

9th International Water Association (IWA) Membrane Technology Conference & Exhibition for Water and Wastewater Treatment and Reuse

June 23-27, 2019 – TOULOUSE, FRANCE

Conference Program

23 JUNE 2019 (SUNDAY)	
	Optional Guided Tours
	WELCOME RECEPTION
19:00-20:30	Venue = Pierre Baudis Conference Center, Room Caravelle I
24 JUNE 2019 (MONDAY)	
	CONFERENCE OPENING AND PLENARY
	Venue : Auditorium Saint Exupéry
9:15-9:40	Welcome addresses: Corinne CABASSUD, Conference Chair; Xia HUANG, IWA-MT Group Chair
9:40-10:10	PLENARY 1 : Novel membranes for various processes and their benefits for water applications Prof. Rong WANG, Nanyang Technological University (NTU), Singapore
10:10-10:40	PLENARY 2 : Technological success stories in 21st Century Africa: How to make the dream come true for membranes? Dr. Abdoulaye DOUCOURE, president of the African Membrane Society
10:40-11:10	Morning break
	PLENARY and PANEL DISCUSSIONS
11:10-11:40	PLENARY 3 : Integrating Systems of Water Reuse and Desalination: Water/Energy or Regulations/Footprint? Prof. Amy CHILDRESS, University of Southern California, USA
11:40-12:10	PLENARY 4 : Membranes under Pressure : Membranes in Drinking Water Treatment Prof. Emile CORNELISSEN, KWR Watercycle Research Institute, Netherlands
12:10-12:40	PANEL DISCUSSIONS
12:40-14:00	LUNCH

24 JUNE 2019 (MONDAY)					
	SESSION 1 : DRINKING WATER TREATMENT	SESSION 2: DOMESTIC WASTE WATER TREATMENT	SESSION 3: INDUSTRIAL WATER TREATMENT	SESSION 4: DESALINATION	SESSION 5: FOULING CHARACTERIZATION
	Venue: Room Guillaumet 1 Session Chairs: F. Frechen (Germany), A.C. Valentin (France)	Venue: Room Guillaumet 2 Session Chairs: P. Le-Clech (Australia), K. Kimura (Japan)	Venue: Room Cassiopée Session Chairs: V. Frenkel (USA), M. Jacob (France)	Venue: Room Argos Session Chairs: V. Vigneswaran (Australia), J. Gilron (Israel)	Venue: Room Spot Session Chairs: J.S. Vrouwenvelder (Saudi Arabia), A. Lerch (Germany)
14:00-14:30	Keynote: Combat Poverty & improve Social Cohesion in Third World Countries with Membranes Franz Frechen (Germany)	Keynote: Research opportunities for maturing membrane technologies in the water and wastewater industry Pierre Le-Clech (Australia)	Keynote: Membrane technologie: State of the art and areas of future innovations Val Frenkel (USA)	Keynote : Survey of Practice and Experience of Membrane Pre-treatment to Control Bio-fouling for Seawater Desalination Graeme Pearce (UK)	Keynote: Biofouling of membrane systems: diagnosis, prediction and prevention H. Vrouwenvelder (Saudia Arabia)
14:30-14:50	Retention and integrity of drinking water production membranes towards nanoparticles and viruses N. Jacquet, Y. Wyart, G. Darracq, S. Wurtzer, L. Moulin, P. Moulin (France)	Energetic refurbishment of an existing large-scale MBR C. Brepols, K. Drensla, A. Janot, H. Schafer (Germany)	Reverse osmosis membrane performance at extreme pH conditions K. Zedda, I. Hegoburu (Germany, Portugal)	Effect of Saline Water Quality on Ion Transport Behavior in Membrane Desalination W. Cheng, X. Lu, R. Epsstein, J. Ma, M. Elimelech (China, USA)	Fouling of colloidal suspensions probed by microPIV and SAXS N. Hengl, C. Rey, S. Baup, A. Dufresne, H. Djeridi, R. Dattani, F. Pignon (France)
14:50-15:10	30 years of evolution in ultrafiltration systems and processes for drinking water treatment P. Sauvade, F. Coehlo, J. Leclerc, D. Bourdiol, A.C. Valentin (France)	Energy and resource efficient biosorption and low energy step-feed membrane bioreactor system G. Tao, C. Htoo, K.M. Phua, S.C. Chua, Y.L. Wah, K.E. Ooi, H. Seah (Singapore)	Forward osmosis treatment of wastewaters from a semiconductor manufacturer A. Haupt, F. Winkler, A. Lerch (Germany)	Economic feasibility of osmotic desalination in off-grid locations P. Pazouki, R.A. Stewart, E. Bertone, F. Helfer (Australia)	At-line sensor for membrane biofouling detection using fluorogen-substrate cleavage L. Fortunato, B. Khan, T. Leiknes (Saudi Arabia)
15:10-15:30	Drinking water treatment solution using low pressure NF on colored surface waters M. Suarez, P. Sauvignet, A. Gaid, J. Goirand, H. Henrik (France, Sweden)	Membrane fouling reduction in biofilm MBR applying polymeric and monomeric inorganic coagulants Z. Maletsky, H. Ratnaweera, O. Kulesha (Norway)	Treatment of table olive processing wastewater by an osmotic membrane bioreactor S. Donate-Hernandez, L. Pastor-Alcaniz, M.J. Lujan-Facundo, J.L. Soler-Cabezas, M.C. Vincent-Vela, A. Bes-Pia, J. A. Mendoza-Roca (Spain)	Gypsum Scaling in Capacitive Deionization and Membrane Capacitive Deionization E. Liu, L.Y. Lee, S.L. Ong, H.Y. Ng (Singapore)	In-situ visualization of concentration polarization during crossflow UF using micro-laser induced fluorescence X-Y. Li, B-Y. Meng (China)
