carbon materials with engineered structure and surface properties for capacitive deionization desalination <i>Professor Jieshan Qiu, Dalian University of Technology, China</i>
11.40 - 12.10	Plenary 4: Coupling of mass cultivation of microalgae with industrial wastewater treatment <i>Professor Ashok Pandey, Center of Innovative and Applied Bioprocessing, India</i>
12.10 - 12.40	Panel Discussion
12.40 - 14.00	Lunch

6 SEPTEMBER 2017 (WEDNESDAY)					
	SESSION 1: DRINKING WATER TREATMENT (1)	SESSION 2: DOMESTIC WASTEWATER TREATMENT AND REUSE (1)	SESSION 3: INDUSTRIAL WASTEWATER TREATMENT AND REUSE (1)	SESSION 4: DESALINATION (1)	SESSION 5: MEMBRANE FOULING MECHANISMS AND CONTROL (1)
	Venue: Room 300 Session Chairs: F.-B. Frechen (Germany), R. Nitisravut (Thailand)	Venue: Room 301 Session Chairs: P. Le-Clech (Australia), X.H Wen (China)	Venue: Room 302 Session Chairs: V. Frenkel (USA), S.Q. Xia (China)	Venue: Room 303 Session Chairs: S.K Hong (Republic of Korea), S.L. Ong (Singapore)	Venue: Room 304 Session Chairs: R. Ben Aim (France), B. Tang (China)
14.00 - 14.30	Keynote: Membranes and the Sustainable Development Goals <i>Prof. Franz-Bernd Frechen (Germany)</i>	Keynote: The development of validation guidelines for MBR in Australia <i>Prof. Pierre Le-Clech (Australia)</i>	Keynote: Membrane technologies: state of the art and areas of future innovation <i>Dr. Val Frenkel (USA)</i>	Keynote: Integrating new technologies to seawater reverse osmosis (SWRO) desalination for achieving H₂O minus CO₂ <i>Prof. Seungkwan Hong (Republic of Korea)</i>	Keynote: Membrane biofouling: prediction and control <i>Prof. Roger Ben Aim (France)</i>
14.30 - 14.50	Nanofiltration for surface water treatment - hydrodynamics and module configuration (MTC-066) <i>J. Winter, B. Barbeau, P.R. Bérubé (Canada)</i>	Ceramic membranes for re-use (MTC-018) <i>L. Ng, H. Shorney-Darby, J. Zheng, G. Galjaard (Singapore)</i>	Benefits of polymeric membranes in oil and gas produced water treatment (MTC-238) <i>E. Sutton-Sharp (France)</i>	Comparative efficiency of ultrafiltration pretreatment on different waters (MTC-060) <i>P. Buchta, D. Vial, R. Winkler, P. Berg (Germany)</i>	Finding the root causes of biofouling: Experimental evidence from pure-cultured sludge bacteria (MTC-039) <i>M. Naga Raju, Z. Zhou, F. Meng (China)</i>
14.50 - 15.10	Treatment of highly-colored surface water by combination of ion exchange and hybrid microfiltration membrane filtration system (MTC-200) <i>T. Miyoshi, Y. Takahashi, T. Suzuki, R. Nitisravut, C. Polprasert (Japan)</i>	Analysis on a nanofiltration demonstration project for producing high-quality reclaimed water (MTC-104) <i>P. Zhang, X. Wen, B. Wang, K. Yu, T. Xue (China)</i>	Challenges of industrial wastewater treatment using membrane bioreactors (MTC-323) <i>M. Tang, J. Liu (Singapore)</i>	Optimising the filtration process in AnMBR technology for sewage treatment (MTC-092) <i>A. Robles, E. Jiménez, F. Durán, J.B. Giménez, J. Arevalo, J. Vazquez-Padin, J. Serralta, F. Rogalla, A. Seco, J. Ferrer, J. Ribes (Spain)</i>	Fouling mechanism of membrane bioreactor (MBR) system operated under short solids retention time (SRT) (MTC-094) <i>A. Liu, S.L. Low, K.K. Ng, S.L. Ong, H.Y. Png, G. Tao, W.C.L. Lay, C-H. Wu, H.Y. Ng (Singapore)</i>
15.10 - 15.30	On pump-free membrane backwashing in remote areas (MTC-240) <i>B. Aumeier, S. Yüce, M. Wessling (Germany)</i>	From pilot to full scale: a review of flat-sheet ceramic MBR systems for used water treatment/water reuse (MTC-204) <i>S-H. Koh, J. DeCarolis, J. Lin, G. Tao, W-S Ang, K. Ong, M. Alom, W. Lay (Singapore)</i>	The extractive membrane bioreactor - a robust alternative for the treatment of industrial wastewater (MTC-136) <i>S. Goh, C.H. Loh, A.G. Fane, R. Wang, A.G. Livingston (Singapore)</i>	New pre-treatment of SWRO desalination for algal bloom control (MTC-103) <i>G. Cha, S.K. Hong (Republic of Korea)</i>	Effect of HRT on fouling in a flatsheet/hollow fiber submerged anaerobic membrane bioreactor (SAMBR) (MTC-167) <i>Q. Zhang, S. Singh, D.C. Stuckey (Singapore)</i>
15.30 - 15.50	Influence of different pre-treatments on the operation of ceramic microfiltration on humic-rich lake water (MTC-214) <i>E. Lavonen, K. Dahlberg, I. Bodlund, U. Eriksson (Sweden)</i>	Effect of dosing potassium ferrate on fouling characteristics, reclaimed water properties and performance in an integrated ceramic membrane reactor (MTC-041) <i>J. Liu, Z. Zhang, J. Li, X. Zhang (China)</i>	Water reclamation by ceramic and RO membrane at petrochemical plant (MTC-069) <i>E. Fong, R. Yin, H. Noguchi, T. Niwa, K.A. Kekre, C.C.S. Reddy (Singapore)</i>	Dependence of nanofiltration membrane charge on ionic environment and its effect on salt rejection (MTC-155) <i>Z. Wang, X.M. Wang (China)</i>	Modification of polysulfone (PSF) hollow fiber membrane (HF) with zwitterionic or charged polymers (MTC-331) <i>P. Wan, M. Bernards, B. Deng (USA)</i>
15.50 - 16.10	FeCN/SiO₂/PVDF composite membrane for selective removal of cesium (MTC-298) <i>Y. Yanq, S. Ding, L.A. Hou (China)</i>	Performance of a full-scale ceramic MBR system to treat domestic sewage (MTC-319) <i>T. Niwa, R. Yin, T. Watanabe, H. Noguchi, W.C.L. Lay, K.A. Ong, M. Alom (Singapore)</i>	Combination of advanced oxidation processes (AOPs) and membrane bioreactor (MBR) for industrial wastewater treatment: A case study in Jiangsu Province, China (MTC-324) <i>J. Zhang, J. Liu (Singapore)</i>	Chiotsan forward osmosis membrane for brackish water desalination (MTC-165) <i>Saiful, Marlina, Melisa (Indonesia)</i>	Transforming the morphology of activated biomass in a membrane bioreactor: A novel approach to mitigate membrane fouling? (MTC-290) <i>B. Tang, Y. Zheng, L. Bin, W. Zhang (China)</i>
