

26 JUNE 2019 (WEDNESDAY)					
	SESSION 30 : OXIDATION/OZONATION	SESSION 31: WASTE WATER REUSE	SESSION 32: RENEWABLE ENERGIES	SESSION 33: RESOURCE RECOVERY	SESSION 34: MEMBRANE AGING AND LIFE CYCLE
	Venue: Room Guillaumet 1 Session Chairs: H. K. Shon (Australia), M. Monnot (France),	Venue: Room Guillaumet 2 Session Chairs: T. Leiknes (Saudi Arabia), K. Kimura (Japan)	Venue: Room Argos Session Chairs: A. Schafer (Germany), A. Ahmadi (France)	Venue: Room Spot Session Chairs: S. Vigneswaran (Australia), I. Koyuncu (Turkey)	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. Yuksekdag, 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. Lapicque (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. Siebdrath, 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. Beaume, 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. Grönning, 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				

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	SESSION 35: SOURCE SEPARATION	SESSION 36 : ANAEROBY MBR	SESSION 37: SOLAR MEMBRANE DISTILLATION	SESSION 38: FORWARD OSMOSIS/RO/ PRO	SESSION 39: MBR MODELLING
	Venue: Room Guillaumet 1 Session Chairs: How-Yong Ng (Singapore), C. Joannis-Cassan (France)	Venue: Room Guillaumet 2 Session Chairs: J. Kim (Korea), H-Y. Ng (Singapore)	Venue: Room Argos Session Chairs: A. Schafer (Germany), C. Cabassud(France)	Venue: Room Spot Session Chairs: H K. Shon (Australia), L. D. Nghiem (Australia)	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 M. Alliet, 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. Verdaguier, 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. Johir, 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 <u>Z. Zhou</u> , Y. Tao, <u>Y. Xiao</u> , F. Meng, D. Stuckey (China, Singapore, UK)	Insight on thermoplasmonic effects in photothermal membrane distillation <u>D. Elmagrahoui</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. Zednick, M. Vojtiskova, E.A. Garmendia, M. Pecenka, J.R. Ambrozova, R. Gracic (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				

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	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. Maghsoudi, 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 Tzyy (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				

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	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				