15:30-15:50	A pilot study of coagulation-UF-NF for Tai Lake water treatment T. Li, B. Gui, B. Dong, C. Staaks (China, Germany)	Direct wastewater treatment by membrane technology P. Sanchis-Perucho, A. Robles, J. Godifredo, R. Barat, D. Aguado, A. Seco, J. Ferrer, A. Bouzas (Spain)	Application of diffusion dialysis in separation of sulfuric acid and copper from electroplating wastewater A. Ruiz-Aguirre, J. Lopez, R. Guecci, S. Randazzo, A. Cipollona, J. L. Cortina, G. Zaragoza, G. Micale (Italy, Spain)	Relationship between efficiency and chemical composition of different antiscalants. E. M. Maya, R. Sandin (Spain)	Characterization and chemical cleaning of irreversible membrane fouling by in-situ SPF-EEM K. Ochiai, Q. Ding, H. Yamamura, Y. Watanabe (Japan)
15:50-16:10	Optical coherence tomography for MF fouling investigation under different pretreatment scenarios B.J. Deka, J. Guo, S. Jeong, A. K.J. An (China)	High-flux operation of an MBR equipped with ceramic flat-sheet membranes Y. Ninomiya, A. Kakuda, K. Kimura (Japan)	Diffusive and Convective Transport of Organics in Ion-Exchange Membranes L. Ma, L. Gutierrez, M. Waqas, A. Verliefde (Belgium)	Influence of different surfactants on original nanofiltration membrane cleaning: performances and properties Z. Gu, S. Yu (China)	Characterization of Fluorescence Foulants on UF Membrane using Front-Face Excitation-emission Matrix (FF-EEM) Spectroscopy H. Yu, Z. Wu, X. Zhang, F. Qu, J. HE, H. Rong, H. Liang (China, Korea)
16:10-16:30	Afternoon break				
16:30-18:00	POSTER SESSION 1 Room: Saint Exupery Foyer				

25 JUNE 2019 (TUESDAY)						
	SESSION 6 : DRINKING WATER TREATMENT Venue: Room Guillaumet 1 Session Chairs: P. Huck (Canada), P. Berg (Germany)	SESSION 7: DOMESTIC WASTE WATER TREATMENT Venue: Room Guillaumet 2 Session Chairs: K. Kimura (Japan), R. Ben Aim (France)	SESSION 8: INDUSTRIAL WATER TREATMENT Venue: Room Diamant Session Chairs: M. Jacob (France), E. Cornelissen (Netherlands)	SESSION 9: DESALINATION Venue: Room Cassiopée Session Chairs: J. Gilron (Israel), M.N. De Pinho (Portugal)	SESSION 10: MEMBRANE DISTILLATION Venue: Room Argos Session Chairs: H.H. Tseng (Taiwan), A. Lerch (Germany)	SESSION 11: FOULING QQ Venue: Room Spot Session Chairs: C.H. Lee (Korea), C. Guigui (France)
8:30-9:00	Keynote: Raising synergy effects in hybrid membrane processes S. Panglish (Germany)	Keynote: Recovery of organic matter from municipal WW by direct membrane filtration: toward net energy-positive municipal WW K. Kimura (Japan)	Keynote: Membranes in the Oil & Gas industry: Present and Future Matthieu Jacob (France)	Keynote: IEMB - Donnan Dialysis study of oxyanion removal - Effect of membrane and contacting mode Jack Gilron (Israel)	Keynote: Omniphobic Membranes for Membrane Contactors Kuo-Lun Tung (Taiwan)	Keynote: Confronting challenges and future directions in QQ-MBR Chung-Hak Lee (South Korea)
9:00-9:20	Membrane fouling in integrated adsorption-UF system: Effects of NOM and adsorbent properties K. Li, S. Li, T. Huang, G. Li, H. Liang (China)	Characterization of organic foulants of treated WW and their polyamide membranes' fouling propensity N. Stein, N. Siebdrath, B. Skibinski, A. Lerch, M. Herzberg, R. Bersntein (Israel, Germany)	SiC ceramic membrane grafted with carbon nanotubes for oil-in-water emulsion separation A. Poli, C. Batiot Dupeyrat, A. Ferreira-Santos, M. Jacob, P. Baldoni-Andrey, B. Teychene (France)	Electrical Membrane Separation: Mechanism, Material and Reactor C. Hu, J. Sun, Z. Liu, X. Tan, H. Liu, J. Qu (China)	Utilizing ceramic membranes in Membrane Distillation processes for desalination applications J. Schnittger, M. Weyd, A. Lerch (Germany)	Joint effect of QQ bacteria on microbial community structure in MBR B. Yavuzturk Gul, I. Koyuncu (Turkey)
9:20-9:40	Increased NOM removal with less coagulant combining ion exchange and ultrafiltration I.S. Bodlund, L.E Hagglund, A. Schweiger, P. Buchta, U. Eriksson (Sweden)	Fluorescence characterization of organic matter in MBR: chem. contents, hydrophobicity, molecular weight, and relation to membrane X. Kang, B. Han, J. Yu, Y. Shen, X. Huang (China)	Asset Management Using Modelling and Experiments for Membrane Selection in Produced Water Treatment E. Frederic, A. Krifi, C. Guigui, P. Schmitz, P. Baldoni-Andrey, M. Jacob, C. Machinal, Y. Deleuze, E. Barbier (France)	Numerical modeling of decline in performance of roto-dynamic RO system A. Uppu, A. Chaudhuri, S. Prasad Das (India)	Contact angle investigation of hydrophobic membranes for greywater distillation M. Ramezani-pour, M. Sivakumar, Y. Zhang, N. Osborne (New Zealand, Australia)	Implications of facultative isolated quorum quenching consortium for biofilm control B. Xu, T.C. Ng, S. Huang, X. Shi, H.Y. Ng (Singapore)