16.10 - 16.30	Afternoon Break				
16.30 - 18.00	POSTER SESSION Venue: Room 309-311				

7 SEPTEMBER 2017 (THURSDAY)					
	SESSION 6: DRINKING WATER TREATMENT (2) Venue: Room 300 Session Chairs: P. Berube (Canada), H. Nagaoka (Japan)	SESSION 7: NOVEL MATERIALS AND CONFIGURATIONS IN MEMBRANE PROCESSES (1) Venue: Room 301 Session Chairs: M. Fidalgo (USA), V. Tarabara (USA)	SESSION 8: FORWARD OSMOSIS PROCESSES (1) Venue: Room 302 Session Chairs: H.K Shon (Australia), X.H. Wang (China)	SESSION 9: ENERGY AND RESOURCE RECOVERY USING MEMBRANE PROCESSES (1) Venue: Room 303 Session Chairs: J. Drewes (Germany), Y. Wibisono (Indonesia)	SESSION 10: MEMBRANE FOULING MECHANISMS AND CONTROL (2) Venue: Room 304 Session Chairs: Z.W Wang (China), H. Noguchi (Singapore)
08.30 - 09.00	Keynote: Rethinking the design of ultrafiltration membrane systems for drinking water treatment in small and remote communities <i>Prof. Pierre Berube (Canada)</i>	Keynote: Better membranes through materials: opportunities and challenges for inorganic membranes <i>A/Prof. Maria Fidalgo (USA)</i>	Keynote: Pros and cons of forward osmosis: current progress and update <i>A/Prof. Hokyong Shon (Australia)</i>	Keynote: Novel membrane applications for energy-efficient potable water reuse <i>Prof. Jörg Drewes (Germany)</i>	Keynote: Modifying membrane interface to control biofouling and/or enhance recalcitrant organic matter degradation <i>Prof. Zhiwei Wang (China)</i>
09.00 - 09.20	Comparisons of NOM fouling and cleaning of ceramic and polymeric membranes during water treatment (MTC-139) <i>M. Alresheedi, O.D. Basu, B. Barbeau (Canada)</i>	Membrane biofouling control using membrane blended with quaternary ammonium compound assembled on carbon material (MTC-017) <i>X. Zhang, M. Chen, Z. Wang (China)</i>	Mitigating salt passage by coupling surfactant and polyelectrolyte in forward osmosis (MTC-126) <i>D.T. Cao Ngoc, S.S. Chen (Chinese Taiwan)</i>	Anti-algal surface modification for membrane-based microalgae harvesting (MTC-207) <i>Y. Wibisono, W. Yandi (Indonesia)</i>	Standalone device to monitor and simulate membrane system performance (MTC-318) <i>F.K. Chwee, Y. Zhang, A.N. Phua (Singapore)</i>
09.20 - 09.40	Membrane ageing: understanding changing performance in water treatment plants (MTC-186) <i>S.J. Robison, P.R. Bérubé (Canada)</i>	Development and operation of a novel electrically-enhanced biomass concentrator reactor (E₂BCR) for wastewater treatment (MTC-097) <i>D. Cecconet, E. Omodeo Salè, A. Callegari, A.G. Capodaglio (Italy)</i>	Chemical cleaning protocols of TFC FO membranes fouled in AnOMBRs (MTC-009) <i>X.H. Wang, T.Z. Hu, X.F. Li (China)</i>	A membrane based platform for resource recovery from wastewater (MTC-168) <i>L.D. Nghiem (Australia)</i>	Early biofouling detection using fluorescently measured extracellular enzyme activity (MTC-045) <i>B. K. Khan, L. Fortunato, T. Leiknes (Saudi Arabia)</i>
09.40 - 10.00	Causes of negatively charged meso-particles formed in coagulation-membrane filtration hybrid process (MTC-278) <i>D. Ishikawa, Q. Ding, H. Yamamura, Y. Watanabe, K. Takiguchi (Japan)</i>	Atomic layer deposition route for synthesis of ceramic tight nanofiltration membranes (MTC-117) <i>R. Shang, L. Rietveld, B. Heijman (The Netherlands)</i>	Spiral wound forward osmosis membrane module for the osmotic dilution of seawater using wastewater (MTC-216) <i>J.E. Kim, S. Phuntsho, J.Y. Choi, H.K. Shon (Australia)</i>	Long-term effects of ferric and copper on methanogenesis in anaerobic membrane bioreactor treating starch wastewater (MTC-210) <i>D. Yu, J. Liu, J. Zhang, K. Li, C. Buhe, Y. Wei (China)</i>	How does the variation of biopolymer components impact UF fouling (MTC-062) <i>X. Zheng, T. Liu, D.Q. Wang, Z.J. Yang, W. Cheng, X. Cao, Y.Z. Zhang (China)</i>
10.00 - 10.20	Drinking water quality of membrane filtration: comparison to rapid sand filtration in samples from water distribution networks (MTC-252) <i>H. Nagaoka, K. Iizuka, D. Yoshida (Japan)</i>	High throughput dechlorination by nanocomposite membranes with graphene-supported Pd and Pd-Au catalysts (MTC-166) <i>C.A. Crock, R. Şengür-Taşdemir, I. Koyuncu, V.V. Tarabara (USA)</i>	Effects of applied pressures on active layer thickness and free volume of TFC forward osmosis (FO) membrane (MTC-284) <i>S.J. Kim, D. Han, M. Hwang (Republic of Korea)</i>	Comparison of different desalination technologies to treat condensate of a steam-injected gas turbine process (MTC-237) <i>A. Weigert, H. Rosentreter, T. Lutsch, E. Khan, A. Martin, U. Gampe, A. Lerch (Germany)</i>	Properties of biofouling layer formed by gram-negative and gram-positive bacteria on the nanofiltration membrane under different salinity conditions (MTC-113) <i>L.H. Kim, T.H. Chong (Saudi Arabia)</i>
10.20 - 10.40	Morning Break				

7 SEPTEMBER 2017 (THURSDAY)					
	SESSION 11: DOMESTIC WASTEWATER TREATMENT AND REUSE (2) Venue: Room 300 Session Chairs: K. Kimura (Japan), A. Karagunduz (Turkey)	SESSION 12: NOVEL MATERIALS AND CONFIGURATIONS IN MEMBRANE PROCESSES (2) Venue: Room 301 Session Chairs: I. Koyuncu (Turkey), A.G. Capodaglio (Italy)	SESSION 13: FORWARD OSMOSIS PROCESSES (2) Venue: Room 302 Session Chairs: I. Alexiou (United Kingdom), G.F Sun (Singapore)	SESSION 14: HYBRID MEMBRANE PROCESSES (1) Venue: Room 303 Session Chairs: K.-H. Choo (Republic of Korea), S.J. Khan (Pakistan)	SESSION 15: MEMBRANE FOULING MECHANISMS AND CONTROL (3) Venue: Room 304 Session Chairs: P. Huck (Canada), X.Q Shi (Singapore)
10.40 - 11.10	Keynote: An energy-efficient membrane bioreactor using baffles and scouring agents <i>A/Prof. Katsuki Kimura (Japan)</i>	Keynote: Nanofiltration membranes containing selective active layer <i>Prof. İsmail Koyuncu (Turkey)</i>	Keynote: Sustainable industrial environmental management: the role of carbon budgets and the circular economy <i>Prof. Ioannis Alexiou (United Kingdom)</i>	Keynote: Membrane electro-oxidizer (MEO): A new hybrid membrane system for advanced wastewater treatment <i>Prof. Kwang-Ho Choo (Republic of Korea)</i>	Keynote: Investigating biofiltration as a 'green' and sustainable pre-treatment to reduce membrane fouling <i>Prof. Peter Huck (Canada)</i>
11.10 - 11.30	Improving the efficiency of conventional septic tanks (CSTs) with dynamic membrane (MTC-043) <i>P.J. Quek, H.Y. Ng (Singapore)</i>	Flux-enhanced TFN NF membranes containing halloysite nanotubes for dye rejection (MTC-184) <i>T. Ormanci-Acar, M. Agtas, O. Mutlu-Salmanli, F. Celebi, T. Turken, D.Y. Imer, A. Altas, Y.Z. Menceoglu, S. Unal, I. Koyuncu (Turkey)</i>	A novel thin film composite forward osmosis membrane with efficient oil/water separation (MTC-026) <i>Z. Liu (Qatar)</i>	Performance evaluation of hybrid OMBR-MD using organic and inorganic draw solutions (MTC-059) <i>S.J. Khan, M.S. Siddique, M.A. Shahzad (Pakistan)</i>	Oxygen sensing planar optodes: insights into biofouling development in reverse osmosis membrane systems (MTC-055) <i>N. Farhat, M. Staal, S. Bucs, M. van Loosdrecht, J. Vrouwenvelder (Saudi Arabia)</i>
11.30 - 11.50	Resolving key challenges for recovering dissolved methane using membrane contactors (MTC-065) <i>A. Mcleod, A. Soares, V. Mathioudakis, P. Ncube, J. Cookney, B. Jefferson, E.J. McAdam (United Kingdom)</i>	High-performance RO membranes fabricated on the supports optimized by graphene oxide and controlled phase separation (MTC-152) <i>J. Lee, K. Goh, J. H. Low, T.-H. Bae, C.-H. Lee, P.-K. Park (Singapore)</i>	Forward osmosis for the treatment of effluents from dairy processing and automotive industry (MTC-196) <i>A. Haupt, A. Lerch (Germany)</i>	Development of Forward Osmosis System Analysis (FOSA) software for the optimum design and operating conditions (MTC-325) <i>S.M. Ali, J.E. Kim, S. Phuntsho, H.K. Shon (Australia)</i>	Time-resolved monitoring of biofouling development using optical coherence tomography (OCT) (MTC-056) <i>L. Fortunato, S. Jeong, T. Leiknes (Saudi Arabia)</i>
11.50 - 12.10	Membrane hydrodynamic conditions to achieve energy neutral sewage treatment in a granular anaerobic membrane bioreactor (MTC-081) <i>K. Wang, A. Soares, B. Jefferson, E.J. McAdam (United Kingdom)</i>	Preparation of alumina-zirconia ceramic nanofiltration (NF) membrane for the removal of uranium (MTC-220) <i>Y.K. Chung, M.Y. Lee, Y.J. Kim, H.S. Park, S. Kang (Republic of Korea)</i>	Forward osmosis in copper mining applications: water recovery and heavy metal rejection from acid mine drainage (MTC-090) <i>B. Vital, D. Jeison, J.C. Ortega-Bravo (Chile)</i>	Pilot demonstration of 90% recovery NEWater process using RO-EDR hybrid technology (MTC-084) <i>B. Mallampati, G. Gunasheela, N. E. Moe, A. Lee, J. Barber, K. Irwin (Singapore)</i>	Dynamic behavior of synergistic fouling on nanofiltration membrane during advanced treatment of sewage secondary effluent (MTC-148) <i>M. Li, W. Lin, K. Xiao, X. Wang, X. Huang (China)</i>
12.10 - 12.30	Effect of feed pH on soluble microbial products (SMPs) in a submerged anaerobic membrane bioreactor (MTC-088) <i>C. Kunacheva, Y.N.A. Soh, D.C. Stuckey (Singapore)</i>	Preparation of interconnected biomimetic PVDF-CTFE membrane by phase inversion strategy (MTC-235) <i>L. Zheng, J. Wang, Z. Wu, Y. Wei (China)</i>	New industrial application of forward osmosis: precious metal recovery (MTC-116) <i>G. Gwak, D.I. Kim, J.A. Lim, S.K. Hong (Republic of Korea)</i>	Integrated hollow fiber nanofiltration membrane-calcite contactor process for domestic groundwater treatment (MTC-178) <i>M. Haddad, P.R. Bérubé, T. Ohkame, N. Taniguchi, B. Barbeau (Canada)</i>	Fouling studies of EDR membranes in high recovery IMS (MTC-057) <i>W.Z. Chua, R. Mallampati, G. Gunasheela, H. Ramanan, H.Y. Ng (Singapore)</i>
12.30 - 12.50	Combination of microfiltration membrane with bioelectrodialysis reactor for advanced wastewater purification (MTC-174) <i>K. Zug, F. Liu, P. Liang, X. Zhang, X. Huang (China)</i>	Novel biofilm resistant nanofibrous membranes for water treatment applications (MTC-289) <i>V. Anand Ganesh, B. Kundukad, S. Radhakrishnan, E. Makhija, S. Ramakrishna, K. Van Vliet (Singapore)</i>	Aquaporin Inside™ Forward Osmosis membrane in industrial applications (MTC-044) <i>G. Sun (Singapore)</i>	Greenhouse gas emissions from membrane bioreactors: analysis of a two-year survey (MTC-160) <i>G. Mannina, M. Capodici, A. Cosenza, D. Di Trapani (Italy)</i>	Gravity-driven membrane filtration for advanced wastewater treatment: filtration performance and fouling characteristics (MTC-283) <i>Y. Wang, L. Fortunato, S. Jeong, T. Leiknes (Saudi Arabia)</i>