9:40-10:00	Application of submerged membrane adsorption hybrid system to remove arsenic for M. Usman, J. Rodrigues, S. Tasawar, M. Ernst (Germany)	Self-Degradation of Membrane Biofoulants by Extending SRT in a DMBR L. Guoqiang (China)	Water and Polymer flooding Produced Water reuse by Ceramic Membranes M. Hendou, E. Singlande-Mauvernavy (France)	A new experimental approach to "visualize" scaling mechanism in RO modules using "fluorescent" A. Pervov, K. Popov, M. Oshepkov (Russian Federation)	Membrane fouling and wetting according to operating conditions of a membrane distillation process J. Lim, K.P. Son, H. Lee, J. Park, P-K Park (Korea)	Active quorum quenching bacteria diversity in biofilm and sludge of full-scale membrane bioreactors S. Tabraiz, P. Sallis (USA)
10:00-10:20	Combination of gravity driven submerged membranes and GAC for decentralized water purification P. Schumann, A. S. Ruhl, J.A. Ordonez Andrade (Germany)	Fouling potential of lipopolysaccharides released under low temperature in MBRs T. Kakuda, K. Kimura (Japan)	Nitrogen recovery by Transmembrane Chemisorption process from high strength effluent I. Gonzalez, A. Mottet, D. Delagnes, X. Lefebvre, M. Bounouba, M. Orfao, O. Lorain, C. Guigui, M. Besson, M. Spérandio (France)	Effect of UV/PMS pre-oxidation against algal bloom in seawater desalination H. Lee, J. Lim, M. Zhan; S. Hong (Korea)	Understanding wetting phenomenon by produced water in membrane distillation L. Han, J.W. Chew (China, Singapore)	Mechanism of fouling mitigation by vanillin in MBR revealed by size vs. polarity profiling of EPS R. Honda, P.-N. Hong, T. Tobino, N. Matsuura, R. Yamamoto-Ikemoto (Japan)
10:20-10:40	Morning break					

25 JUNE 2019 (TUESDAY)						
	SESSION 12 : REMOVAL OF MICROPOLLUTANTS Venue: Room Guillaumet 1 Session Chairs: M.N. Pinho (Portugal), C. Causserand (France)	SESSION 13: DOMESTIC WASTE WATER TREATMENT Venue: Room Guillaumet 2 Session Chairs: R. Ben Aim (France) I. Koyuncu (Turkey)	SESSION 14: INDUSTRIAL WATER TREATMENT Venue: Room Diamant Session Chairs: H.Y. Ng (Singapour), V. Frenkel (USA)	SESSION 15: DECENTRALIZATION AND Venue: Room Cassiopée Session Chairs: P. Berube (Canada), F. Frechen (Germany)	SESSION 16: NEW MEMBRANES FOR WATER Venue: Room Argos Session Chairs: Z. Whang (China), C. Coetsier (France)	SESSION 17: FOULING QQ Venue: Room Spot Session Chairs: C.H. Lee (Korea), C. Guigui (France)
10:40-11:10	Keynote: Predicted environmental conc. and occurrence of anti-cancer drugs in the aquatic environment: are membrane filtration and advanced oxidation processes a solution ? Vaneissa Pereira (Portugal)	Keynote: Resource Recovery from Water/Wastewaters Ismail Koyuncu (Turkey)	Ultrafiltration to produce disinfected water in shellfish farms C. Cordier, C. Stavrakakis, L. Charpin, M. Papin, K. Guyomard, P. Sauvade, F. Coelho, P. Moulin (France)	Keynote: Biofilm impact on integrity of passive membrane systems Pierre Berube (Canada)	Keynote: Antibiofouling Membranes for Water and Wastewater Treatment: Antimicrobial Mechanisms and Fabrication Strategies Zhiwei Wang (China)	Keynote: Biofouling Control in Reverse Osmosis Water Treatment Process by Quorum Quenching Hyun-Suk Oh (Korea)
11:10-11:30	Reactive electrochemical membrane for the removal of micropollutants from water C. Trellu, C. Coetsier, G. Lesage, M. Rivatten, S. Lacour, S. Cerneaux, JC Rouch, S. Raffy, M.A. Oturan, M. Cretin, C. Causserand (France)	Impact of Support Material Type on Dynamic MBR Performance O. Isik, R. Hudayarizka, A.M. abdelrahman, M. E. Ersahin, H. Ozgun, I. Demir, I. Koyuncu (Turkey),	Removal of antibiotic resistance genes by a sequencing batch membrane bioreactor treating swine wastewater Q. Suj, Y. Wei, H. Zhong (Chine)	In-situ membrane and adsorbent regeneration developed for self-sufficient decentralized water treatment A. Benedikt, S. Yuce, M. Wessling (Germany)	Superhydrophilic and oleophobic membrane functionalized with nanosheets for antifouling S. Zhang, Z.B. Ma, S. Liang, X. Huang (China)	Quorum Quenching in MBR: Mass transfer and hydrodynamic characterization C. Guigui, M. Larzag, N. Dietrich, C. Lafforgue (France)
11:30-11:50	Description of Polar Mobile Organic Chemicals (PMOC) removal by RO and NF using decision tree methodology. B. Teychene, F. Chi, J. Chokki, G. Darracq, J. Baron, M. Joyeux, H. Gallard (France)	Membrane fouling mechanism of an anammox MBR with fixed composite carriers X. Siquing, N. Zhihao, X. Jingyi, D. Jun (China)	Effect of Ferric Hydroxide on Membrane Fouling Treating with Pharmaceutical Wastewater S. Huang, X. Shi, B. Xu, H-Y Ng (Singapore)	Drinking Water Supply Using NF for CKDu Prevailing Rural Areas of Sri Lanka: from laboratory to practice T. Cooray, Y. Wei, L. Zheng, H. Zhong (Sri Lanka, China)	Electro-enhanced organic fouling mitigation applying novel duplex-coated gold-polymer-UF membrane T. Mantel, P. Benne, M. Ernst (Germany)	Application of Cell Entrapping Beads for Quorum Quenching Technique in Submerged MBR S. Ahmed, N. Sohail, S. Chung, I. Qazi (Pakistan)