12.50 - 13.50	Lunch IWA Specialist Group General Assembly (13.20-13.50) - Room 300				

7 SEPTEMBER 2017 (THURSDAY)					
	SESSION 16: DOMESTIC WASTEWATER TREATMENT AND REUSE (3) Venue: Room 300 Session Chairs: X. Huang (China), P. Saikaly (Saudi Arabia)	SESSION 17: MEMBRANES FOR EMERGING POLLUTANTS REMOVAL Venue: Room 301 Session Chairs: L.D. Nghiem (Australia), C. Coetsier (France)	SESSION 18: FORWARD OSMOSIS PROCESSES (3) Venue: Room 302 Session Chairs: H.K Shon (Australia), W.-H. Kuan (Chinese Taiwan)	SESSION 19: DESALINATION (2) Venue: Room 303 Session Chairs: S. Vigneswaran (Australia), C.K. Lee (Republic of Korea)	SESSION 20: MEMBRANE FOULING MECHANISMS AND CONTROL (4) Venue: Room 304 Session Chairs: H. Vrouwenvelder (Saudi Arabia), O. Basu (Canada)
13.50 - 14.20	Keynote: Practice on optimization and energy saving in large-scale MBR plants for municipal wastewater treatment <i>Prof. Xia Huang (China)</i>	Keynote: Micropollutant removal by membrane separation: evaluation, modelling and full scale monitoring <i>Prof. Long Duc Nghiem (Australia)</i>	Keynote: Osmotic membrane bioreactor for wastewater treatment and reuse <i>Mr. Nirenkumar Pathak (Australia)</i>	Keynote: Integrated fractional-submerged membrane distillation with crystallization for seawater brine treatment <i>Prof. Saravanamuth Vigneswaran (Australia)</i>	Keynote: Biofouling of spiral wound membrane systems: recent insights and future research directions <i>Prof. Hans Vrouwenvelder (Saudi Arabia)</i>
14.20 - 14.40	Dual MBR - CAS concept: an attractive technology to extend a WWTP? (MTC-027) <i>A. Fenu, K. Moons, N. Hellinck, M. Weemaes, G. Parmentier, I. Boonen (Belgium)</i>	PPCPs removal by a process combining ozonation with ceramic membrane (MTC-031) <i>Y. Tan, Z. Zhang, X. Fan, X. Zhang (China)</i>	Performance and microbial community changes in forward osmosis membrane combined with anaerobic bioreactor for sewage treatment (MTC-188) <i>Y. Gao, P. Liang, X. Zhang, X. Huang (China)</i>	Fabrication, optimization and application of superhydrophobic PDMS/PMMA membrane for membrane distillation (MTC-030) <i>L.-F. Ren, F. Xia, J. Shao, X. Zhang, J. Li (China)</i>	Mitigation of membrane fouling caused by biopolymers by application of ultrafiltration (MTC-212) <i>K. Kume, K. Shikato, K. Kimura (Japan)</i>
14.40 - 15.00	Alternative approach to improve operating flux of MBR (MTC-070) <i>H. Noguichi, E. Fong, Y. Nakamura, T. Niwa, Y. Fukuzaki, B. Wett, G. Tao (Singapore)</i>	Tertiary treatment of micropollutants using layer by layer-made nanofiltration membranes (MTC-037) <i>S.M. Abtahi F, S. Ilyas, C.J. Cassan, W.M. de Vos, C. Albasí (France)</i>	Biogas production from concentrated municipal sewage by forward osmosis, micro and ultrafiltration (MTC-107) <i>J.C. Ortega-Bravo, J.A. Pavez, V. Hidalgo, I.E. Reyes-Caniupán, D. Jeison (Chile)</i>	Fabrication of electrospun PVDF-PTFE composite nanofibrous membranes for membrane distillation (MTC-185) <i>B. Ozbey-Unal, E. Gezmis, D.Y. Imer, B. Keskinler, I. Koyuncu (Turkey)</i>	The influence of granular media on membrane fouling in submerged hollow-fiber fluidized membrane reactor for wastewater treatment (MTC-287) <i>M. Aslam, A. Charfi, H. Jang, E. Park, J. Kim (Republic of Korea)</i>
15.00 - 15.20	A porous polymer-based hollow fiber cathode for simultaneous recovery of energy and clean fresh water from wastewater (MTC-120) <i>K. Katuri, N. Bettahalli, X. Wang, G. Matar, S. Chisca, S. Nunes, P.E. Saikaly (Saudi Arabia)</i>	Reactive electrochemical membrane for the removal of micropollutants from water (MTC-190) <i>C. Trellu, C. Coetsier, J.-C. Rouch, S. Raffy, M. Cretin, C. Caussereand (France)</i>	Forward osmosis process: comparing hollow fiber membrane with flat membrane for hydrolyzed stale urine treatment (MTC-226) <i>J. Li, J. Pan, C. Wang (China)</i>	Direct integration of solar heating within a VMD module: design, evaluation & optimization (MTC-285) <i>Q. Ma, A. Ahmadi, C. Cabassud (France)</i>	Quorum quenching and backwashing approaches for biofouling control in submerged membrane bioreactor (MTC-303) <i>S.J. Khan, H.Y. Abdullah, C.H. Lee (Pakistan)</i>
15.20 - 15.40	Membrane distillation (MD) for improving water recovery in wastewater reclamation plant (WRP) (MTC-312) <i>G. Naidu, Y. Choi, S. Vigneswaran (Australia)</i>	Degradation kinetic of phenanthrene by <i>Rhodococcus zopfii</i> with natural biofilm (MTC-245) <i>R. Mohd-Towel, S. Abdul-Talib, A. Amir (Malaysia)</i>	Integration of forward osmosis in the treatment of sewage by <i>Chlorella vulgaris</i> (MTC-272) <i>M. Larronde-Larretche, X. Jin (United Kingdom)</i>	Optimisation of solar thermal driven seawater membrane distillation desalination using simulation (MTC-162) <i>H.C. Duong, L.D. Nghiem (Australia)</i>	Fouling indices and resistance in series for quantification of NOM fouling in submerged membrane systems (MTC-140) <i>M. Alresheedi, O.D. Basu (Canada)</i>