11:50-12:10	Nanofiltration membranes for selective separation of organic micropollutants and divalent cations Y.L. Liu, X.M. Wang, Y. F. Xie, X. Huang, B. Van Der Bruggen (China, Belgium)	Contribution of single cell bacteria on MBR fouling M.K. Jorgensen, S.H. Hansen, M. Nierychlo, M.L. Christensen, P.H. Nielsen (Denmark)	Concentration of hospital wastewater using Aquaporin Inside® Hollow Fiber forward osmosis membranes K. Traskus, M.S. Camilleri-Rumbau, V. Sanahuja-Embuena, S. Braekevelt, M.H. Moller, B.M. Pedersen, U. Nielsen, J. Vogel (Denmark)	Repeated pressurization deteriorates virus removal by RO membrane for household water treatment S. Torij, T. Hashimoto, A.T. Do, H. Furumai, H. Katayama (Japan)	Adhesion of bacteria on modified membrane surfaces C. Coetsier, S. Bkhait, V. Bouvier Vincent, S. Desclaux, S. Beaufort, E. Girbal-Neuhauser, JF.Lahitte, C. Causserand, J.C. Remigy (France)	Biofouling reduction effects of QSI immobilized on membrane J.H. Kim, S.H. Park, W.J. Song, J.H. Lee, J.H. Kweon (Korea)
12:10-12:30	Tetracycline degradation in water by enzymes immobilized on silica monoliths S. Ahmad, W. Sebai, J. Sanchez-Marcano, M-P Belleville, A. Galarneau, N. Brun (France)	Necessity in contingency: Bacterial assembly in the bio-cake of MBRs F. Meng, Xu Ronghua, Yu Zhong, Zhou Zhongbo, Zhao Shanshan (China)	New membrane technology for NaCl reuse in industrial water softening Y. Orestov, T. Mitchenko (Ukraine)	A low energy gravity-driven MBR system for decentralized grey water treatment A. Ding, H. Liang, W. Pronk (China, Switzerland)	Application of MnO₂-Co₃O₄ coated ceramic UF membrane for fouling mitigation and contaminant removal S. Zhang, F. Qi, L. Gutierrez, J-P Croue (Australia, China, Ecuador)	Effect on Water Flux and Backwashing on Quorum Sensing in Biocake layer in Membrane H. Lee, S.H. Lee, C.H. Nahm, J. Lim, S. Min, D. Chae, C-H Lee, P-K Park (China, USA, Korea)
12:30-13:50	LUNCH IWA Specialist Group General Assembly 13:15- 13h50 Room Cassiopée					

25 JUNE 2019 (TUESDAY)						
	SESSION 18 : DRINKING WATER TREATMENT Venue: Room Guillaumet 1 Session Chairs: P. Huck (Canada), A. Lerch (Germany)	SESSION 19: DOMESTIC WASTE WATER TREATMENT Venue: Room Guillaumet 2 Session Chairs: K-H Choo (Korea), R. Ben Aim (France)	SESSION 20: MEMBRANE DISTILLATION Venue: Room Diamant Session Chairs: L. D. Nghiem (Australia), S. Laborie (France)	SESSION 21: BRINE/CONCENTRATE DISPOSAL Venue: Room Cassiopée Session Chairs: E. Curcio (Italy), S. Vigneswaran(Australia)	SESSION 22: NEW MEMBRANES FOR WATER Venue: Room Argos Session Chairs: M. Fidalgo (USA), O. Lorain (France)	SESSION 23: CLEANING Venue: Room Spot Session Chairs: X. Huang (China), H. Vrouwenvelder (Saudi Arabia)
13:50-14:20	Keynote: Developing Biofiltration Pre-Treatment to Reduce Membrane Fouling Peter Huck (Canada)	Keynote: Two-in-one electrochemical membrane system for advanced wastewater treatment Kwang-Ho Choo (Korea)	Keynote: Strategic membrane distillation applications beyond drinking water production Long Nghiem (Australia)	Keynote: Creating value from seawater desalination brine: an integrated membrane-based approach Efrem Curcio (Italy)	Keynote: Solvent permeation behavior of laser induced graphene on ceramic membranes Maria Fidalgo (USA)	Keynote: Membrane autopsy deciphering core-microbiota stubborn against online chemical cleaning in a full-scale MBR Xia Huang (China)
14:20-14:40	Analysis of fouling mechanisms in capillary UF membranes during filtration of algal species in intact and lysed conditions S. Laksono, I.M. Elsherbiny, C. Staaks, S. Panglish (Germany)	A new electro-conductive membrane (PES/PANI/rGO) for electrochemical MBR E. Subtil, J. Goncalves, H. Gajardoni, E.C. Venancio, W.A. ALVES, J.C. Mierzwa, P. Le-Clech (Brazil, Australia)	Novel VMD configuration for water vapor flux enhancement N. Ghaffour, A. Alsaadi, A. Alpatova, J. G. Lee, L. Francis (Saudi Arabia)	Modelling the Electrodialysis Reversal Process for Zero Liquid Discharge of Industrial Reverse Osmosis Concentrate V.V. Waghlikar, L.Y. Lee, S.L. Ong, H.Y. Ng (Singapore)	Grafted ceramic membranes with drastically reduced fouling tendency A. Buekenhoudt, M. Ghulam, K. Wyns, V. Meynen, R. Vleeschouwers (Belgium)	Novel Application of Ionic Liquids As Cleaning Agents against Irreversible Membrane Fouling S.J. Choi, S.S. Kim, D. Jang, D.S. Hwang, S. Kang (Korea)
14:40-15:00	Fouling Analysis of UF Membrane Treating Algae Laden Water E. Castilla-Rodriguez, H. Zhou (Canada)	Improving the cleaning procedure of a full scale MBR by characterizing the sodium hypochlorite oxidative stress A. Fenu, S. Derese, M. Weemaes (Belgium)	Influence of salinity on wetting and wettability in membrane distillation S. Laborie, T. Zhang, P. Jacob, C. Cabassud (France)	Concentrate transportability from RO membrane applications E. Filloux, D. Ratte, D. Steinmann, J. Kuntz, L. Guey, A. Brehant (France)	Pollens-inspired Modification of Microfiltration Membranes for Biofouling Mitigation X. Zhang, Z. Wang (China)	Application of cis-2-Decenoic acid for MBR biofouling reduction W.J. Song, J.H. Kim, J.H. Kweon (Korea)
15:00-15:20	Desalination of saline groundwater by reverse osmosis and membrane capacitive deionisation H. Rosentreter, L.E. Herr, M. Walther, A. Lerch (Germany)	NeophilTM -MBR, an innovative strategy for micropollutants removal. C. Albasi, L. Cavaille, C. Dasilva, O. Lorain (France)	Membrane distillation biofouling: Effects at increasing feed temperature A. Bogler, E. Bar-Zeev (Israel)	Performance of Fractional-Submerged Membrane Distillation-Crystallizer for Brine Treatment S. Vigneswaran, Y. Choi, G. Naidu, S. Lee (Australia, Korea)	New ultrafiltration membrane made with new polymer material for long lasting and rejections performances O. Lorain, S. Marcellino, I. Duchemin, M. Zevaco, J-M Espenan (France)	Citric vs Oxalic Acid for Membrane Cleaning in MBR K. Westling, S.L. Andersson, S. Andersson (Sweden)
15:20-15:40	UF membrane filtration of water after conventional coagulation and novel suspended ion exchange E. Lavonen, K. Dahlberg (Sweden)	Evolution of Cation Exchange Membranes properties in a Bioelectrochemical System. M.I. San Martin, R.M. Alonso, P. Pradanos, A. Escapa, A. Moran (Spain)	Long-term performance and fouling characteristics of MD in continuously FGD wastewater L. Zheng, C. Zhang, H. Zhong, Y. Wei (China)	Combination of membrane and electrochemical processes for textile effluent/membrane concentrate A. A. Derya, A. Aouni, D.Y. Koseoglu-Imer, A. Hafiane, I. Koyuncu (Turkey)	Enhanced antifouling resistance of PVDF membranes by grafting zwitterionic via branch-liked SMA-Y-C Lin, K-M Liu, D-K Wang, H-H Tseng (Taiwan, Australia)	Effect of supersaturated CO2 backwash on membrane fouling mitigation A. Alpatova, A. Qumar, M. Alghamdi, N. Ghaffour (Saudi Arabia)
15:40-16:00	Afternoon break					

25 JUNE 2019 (TUESDAY)						
	SESSION 24: ALGAE and ALGAL REACTORS Venue: Room Guillaumet 1 Session Chairs: T. Leiknes (Saudi Arabia), P. Le Clech (Australia)	SESSION 25: WASTE WATER REUSE Venue: Room Guillaumet 2 Session Chairs: K-H Choo (Korea), Z. Zhang (China)	SESSION 26: MEMBRANE DISTILLATION Venue: Room Diamant Session Chairs: L.D. Nghiem (Australia), S. Laborie (France)	SESSION 27: BRINE/CONCENTRATE DISPOSAL Venue: Room Cassiopée Session Chairs: S. Vigneswaran (Australia), I. Lemaitre (France)	SESSION 28: NEW MEMBRANES FOR WATER Venue: Room Argos Session Chairs: M. Fidalgo (USA), P. Berg (Germany)	SESSION 29: CLEANING Venue: Room Spot Session Chairs: X. Huang (China), H. Vrouwenvelder (Saudi Arabia)
16:00-16:20	Assessment of fouling control strategies in an algae membrane photobioreactor <u>L. Fortunato</u> , A. Lamprea, T. Leiknes (Saudi Arabia)	Tuas WRP and The Tuas Nexus, Singapore <u>K. Tan</u> , G. Otoole, C. Newbery (Singapore)	Optimization of a forward osmosis and membrane distillation hybrid system <u>Y. Kim</u> , H.S. Son, H. Ghaffour (Saudi Arabia)	SAPHIRA TSAR: a novel high water recovery membrane-based solution <u>I. Lemaitre</u> , B. Riviere, C. Breda, C. Daines, E. Barbier, M. Hendou, B. Lee (France)	Coating of Ultrafiltration Membranes with Coagulant ? Effects on Operation and Costs <u>A. Schweiger</u> , D. Vial, P. Buchta, R. Winkler, P. Berg (Germany)	Monochloramine use for biological stability and biofouling control in RO membranes treating an MBR effluent <u>N.M. Farhat</u> , E. Loubineaud, E.I.E.C. Prest, J. El-Chakhtoura, C. Salles, S. Bucs, J. Trampe, W.B.P. Van Der Broek, J.M.C. Van Agtmaal, M.C.M. Van Loosdrecht, J.C. Kruithof, J.S. Vrouwenvelder (Saudi Arabia, The Netherlands)
16:20-16:40	Algae-bacteria co-immobilized beads on wastewater treatment and lessening membrane fouling <u>S. Cao</u> , C. Zhu, Q.L. Zhang, Y. Tao (China)	Decentralised greywater reuse: applicability of MBR for micropollutant removal <u>E. Mendoza</u> , I. Rodriguez-Roda, G. Buttiglieri (Spain)	Enhanced ammonia recovery from wastewater using a Nafion membrane and its mechanism in MD <u>A. K. An</u> , J. Guo, J.G. Lee, T. Tan, J. Yeo, K.J. Kim, N. Ghaffour (China, Saudi Arabia)	Using microalgae to treat RO concentrate for safe disposal and resource recovery A. Mohseni, <u>L. Fan</u> , F. Roddick (Australia)	Fouling behavior of new PPS hollow-fiber UF membranes modified with multi-block copolymer additives <u>A. Kouchaki Shalmani</u> , I.M.A. Elsherbiny, I. Stratmann, O. Gronwald, M. Weber, L. Grunig, U.A. Hangde, M. Heijnen, M. Krug, M. Koti, M. Ulbricht, S. Panglish (Germany)	Enhanced biofilm solubilization by urea in reverse osmosis membrane systems <u>H. Sanawar</u> , I. Pinel, N.M. Fehrat, S. Bucs, J. Zlopasa, J. C. Kruithof, G.J. Witkamp, M.C.M. Van Loosdrecht, J.S. Vrouwenvelder (Saudi Arabia, Netherlands)