15.40 - 16.00	Effects of Short Solids Retention Time (SRT) on the nutrient removal performance of Membrane Bioreactor (MBR) (MTC-093) <i>A. Liu, S.L. Low, K.K. Ng, S.L. Ong, H.Y. Png, G. Tao, W.C.L. Lay, H.Y. Ng (Singapore)</i>	Micropollutants rejection comparison of nanofiltration and reverse osmosis membranes: pilot scale study (MTC-119) <i>K. Kecili, G. Cotton, C. Feliers, V. Heim (France)</i>	Developing energy-efficient seawater desalination processes by integrating forward osmosis membranes (MTC-292) <i>J.H. Low, C.C.M. Heng, J.H. Oh, S.K. Kim, M. Perty, T.-H. Bae (Singapore)</i>	Study of thermal energy efficiency of hollow fiber membrane modules in direct contact membrane distillation (DCMD) (MTC-315) <i>Y.K. Park, J.H. Choi, Y.H. Shin, Y.J. Choi, S.H. Lee (Republic of Korea)</i>	Advanced oxidation processes for organic fouling removal (MTC-132) <i>L. De Angelis, M. Fidalgo de Cortalezzi (USA)</i>
16.00 - 16.20	Afternoon Break				

7 SEPTEMBER 2017 (THURSDAY)					
	SESSION 21: DRINKING WATER TREATMENT (3) Venue: Room 300 Session Chairs: P. Berg (Germany), F. Xiao (China)	SESSION 22: ENERGY AND RESOURCE RECOVERY USING MEMBRANE PROCESSES (2) Venue: Room 301 Session Chairs: C. Cabassud (France), E.J. McAdam (United Kingdom)	SESSION 23: INDUSTRIAL WASTEWATER TREATMENT AND REUSE (2) Venue: Room 302 Session Chairs: E. Cornelissen (The Netherlands), A. An (Hong Kong)	SESSION 24: PILOT SCALE MBR STUDIES Venue: Room 303 Session Chairs: H.D. Zhou (Canada), H.Y. Ng (Singapore)	SESSION 25: MEMBRANE FOULING MECHANISMS AND CONTROL (5) Venue: Room 304 Session Chairs: D. Stuckey (Singapore), Y.Y Xiao (China)
16.20 - 16.50	Keynote: Innovations and trends in water treatment with ultrafiltration membranes <i>Dr. Peter Berg (Germany)</i>	Keynote: Membrane-based processes for sea water desalination assisted by solar energy for remote areas: state of art and perspectives <i>Prof. Corinne Cabassud (France)</i>	Keynote: Does nanotechnology increase the performance of high pressure membranes? <i>Prof. Emile Cornelissen (The Netherlands)</i>	Keynote: Development of Membrane Aerated Biofilm Reactor (MABR) processes in wastewater treatment <i>Prof. Hongde Zhou(Canada)</i>	Keynote: Membrane fouling in anaerobic membrane bioreactors: some new insights <i>Prof. David C. Stuckey (Singapore)</i>
16.50 - 17.10	Understanding the mechanism of fouling behaviours in coagulation-UF membrane filtration process (MTC-114) <i>P. Xiao, F. Xiao (China)</i>	Rethinking ammonia recovery through antisolvent enabled membrane assisted crystallisation (MTC-046) <i>H. Sakar, A.J. Mcleod, E.J. McAdam (United Kingdom)</i>	Treatment of electroplating wastewater by a short flow ceramic UF membrane process (MTC-016) <i>Y. Peng, Z. Zhang, X. Fan, X. Zhang (China)</i>	Semi-pilot SMBR treatment of flowback waters: fouling characteristics and mitigation (MTC-127) <i>O.K. Abass, X. Chen, K.S. Zhang (China)</i>	Comparison of different quorum quenching bacteria as a solution for membrane biofouling (MTC-153) <i>B. Yavuztürk Gül, D. Imer, P. Park, I. Koyuncu (Turkey)</i>
17.10 - 17.30	Different points for optimal coagulation conditions to control irreversible microfiltration and ultrafiltration membrane fouling (MTC-201) <i>Q. Ding, H. Yamamura, T. Meyn, Y. Watanabe (Japan)</i>	Development of a functionalized membrane for phosphate recovery from water (MTC-150) <i>A. Hafuka, K. Furuya, H. Yamamura, H. Satoh, Y. Watanabe (Japan)</i>	Engineering the re-entrant hierarchy and surface energy of PVDF membrane for Industrial WW treatment and reuse using membrane distillation (MTC-330) <i>K.J. An (Hong Kong)</i>	Long term demonstration test of Low Energy No Aeration (LENA) MBR in water reclamation plant (MTC-175) <i>W. Lee, J. Ho, G. Lee, H. Roh (Republic of Korea)</i>	Quorum quenching for biofouling control in anaerobic membrane bioreactors (AnMBR) (MTC-180) <i>Y. Xiao, C.Y. Eng, Y. Zhou (China)</i>
17.30 - 17.50	Virus removal by coagulation-microfiltration with high-basicity polyaluminum chloride (MTC-260) <i>N. Shirasaki, T. Matsushita, Y. Matsui, K. Murai (Japan)</i>	Direct membrane filtration (DMF) of municipal wastewater by ceramic flat-sheet membranes (MTC-209) <i>M. Kato, K. Kimura (Japan)</i>	Jet-loop reactor with cross-flow ultrafiltration membrane system for treatment of olive mill wastewater (MTC-192) <i>B. Ribeiro, I. Torrado, L. Baeta-Hall, S. DiBerardino, S.M. Paixão, M. Rusan, A.R.B. Amer, S. Zuraiqi, A. Eusébio (Portugal)</i>	Vibratory shear enhanced hollow fiber membrane module in a pilot-scale MBR (MTC-191) <i>B. Kaya, N. Tiro, H. Özgün, M. Evren Erşahin, O. Atilla Arıkan, N. Özgü Yiğit, M. Kitış, I. Koyuncu (Turkey)</i>	Efficient dosing of microbial quorum quenchers for biofouling control in MBRs (MTC-271) <i>T. Iqbal, K. Lee, K.H. Choo, C.H. Lee (Republic of Korea)</i>
19.00 - 22.00	CONFERENCE DINNER Venue: S.E.A Aquarium at Resorts World Sentosa				

8 SEPTEMBER 2017 (FRIDAY)					
	SESSION 26: DOMESTIC WASTEWATER TREATMENT AND REUSE (4) Venue: Room 300 Session Chairs: J.H. Kim (Republic of Korea), C. Visvanathan (Thailand)	SESSION 27: MEMBRANES AND SLUDGE MANAGEMENT Venue: Room 301 Session Chairs: G. Pearce (United Kingdom), S. Di Berardino (Portugal)	SESSION 28: MEMBRANE OPERATION AND CHARACTERIZATION Venue: Room 302 Session Chairs: G. Korshin (USA), X. Zheng (China)	SESSION 29: PROCESS MODELING AND SIMULATION Venue: Room 303 Session Chairs: A. Lerch (Germany), G. Mannina (Italy)	SESSION 30: REVERSE OSMOSIS PROCESSES Venue: Room 304 Session Chairs: S. Gray (Australia), K. Xiao (China)