16:40-17:00	Using an algae-based membrane bioreactor to remove nutrients in the wastewater <u>P.-H. Wu</u> , T.-M. Hsieh, C.-P. Yu (Taiwan)	Wastewater re-use with ozone and ceramic membrane: an alternative strategy <u>R. Floris</u> , S. Gabriel, B. Martijn (Netherlands)	Improving the energy efficiency of direct contact membrane distillation using the thermoelectric element <u>S-H Kim</u> , H-K Lime, T-M Lee (Korea)	Improved Recovery of Desalination by Energy-Efficient Reverse Osmosis (EERO) Process <u>T.H. Chong</u> , S.K. Lee, S.R. Suwarno, S. Goh (Singapore)	Fouling caused by carboxyl or hydroxyl containing polysaccharides on PVDF and GO/PVDF membranes <u>Y. Wang</u> , Y. Zhang, X. Zheng (China)	Enzymatic cleanings for ceramic and polymeric membranes in pretreatment of brackish surface <u>J.M. Vinas</u> , J. Arevalo, M. Burgos, D. Amador, F. Rogalla, V.M. Monsalvo Viñas (Spain)
18:00-19:30	POSTER SESSION 2 (Room outside the Conference Center ; transportation by bus at 17:30)					
20:00:23:00	CONFERENCE GALA DINNER					

26 JUNE 2019 (WEDNESDAY)					
	SESSION 30 : OXIDATION/OZONATION Venue: Room Guillaumet 1 Session Chairs: H. K. Shon (Australia), M. Monnot (France),	SESSION 31: WASTE WATER REUSE Venue: Room Guillaumet 2 Session Chairs: T. Leiknes (Saudi Arabia), K. Kimura (Japan)	SESSION 32: RENEWABLE ENERGIES Venue: Room Argos Session Chairs: A. Schafer (Germany), A. Ahmadi (France)	SESSION 33: RESOURCE RECOVERY Venue: Room Spot Session Chairs: S. Vigneswaran (Australia), I. Koyuncu (Turkey)	SESSION 34: MEMBRANE AGING AND LIFE CYCLE Venue: Room Diamant Session Chairs: C. Causserand (France), P. Le Clech (Australia)
8:30-9:00	Microwave-enhanced Reactive Membrane Filtration Systems W. Zhang, W. Fu (USA)	Keynote: The Application of Membrane Bioreactors in Potable Water Reuse S. Katz (Canada)	Keynote: Directly-coupled solar powered membrane systems: experience with fluctuating energy in Tanzania A.I. Schafer, (Germany)	Keynote: Rubidium Extraction From Seawater Brine By An Integrated Membrane Distillation-Selective Sorption System S. Vigneswaran (Australia)	Keynote: Impact of chemical cleaning by oxidative agents on properties and lifetime of polymeric membranes C. Causserand (France)
9:00-9:20	Novel Ceramic Membrane Coated by Nanoparticles for a hybrid ozonation-membrane filtration F. Qi, Z. Song, Y. Guo (China)	Reclamation of Biological Secondary Effluent from the Municipal Wastewater Plant C.H. Ni, Y.C. Lin, J.C.T. Liu (Taiwan)	Solar energy fluctuations impact on osmotic backwash in renewable energy-powered brackish water NF/RO desalination system Y. Cai, A.I. Schafer (Germany)	Toward Resource Recovery from Wastewater: Rare Earth Element Potentials and Membrane Technology for the Separation A. Yuksekdog, B. Kose-Mutlu, M.R. Wiesner, I. Koyuncu (Turkey, USA)	Membrane replacement: is changing membrane technology a big issue? Y. Poussade, D. Decerle, L. Le-Grand, A. Le-Person (France)
9:20-9:40	Membrane filtration coupled with wet air oxidation for intensified treatment of refractory effluents M. Monnot, C. Pinchai, S. Lefevre, O. Boutin, P. Moulin (France)	Highly selective and antifouling reverse osmosis membrane for domestic-wastewater reclamation N.K. Khanzada, M.U. Farid, A.K. An (Hong-Kong)	Photovoltaic electrocoagulation treatment of a textile wastewater at high concentrations B. Merzouk, B. Khemila, F. Lapique (Algeria, France)	Treatment of Acid Mine Drainage with Membrane Distillation: Water Reuse and Resource Recovery G. Naidu, E.H.C. Castillo, D.L. Nghiem, S. Vigneswaran (Australia)	Natural Viruses for Monitoring the integrity of Reverse Osmosis E. Cornelissen, T.R. Da Silva, B. Blankert, L. Heijnen, E.F. Beerendonk, L.M. Hornstra, G.J. Medema (Netherlands, Singapore, Belgium, Portugal)
9:40-10:00	Bubble-less ozonation with non-porous membranes: Experiments and CFD modelling G. Zoumpouli, S.S.X. Ho, Y.M. J. Chew, J. Wenk (UK)	New RO Membrane with Improved Fouling Resistant and Low Energy Consumption for Wastewater Reclamation S. Huang, Y. Yang, K. Nakatsuji, H. Takabatake, J. Okabe, M. Kimura, L. Zhu (China, Japan)	Pre-treatment by solar-UV irradiation for biofouling control in desalination processes with thin film composite membranes B. Skibinski, N. Siebrath, E. Bodner, Q. Yang, K. Zoschke, P. Hua, S. Tredte, A. Lerch (Germany)	A MBR with iron dosing and acidogenic co-fermentation for enhanced phosphorus removal and recovery in wastewater X-Y Li, R-H Li (China)	Impact of mechanical properties of hollow fiber membranes on backwash efficiency T. Vroman, F. Beauce, J.C. Remigy (France)
10:00-10:20	Membrane-dispersion Advanced Oxidation Processes (MAOPs) Treatment on Pulp Wastewater Concentrate from R. Li, Z. Li, Q. Jiang, M. Zhou, W. Xing (China)	Performance of integrated ozonation-ceramic membrane filtration in reclaimed water treatment: Effect of ozonation F. Qi, L.Y. Li, Y. Zhang, Z. Song, Y. Yang (China)	Combined solar driven pervaporation with graphene oxide membrane B. Lian, Q. Li, R.A. Taylor, G. Leslie (Australia)	Ammonium recovery from process water of digested sludge dewatering by membrane contactors L. Richter, M. Wichern, M. Gromping, U. Robecke, J. Haberkamp (Germany)	Upcycling of previously used reverse-osmosis membranes by the binding of copper nanoparticles with the aid of K. Inoue, M. Kuroiwa, H. Yamamura, A. Yonezu, Y. Watanabe (Japan)
10:20-10:40	Morning break				

26 JUNE 2019 (WEDNESDAY)					
	SESSION 35: SOURCE SEPARATION Venue: Room Guillaumet 1 Session Chairs: How-Yong Ng (Singapore), C. Joannis-Cassan (France)	SESSION 36 : ANAEROBY MBR Venue: Room Guillaumet 2 Session Chairs: J. Kim (Korea), H-Y. Ng (Singapore)	SESSION 37: SOLAR MEMBRANE DISTILLATION Venue: Room Argos Session Chairs: A. Schafer (Germany), C. Cabassud(France)	SESSION 38: FORWARD OSMOSIS/RO/ PRO Venue: Room Spot Session Chairs: H K. Shon (Australia), L. D. Nghiem (Australia)	SESSION 39: MBR MODELLING Venue: Room Diamant Session Chairs: G. Mannina (Italy), M. Heran (France)
10:40-11:10	MBR performances in wastewater source-separation scheme <u>C. Joannis-Cassan</u> , N. Gambier, C. Guigui (France)	Keynote: Importance of fluidized media for anaerobic fluidized MBR: Fouling control, microbial distribution and system performance J. Kim (Korea)	Keynote: Integrated solar heating vacuum membrane distillation for remote places: issues and perspectives C. Cabassud (France)	Keynote: GreenPRO for osmotic pumping employing fertilizer draw solution H- K. Shon (Australia)	Keynote: Frontiers and new perspectives in MBR modelling and control G. Mannina (Italy)
11:10-11:30	Producing ammonia nitrate liquid fertilizer from urine using MBR <u>J. Li</u> , X. Cui, Y. Li, K. Xu, C. Wang (China)	Performance Evaluation of Anaerobic Membrane Bioreactor for Domestic Wastewater Treatment <u>S.J. Khan</u> , A. Aslam (Pakistan)	Enhancing solar membrane distillation performance using core-shell nanofibers <u>R. Xin</u> , Y. Chen, K. Zuo, K. Tung, Q. Li (USA, Taiwan)	Forward osmosis with high concentration draw solution recovery system C. Patrut, <u>L. Van Dijk</u> , C. Kazner, R. Wunsch, M. Pastur, J. Palacin, J. Kochan, F. Zorn, S. Vila, C. Niewersch, J. Koppe (European consortium)	Statistical modelling of a semi-industrial scale membrane bioreactor using fuzzy inference methods <u>M. Alliet</u> , E. Suard, Y. Fayolle, S. Guerin, H. Jones, S. Guillaume, V. Rocher, C. Albasi, S. Gillot (France)
11:30-11:50	Membrane bioreactor for urinary nitrogen stabilization: microbial acclimation and system performance <u>G. Lesage</u> , C. Jacquin, M. Monnot, F. Zaviska, T. Merle, G. Lesage, M. Heran (France, Switzerland)	Effect of ultrafiltration membrane material on fouling dynamics in submerged anaerobic MBR treating domestic wastewater <u>A.D. Grossman</u> , Y. Yang, D. Calero Camarena, G. Oron, R. Bernstein (Israel)	Vacuum-enhanced air-gap membrane distillation as a viable solution for solar desalination <u>G. Zaragoza</u> , J.A. Andres-Manas, F.G Acien, A. Ruiz-Aguirre (Spain, Italy)	Forward osmosis for wastewater concentration: lab and pilot case studies <u>G. Blandin</u> , E. Onishchenko, F. Ferrari, E. Mendoza, G. Buttiglieri, J. Comas, I. Rodriguez-Roda (Spain)	Fuzzy logic control for energy saving in submerged membranes H. Monclus, A. Galizia, G. Blandin, O. Lorain, M. Verdaguer, M. Poch, I. Rodriguez-Roda, J. Comas (Spain, France)
11:50-12:10	Techno-economic feasibility of recovering phosphorous, nitrogen from urine via forward osmosis <u>F. Volpin</u> , L. Chekli, M.A.H. Jahir, S. Phuntsho, J. Cho, N. Ghaffour, J.S. Vrouwenvelder, H-K. Shon (Australia, Korea, Saudi Arabia)	Size-Dependent Microbial Diversity of Sub-Visible Particles in a Submerged Anaerobic MBR: Implications for Membrane Fouling Z. Zhou, Y. Tao, <u>Y. Xiao</u> , F. Meng, D. Stuckey (China, Singapore, UK)	Insight on thermoplasmonic effects in photothermal membrane distillation <u>D. Elmagrahouj</u> , S. Jaziri, A. Politano (Tunisia, Italy)	Quantitative Analysis on the Irreversible Membrane Fouling of FO for WW Reclamation: Applicability of the Modified Fouling Index <u>M. Zhan</u> , G. Gwak, S. Hong (Korea)	CFD simulation of aeration process and baffle influence in a full-scale commercial flat sheet module <u>Y. Cao</u> , B. Gu, A. Sonnenburg, W. Urban (Germany)
12:10-12:30	Combination of membrane processes and ozonation for source-separated urine valorization <u>H. Deng</u> , H. Hoang, J.S. Pic, C. Guigui (France)	Characterization of AnMBR effluent: Towards post-treatment and reuse possibilities of municipal wastewater N. Zamanfar, P. Dolejs, J. Bartacek, J. Hejnic, P. Zednicek, M. Vojtkova, E.A. Garmendia, M. Pecenka, J.R. Ambrozova, R. Grabic (Czech Rep.)	Photocatalytic PVDF-based nanocomposite membranes with advanced antifouling properties under visible light irradiation J. Yin, W. Xiaofeng, P. Wan, <u>B. Deng</u> (USA)	Sacrificial coating development for biofouling control in RO membranes <u>M.F. Nava-Ocampo</u> , S.S. Bucs, A.S.F. Farinha, M. Son, B. Logan, J. Vrouwenvelder (Saudi Arabia, USA)	CFD modelling of a novel aeration system in full-scale FS sMBR to reduce the uneven shear stress distribution <u>M. Liu</u> , Y. Wei, M. Chen, D. Yi, J. Zheng, J. Chang (China)