08.30 - 09.00	Keynote: Biofouling and organic removal efficiency with cost-effective scouring beads in anaerobic fluidized bed ceramic membrane bioreactor for low-strength wastewater treatment <i>Prof. Jeonghwan Kim (Republic of Korea)</i>	Keynote: Membrane filtration market trends based on a comprehensive reference list survey <i>Dr. Graeme Pearce (United Kingdom)</i>	Keynote: Interactions between metachromatic probe and compounds associated with membrane fouling <i>Prof. Gregory Korshin (USA)</i>	Keynote: A little journey through CFD applied in pressure and vacuum driven membrane filtration research & development <i>Prof. Andre Lerch (Germany)</i>	Keynote: High recovery reverse osmosis processes <i>Prof. Stephen Gray (Australia)</i>
09.00 - 09.20	Longer SRT increases the abundance of antibiotic resistance genes in A²O-MBR without selective pressure (MTC-219) <i>J. Zhang, M. Yang, M. Liu, L. Zheng, D. Yu, Z. Cheng, M. Chen, Y. Wei (China)</i>	Combining membrane and anaerobic digestion in CIP dairy wastewater processing (MTC-161) <i>S. Di Berardino, D. Francisco, G. Christoph (Portugal)</i>	Effect of eccentric location of rotating membranes in MBR (MTC-118) <i>L. Sørensen, T.R. Bentzen (Denmark)</i>	Shear stress induced by spherical cap bubble in immersed membrane systems (MTC-137) <i>E. Radaei, X. Liu, Y. Wang, G. Leslie, F. Trujillo (Australia)</i>	Improving reverse osmosis recovery through reverse flow technology (MTC-314) <i>A.N. Phua, K. Chua, F.K. Chwee (Singapore)</i>
09.20 - 09.40	Factors affecting nitrogen removal in baffled membrane bioreactor (B-MBR) (MTC-199) <i>T. Miyoshi, T. Tsumuraya, T.P. Nguyen, K. Kimura, Y. Watanabe (Japan)</i>	Membrane digester for sludge treatment of municipal WWTP - Benefits and drawbacks (MTC-189) <i>R. Lutze, M. Engelhart (Germany)</i>	Determining pore structure characterization of FO membrane supporting layer by CLSM (MTC-154) <i>H. Gong, Y. Zhang, Q. Wang, K. Wang, J.R. McCutcheon (China)</i>	A new integrated MBR model for wastewater treatment: sensitivity and uncertainty analysis (MTC-159) <i>G. Mannina, A. Cosenza, G. Ekama (Italy)</i>	Application of nitric oxide for biofouling control in reverse osmosis membrane system (MTC-157) <i>H.S. Oh, F. Constanancias, C. Ramasamy, T.P. Yi, A.G. Fane, D. McDougald, S.A. Rice (Singapore)</i>
09.40 - 10.00	Metformin removal in a membrane bioreactor operated with new operation concept (MTC-227) <i>S. Arslan, M. Eyvaz, E. Gürbulak, O. Günaydin, E. Yüksel, I. Koyuncu (Turkey)</i>	Assessment of MBR sludge filterability by capillary suction time (CST) and lipopolysaccharide (LPS) (MTC-211) <i>T. Kakuda, H. Iwasaki, K. Kimura (Japan)</i>	MF Membrane pore size determination with a new standard substance (MTC-228) <i>L. Liu, M. Shang, X. Zheng, J. Li, Q. Zhang, R. Cheng (China)</i>	Statistical interpretation and modelling of daily permeability evolution of full-scale membrane bioreactors treating rejection water of digested sludge dewatering using fuzzy inference methods (MTC-206) <i>E. Suard, Y. Fayolle, L. Zhang, S. Guérin, H. Jones, S. Guillaume, V. Rocher, C. Albasi, M. Alliet, S. Gillot (France)</i>	Adsorption of pharmaceuticals onto polyamide layer of NF and RO membranes (MTC-047) <i>Y.-L. Liu, X.-M. Wang, Y.F. Xie (China)</i>
10.00 - 10.20	Filtration performance of biofilm membrane bioreactor (BF-MBR) (MTC-276) <i>W. Zhang, Y. Zheng, B. Tang, L. Bin (China)</i>	Upgrade separate MBR wwtp to reduce energy, fouling and operational problems with a new MLSS management strategy (MTC-322) <i>F.-B. Frechen (Germany)</i>	Fabrication of novel anisotropic triangular silver nanoparticles modified membranes for enhanced antibacterial and anti-adhesion properties (MTC-036) <i>J. Ahmad, X. Wen, F. Li, B. Wang (China)</i>	Analysis of fluid behaviour on cone installed after the inlet of pressurized membrane module using computational fluid dynamics (MTC-258) <i>C. Choi, J. Jang, B. Park, I.S. Kim (Republic of Korea)</i>	Role of membrane autopsy in enhancing reverse osmosis plant operation (MTC-294) <i>G. Liu, S. Pattanayak, P. Navaneethkrishnan, R. Woodling (Singapore)</i>
10.20 - 10.40	Morning Break				

8 SEPTEMBER 2017 (FRIDAY)					
	SESSION 31: DOMESTIC WASTEWATER TREATMENT AND REUSE (5) Venue: Room 300 Session Chairs: G.H Tao (Singapore), N. Thepsuparungsikul (Thailand)	SESSION 32: NOVEL MATERIALS AND CONFIGURATIONS IN MEMBRANE PROCESSES (3) Venue: Room 301 Session Chairs: H. Ratnaweera (Norway), H.L. Guo (Singapore)	SESSION 33: INDUSTRIAL WASTEWATER TREATMENT AND REUSE (3) Venue: Room 302 Session Chairs: K. Zedda (Germany), K.L. Tung (Chinese Taiwan)	SESSION 34: DESALINATION (3) Venue: Room 303 Session Chairs: A. Khalifa (Saudi Arabia), M. Hesampour (Finland)	SESSION 35: MEMBRANE FOULING MECHANISMS AND CONTROL (6) Venue: Room 304 Session Chairs: J.Y. Hu (Singapore), Y.-L. Lin (Chinese Taiwan)
10.40 - 11.00	Development of low energy consuming process using high peeling strength membrane and LENA process (MTC-024) <i>H.C. Jung, H.W. Moon, Y.C. Shin, W.N. Lee, H.K. Roh (Republic of Korea)</i>	A novel single-pass reverse osmosis (RO) configuration for high-purity permeate production with low energy (MTC-048) <i>J. Kim, S.K. Hong (Republic of Korea)</i>	Acid mine drainage pre-treatment using nanofiltration (MTC-144) <i>K. Zedda, Y.W. Siew, S. Velizarov (Germany)</i>	Integrated approach for the design of reverse osmosis plants powered by photovoltaic energy at community-scale (MTC-281) <i>M. Monnot, G.D. Martinez Carvajal, S. Laborie, C. Cabassud, R. Lebrun (France)</i>	Characterization of anti-biofouling behaviors of PVDF membrane modified by quaternary ammonium compound - combined use of QCM-D, CLSM, and FCM (MTC-021) <i>Y. Wen, X. Zhang, Z. Wang (China)</i>
11.00 - 11.20	Optimisation of membrane bioreactor process for energy efficiency (MTC-086) <i>H.Y. Png, S.T. Lai, B.H. Kwok, A.M. Yap, W. Lay, M. Alom, Y.L. Wah, Y.A. Ghani (Singapore)</i>	Zwitterionic polysiloxane-polyamide interpenetrating network as active layer for high performance RO membranes (MTC-236) <i>J.-A.-D. Sharabati, S. Erkoc-Ilter, S. Guclu, F. Saffarimandoab, D.Y. Koseoglu-Imer, S. Unal, Y. Menciloglu, I. Ozturk, I. Koyuncu (Turkey)</i>	Removal of heavy metals from wastewater by nanofiltration and ion exchange (MTC-079) <i>L. Maung Maung, E.N. Farnosova, G.G. Kagramanov (Russia)</i>	The oxidation of amide bonding after the long-term exposure of reverse osmosis (RO) membrane to chemical cleaning agents (MTC-213) <i>D.S. Park, P. Fagkaew, D.S. Jang, S. Kang (Republic of Korea)</i>	Flow behaviour in spacer filled membrane systems: flow visualization by particle image velocimetry (MTC-050) <i>Sz. Bucs, R. Valladares Linares, N. Farhat, C. Picioreanu, J.S. Vrouwenvelder (Saudi Arabia)</i>
11.20 - 11.40	Low-energy membrane-aerated biofilm reactors for nitrification in wastewater (MTC-254) <i>C. Duvall, H. Zhou, Z. Long, P. Côte (Canada)</i>	Double filtration in RO for efficient As(III) removal (MTC-248) <i>H.C. Ratnaweera, M.D. Victor-Ortega, M. Fauskrud (Norway)</i>	Tertiary treatment by nanofiltration of hospital wastewater for the elimination of pharmaceuticals (MTC-156) <i>Y. Lan, K.K. Groenen Serrano, C. Coetsier, C. Causserand (France)</i>	Evaluation of biocide efficacy for biofouling control in seawater reverse osmosis (SWRO) desalination using electrical impedance spectroscopy (EIS) (MTC-282) <i>J.S. Ho, L.N. Sim, T.H. Chong, H.G.L. Coster, K. Hayakawa, H. Komori, J. Takahashi (Singapore)</i>	Fouling mitigation by patterned membranes with various pattern shapes (MTC-169) <i>D.C. Choi, J. Lim, J. Park, S. Min, K. Kim, H. Lee, P.K. Park, C.H. Lee (Republic of Korea)</i>
11.40 - 12.00	Design and operation of low energy step-feed membrane bioreactors for water and resource recovery (MTC-270) <i>G. Tao, C. Htoo, A. M. Ang, Y. J. Lee, S. C. Chua, Y. L. Wah, Y. A. Ghani, H. Seah (Singapore)</i>	Evaluation of the microbial community differences of attached and suspended microorganisms in a novel pilot scale low-energy no-aeration MBR using 16srRNA sequencing (MTC-171) <i>R. De Sotto, J. Ho, W. Lee, S. Bae (Singapore)</i>	Efficiency of an in situ pilot-scale hybrid membrane bioreactor (MBR) for hospital effluent treatment (MTC-063) <i>D. Lachassagne, L. Mouret, H. Budzinski, O. Lorain, J-P. Besse, S. Jeandenand, C. Albasi (France)</i>	Performance benchmarking of polyamide composite sea water reverse osmosis membranes (MTC-295) <i>S. Pattanayak, G. Liu, A. Hauser, R. Woodling, C. Mertes (Singapore)</i>	Non-uniform distribution of adsorptive fouling along hollow fiber membrane filament: characterization and quantification (MTC-247) <i>K. Xiao, S. Mu, C. Liu, X. Huang (China)</i>
12.00 - 12.20	Main issues overcome in development of membrane aerated biofilm reactors for wastewater treatment (MTC-275) <i>R. Shechter, Y. Bar-Tal (Israel)</i>	Demonstrating performance and cost savings associated with a new, thinner, RO membrane (MTC-305) <i>R. Franks, K. Andes, T. Knoell, C. Bartels (USA)</i>	Electrodialysis reversal for industrial reverse osmosis brine treatment (MTC-108) <i>D. Zhao, L.Y. Lee, S.L. Ong, P. Chowdhury, H. Fang, K.B. Siah, H.Y. Ng (Singapore)</i>	Unique membrane simulator for early detection and classification of fouling (MTC-304) <i>M. Hesampour, M. Refaat, E. Olmos, V. Vuori, J. Ekman, M. Piironen, I. Joensuu, G. Fiorenza, S. Dixit, R. Hofmann (Finland)</i>	Predicting the impact of feed spacer modification on biofouling (MTC-251) <i>J.S. Vrouwenvelder, A. Siddiqui, Sz.S. Bucs, E.I. Prest, M.C.M. van Loosdrecht, J.C. Kruithof (Saudi Arabia)</i>
12.20 - 12.40	A novel operation concept for osmotic membrane bioreactors: vacuum enhanced draw solution circulation (MTC-224) <i>S. Arslan, M. Eyvas, D. İmer, T. Aslan, E. Yüksel, İ. Koyuncu (Turkey)</i>	The preparations and characterizations of the low-cost porous ceramic membranes for microfiltration (MTC-134) <i>J.H. Ha, J. Lee, I.-H. Song (Republic of Korea)</i>	High performance UF membrane for advanced coal gasification wastewater treatment (MTC-034) <i>S. Huang, Y. Yang, K. Hagawa, H. Morikawa, S. Minegishi (China)</i>	Fabrication of polysulfone incorporated with surfactant based electrospun uniform nanofibrous membrane for desalination (MTC-040) <i>S. Sinha Ray, S.-S. Chen, H.-T. Hsu, T.-D. Cao, H.T. Nguyen, N.C. Nguyen, C.-T. Chang (Chinese Taiwan)</i>	Membrane defouling using microbubbles generated by fluidic oscillation (MTC-022) <i>M.H. Che Harun, W.B. Zimmerman (United Kingdom)</i>
12.40 - 13.30	Lunch				

8 SEPTEMBER 2017 (FRIDAY)					