12:30-13:30	LUNCH				

26 JUNE 2019 (WEDNESDAY)					
	SESSION 40 : WASTE WATER REUSE Venue: Room Guillaumet 1 Session Chairs: T. Leiknes (Saudi Arabia), Z. Whang (China)	SESSION 41: ANAEROBY MBR Venue: Room Guillaumet 2 Session Chairs: J. Kim (Korea), H-Y. Ng (Singapore)	SESSION 42: PHOTO-CATALYSIS Venue: Room Argos Session Chairs: J. Crespo (Portugal), M. Fidalgo (USA)	SESSION 43: FOULING in RO Venue: Room Spot Session Chairs: E. Cornelissen (Netherlands), H. Buisson (France)	SESSION 44: MBR MODELLING Venue: Room Diamant Session Chairs: G. Mannina (Italy), M. Heran (France)
13:30-14:00	Keynote: Water reclamation and reuse for urban agriculture; pros and cons, opportunities or unsustainable? T. Leiknes, (Saudi Arabia)	Keynote: Challenges and Improvements in AnMBR Operations H-Y. Ng (Singapore)	Keynote: Development of photocatalytic membranes and reactors for water and wastewater treatment J. Crespo (Portugal)	Keynote: Novel Feed Spacers Design for Fouling Mitigating in Membrane Filtration N. Ghaffour (Saudi Arabia)	Keynote: Steady-state approach for ASM1 states variables calculation in MBR M. Heran (France)
14:00-14:20	Disruptive water reuse scheme based on Direct Ultrafiltration (DUF) of municipal wastewaters Y. Poussade, H. Humbert, I. Saudrais, C. Daines, F. Boisquillon, H. Faujour (France, United Arab Emirates)	Removal and biotransformation pathway of antibiotic Sulfamethoxazole in anaerobic membrane bioreactor C.H. Wei, C. Sanchez-Huerta, T. Leiknes, H. Rong, Q. Fang (China, Saudi Arabia)	PVDF-TiO2 photocatalytic membrane performances with pure water - A cost/efficiency study J-P. Mericq, D-T Tran, J. Mendret, C. Faur, S. Brosillon (France)	MRI & NMR investigation of early fouling in spiral wound reverse osmosis membrane modules N. Bristow, J.S. Vogt, S.S. Bucs, J.S. Vrouwenvelder, M.L. Johns, E. Fridjonsson (Australia, Netherlands)	pH-control for acclimation of sludge to high nitrogen content in a MBR: A modeling approach. J.D. Arce Velasquez, J. Laurent (France)
14:20-14:40	Capacitive-deionization-enhanced ultrafiltration for advanced wastewater reclamation M. Li, S. Liang (China)	Quorum quenching in anaerobic membrane bioreactors (AnMBRs) for resilience to toxic shocks Y. Xiao, Z. Zhou, D. Stuckey (China)	Expanding the use of Ceramic Membranes H. Gray, T. Powell (Canada)	Interaction between dissolved silica and alginate in reverse osmosis fouling S. Wang, X. Huang, M. Elimelech (China, USA)	Progress towards standards in integrated (aerobic) MBR modelling C. Brepols, Q. Comas, J. Harmand, M. Heran, A. Robles, I. Rodriguez-Roda, M.V. Ruano, I. Smets, G. Mannina (European Consortium)
14:40-15:00	Development of an electrochemical dynamic membrane filtration system for simultaneous separation and disinfection Q. Lei, Z. Wang (China)	Performance of a high solid content forward osmotic membrane bioreactor for sludge anaerobic digestion H. Zhu, J. Zhao (China)	Photocatalysis for MBR Post-Treatment: Effect of membrane state on Effluent Organic Matter quenching M. Maghsoodi, C. Jacquin, B. Teychene, G. Lesage, M. Heran, V. Tarabara, S.D. Snow (USA, France)	ATR Spectroscopy of Membrane Fouling: Deconvolution of ATR Spectra of the Substrate and Fouling Films G.V. Korshin, H. Guo, X. Tang (USA, China)	Evaluation of a resource efficient deoxygenation MBR zone using trials and simulation S.L. Andersson, K. Westling, S. Andersson, E. Lindblom, S. Taylor (Sweden)
15:00-15:20	Low-energy desalination process by the membrane capacitive deionization process for domestic wastewater reuse C.-H. Hou, C.-S. Fan, Y. Chao (Taiwan)	Nitrogen removal and microbial population dynamics in a bacterial-algal membrane-aerated biofilm reactor (BA-MABR) R. Wang, X. Cheng, Y. Ren, C. Ma, X. Zeng (China)	Self-cleaning electrospun BiOBr/Ag photocatalyst membrane applied for textile wastewater treatment J. Guo, D.Y.S. Yan, F.L.-Y. Lam, B.J. Deka, A.K.J. An (China)	Fouling behavior of isolated organic fractions from seawater in reverse osmosis (RO) desalination process W. Yin, E. Cornelissen, H.Chong Tzzy (Singapore, Belgium)	CFD Modelling of a Bench Scale Vibratory MBR Module R. Kaya, V. Tarabara, I. Koyuncu (Turkey, USA)
15:20-15:40	Afternoon break				
26 JUNE 2019 (WEDNESDAY)					
PLENARY AND CLOSING CEREMONY					
15:40-16:20	PLENARY 5 : Water and circular economy: the new frontier for membranes, Prof. Emeritus Roger BEN AIM (IFTS), France				
16:20-17:00	CONFERENCE CLOSING and AWARDS for best Student presentations				