	SESSION 36: DOMESTIC WASTEWATER TREATMENT AND REUSE (6) Venue: Room 300 Session Chairs: C.Y. Tang (Hong Kong), X.H. Zhang (China)	SESSION 37: NOVEL MATERIALS AND CONFIGURATIONS IN MEMBRANE PROCESSES (4) Venue: Room 301 Session Chairs: H.H. Ngo (Australia), J.H. Shao (China)	SESSION 38: INDUSTRIAL WASTEWATER TREATMENT AND REUSE (4) Venue: Room 302 Session Chairs: G. Oron (Israel), N. Kayaalp (Turkey)	SESSION 39: DESALINATION (4) Venue: Room 303 Session Chairs: S.H. Lee (Republic of Korea), K.C. Ng (Saudi Arabia)	SESSION 40: MEMBRANE FOULING MECHANISMS AND CONTROL (7) Venue: Room 304 Session Chairs: T.O. Leiknes (Saudi Arabia), S.W. Osterhus (Norway)
13.30 - 14.00	Keynote: Novel membranes and membrane processes for water reuse <i>A/Prof. Chuyang Tang (Hong Kong)</i>	Keynote: Can bio-membrane based systems be a smart option for nutrient recovery from wastewater <i>Prof. Huu Hao Ngo (Australia)</i>	Keynote: The role of membrane technology in wastewater reuse <i>Prof. Gideon Oron (Israel)</i>	Keynote: Pressure Retarded Osmosis for seawater reverse osmosis process: energy recovery, power density, and pretreatment <i>Prof Sangho Lee (Republic of Korea)</i>	Keynote: Seeking to understand biofouling in MBR systems through non-invasive imaging (OCT) and modeling (CFD) <i>Prof. TorOve Leiknes (Saudi Arabia)</i>
14.00 - 14.20	Optimising the filtration process in AnMBR technology for sewage treatment (MTC-250) <i>A. Robles, E. Jiménez, F. Durán, J.B. Giménez, J. Vazquez-Padín, J. Serralta, F. Rogalla, A. Seco, J. Ferrer, J. Ribes (Spain)</i>	Fabrication of Aquaporin Z incorporated hollow fiber nanofiltration membranes (MTC-181) <i>R. Sengur-Tasdemir, E. Pekgenc, E. Tutuncu, T. Turken, G. Melike Urper, T. Ergon, N. Gul Karaguler, E. Ates Genceli, I. Koyuncu (Turkey)</i>	Organized industrial zone wastewater treatment alternatives with membrane systems at laboratory scale (MTC-229) <i>O. Özkan, I. Uyanik, T. Türken, I. Koyuncu (Turkey)</i>	Sustainable seawater desalination for future water supply (MTC-076) <i>K.C. Ng, M.W. Shahzad, S.H. Soo (Saudi Arabia)</i>	Modelling approach to understand the effect of mechanical cleaning on fouling reduction with scouring media fluidized by bulk recirculation flow along membrane surface (MTC-054) <i>A. Charfi, M. Aslam, J. Kim (Republic of Korea)</i>
14.20 - 14.40	Study of a pilot membrane bioreactor operated at Short Solids Retention Time (MTC-095) <i>S. L. Low, K.K. Ng, H. Gao, S.L. Ong, H.Y. Png, G. Tao, W.C.L. Lay, C.F. Lin, H.Y. Ng (Singapore)</i>	Removal capacity, transfer coefficient and microbial succession during phenol removal via extractive membrane bioreactor (MTC-032) <i>L.-F. Ren, R. Chen, X. Zhang, Y. He, J. Shao (China)</i>	Potential of marine sediment as novel seeding biomass for anaerobic treatment of pharmaceutical wastewater (MTC-329) <i>X.Q. Shi, K.K. Ng, H.Y. Ng (Singapore)</i>	Pushing desalination processes recovery to the limit: A tri-hybrid desalination Cycle (MTC-075) <i>M.W. Shahzad, M. Burhan, K.C. Ng (Saudi Arabia)</i>	Simultaneous organics and nutrients removal in side-stream aerobic granular sludge membrane bioreactor (AGMBR) (MTC-130) <i>O.T. Iorhemen, R.A. Hamza, J.H. Tay (Canada)</i>
14.40 - 15.00	Kinetic characteristics of ozone decomposition within ceramic membrane pores (MTC-035) <i>S. Jia, Z. Zhang, X. Fan, T. Yi, X. Zhang (China)</i>	E-Fenton mineralization of p-chloroaniline using a Ti/SnO₂-Sb₂O₅ anode and a conductive porous ceramic microfiltration (MF) membrane cathode (MTC-020) <i>J. Zheng, Z. Wang, S. Xu, X. Zhang, X. Wang (China)</i>	Hydrogen-based autotrophic denitrification of agricultural drainage water in a submerged membrane bioreactor (MTC-253) <i>N. Kayaalp, S. Karatas, G. Ozturkmen, E. Gul, E. Gunay, A. Em (Turkey)</i>	Auto-adaptive fouling control in UF system during algal blooms using smart pumps (MTC-089) <i>L.O. Villacorte, D.M. Dominiak, R.E. Gissel, W. van de Ven, V.A. Yangali-Quintanilla (Denmark)</i>	Assessment of a UF membrane filtration facility long-term irreversible fouling (MTC-176) <i>F.J.P. St-Pierre, P.R. Bérubé (Canada)</i>
15.00 - 15.20	Double-win effects of in-situ ozonation on improved filterability of mixed liquor and ceramic UF membrane fouling mitigation in wastewater treatment? (MTC-005) <i>Z. Zhang, S. Tang, X. Zhang (China)</i>	Influence of polymer coating of MF membrane with MPC and PEG on irreversible fouling control in MBRs (MTC-288) <i>H. Nagaoka, T. Yamada (Japan)</i>	Membrane fouling mechanism of HRT's effects on anoxic/oxic membrane bioreactors for pig slurry treatment (MTC-147) <i>S. Xia, H. Guo, Z. Niu (China)</i>	Membrane distillation for water desalination: air gap and water gap modules (MTC-131) <i>A.E. Khalifa (Saudi Arabia)</i>	Investigation of backpulsing technology to mitigate membrane fouling (MTC-307) <i>Y.H. Gao, S.W., Østerhus (Norway)</i>
15.20 - 15.40	Afternoon Break				

8 SEPTEMBER 2017 (FRIDAY)	
	PLENARY & CONFERENCE CLOSING Venue: Room 300-302
15.40 -16.10	Plenary 5: Fouling in membrane bioreactors: a personal journey of two decades <i>Professor Slav W. Hermanowicz, University of California Berkeley, USA</i>
16.10 - 16.40	Plenary 6: The membrane industrial revolution: Solution to climate change issue <i>Professor Joon Ha Kim, Gwangju Institute of Science and Technology, Republic of Korea</i>
16.40 - 17.00	Panel Discussion
17.00 - 17.20	Conference Closing
9 SEPTEMBER 2017 (SATURDAY)	
08.30 - 12.30	TECHNICAL VISITS Tour 1 - Changi Water Reclamation Plant Tour 2 - Choa Chu Kang Waterworks