

MST2019 Day 1 on 13 June 2019, Thursday

TIME	DAY 1 PROGRAMME
	VENUE: NEC AUDITORIUM @ LEVEL 2, NTU
08:00 ~ 08:45	Registration
08:45 ~ 08:55	Welcome Speech by Conference Chair Prof. Rong WANG, Nanyang Environment & Water Research Institute/Singapore Membrane Technology Centre, Nanyang Technological University (NEWRI/SMTC, NTU), Singapore
08:55 ~ 09:10	Opening Speech by Guest of Honour Prof. Anthony G. FANE, University of New South Wales (UNSW), Australia
	PLENARY SESSIONS Session Chair: Prof. Rong WANG, NTU
09:10 ~ 09:50	Plenary Lecture 1 Prof. Kang LI, Imperial College London, UK <i>Robust Micro-tubular and Micro-monolithic Ceramic Membranes</i>
09:50 ~ 10:20	Coffee Break
10:20 ~ 11:00	Plenary Lecture 2 Prof. Jeffrey MCCUTCHEON, University of Connecticut, USA <i>3D Printed Thin Film Composite Membranes</i>
11:00 ~ 11:40	Plenary Lecture 3 Prof. J.S. (Hans) VROUWENVELDER, King Abdullah University of Science & Technology (KAUST), Saudi Arabia <i>Biofouling of Membrane Systems for Drinking Water Production: Diagnosis, Prediction and Prevention</i>
11:40 ~ 12:20	Plenary Lecture 4 Prof. Yung CHANG, Chung Yuan Christian University, Taiwan <i>Bio-Inspired Zwitterionic Membranes</i>
12:20 ~ 12:30	Group Photo Taking
12:30 ~ 13:40	Lunch Break

TIME	DAY 1 PROGRAMME			
	VENUE: NEC SMALL LECTURE THEATRE (SLT) @ LEVEL 3, NTU			
	PARALLEL SESSIONS			
	Session 1 – SLT Room 3 Advanced membrane materials I Session Chair: Assoc. Prof. Zhansheng LI	Session 2 – SLT Room 4 Membrane for wastewater treatment and industrial application I Session Chair: Dr. Bing WU	Session 3 – SLT Room 5 Nanofiltration/Organic Solvent Nanofiltration Session Chair: Dr. Wangxi FANG	Session 4 – SLT Room 6 Emerging membrane processes (FO, PRO, MD) Session Chair: Prof. Fu LIU
13:40 ~ 14:10	Keynote 1 Prof. Sui ZHANG National University of Singapore Author: Sui Zhang <i>Two-dimensional materials for membrane-based molecular separation</i>	Keynote 2 Prof. Fauzi ISMAIL Universiti Teknologi Malaysia Authors: Ahmad Fauzi Ismail, Goh Pei Sean <i>Membrane Bioreactor for Wastewater Treatment: Technological Advancement and Experiences Beyond the Laboratory</i>	Keynote 3 Prof. Jian JIN Chinese Academy of Sciences, China Author: Jian Jin <i>Nanomaterials-assisted Construction of Nanofiltration Membranes with Improved Permeability</i>	Keynote 4 Prof. Am JANG Sungkyunkwan University, Korea Author: A. Jang <i>Low Energy Desalination Technologies: Forward Osmosis-Reverse Osmosis Hybrid System</i>
14:10 ~ 14:30	Oral 01 Authors: <u>R. Xie</u> , F. Luo, X.X. Fan and L.Y. Chu Sichuan University, China <i>Smart Gating Membranes with Responsive Nanogels As Functional Gates</i>	Oral 02 Authors: <u>Jianqiang Wang</u> , and Fu Liu Chinese Academy of Sciences, China <i>Superwetting nanofibrous membrane for oil/water separation: mechanism and applications</i>	Oral 03 Authors: <u>Can Li</u> , Shuxuan Li, Baowei Su, Michael Z. Hu, Xueli Gao and Congjie Gao Ocean University of China <i>High solvent-resistant and nanoparticles-incorporated thin film nanocomposite membranes for organic solvent nanofiltration</i>	Oral 04 Authors: Shenghua Zhou, <u>Fu Liu</u> , Jianqiang Wang, Haibo Lin, Qiu Han, Shuaifei Zhao and Chuyang Y. Tang Chinese Academy of Sciences, China <i>Janus Membrane With Unparalleled Forward Osmosis Performance</i>
14:30 ~ 14:50	Oral 05 Authors: <u>D.M. Reurink</u> , E. te Brinke, I. Achterhuis, H.D.W. Roesink, W.M. de Vos University of Twente, The Netherlands <i>Nafion-based low hydrated polyelectrolyte multilayer membranes for enhanced water purification</i>	Oral 06 Authors: <u>Yuan Liao</u> , Rong Wang, Jinhui Huang Nankai University, China <i>Development and evaluation of nanofibrous composite membranes for extractive membrane bioreactors</i>	Oral 07 Authors: <u>Sara Abdikhebari</u> , Weiwei Lei, Ludovic F. Dumée, Anders J. Barlow, and Kanagaratnam Baskaran Deakin University, Australia <i>Amine functionalised boron nitride BN(NH₂) nanosheet-studded nanofiltration membranes with enhanced flux and fouling resistance</i>	Oral 08 Authors: <u>Syed Muztuza Ali</u> , Jung Eun Kim, Sherub Phuntsho, Ho Kyong Shon University of Technology Sydney, Australia <i>Development of an Optimization Algorithm for Full Scale Forward Osmosis Plant Design</i>
14:50 ~ 15:10	Oral 09 Authors: Shouhai Zhang, <u>Zhansheng Li</u> , Yuning Chen, Qian Liu, Danhui Wang, Zhaoqi Wang, Xigao Jian Dalian University of Technology, China <i>Development Of Poly(Phthalazinone Ether)S Membrane Materials For Energy And Water Treatment Applications</i>	Oral 10 Authors: <u>Bing Wu</u> , Seonki Lee, Matthias Sutter, Michael Burkhardt, Tzyy Haur Chong University of Iceland <i>Biocarriers Facilitated Gravity-Driven Membrane (GDM) Reactor for Decentralized Wastewater Reclamation</i>	Oral 11 Authors: <u>Yuzhang Zhu</u> , Zhenyi Wang, Yang Lu, Xiangxiu Teng, and Jian Jin Chinese Academy of Sciences, China <i>2D Nanowires Film Supported Nanofiltration Membrane for High-Efficient Desalination with Fast Water Permeance</i>	Oral 12 Authors: <u>Arvin Shadravan</u> , Pei Sean Goh, Ahmad Fauzi Ismail Universiti Teknologi Malaysia <i>Thin Film Nanocomposite Membranes Incorporated with Zeolite for Power Generation through Pressure Retarded Osmosis</i>

TIME	DAY 1 PROGRAMME			
15:10 ~ 15:30	<p style="text-align: center;">Oral 13</p> <p style="text-align: center;">Authors: <u>Guoliang Liu</u>, and Dan Zhao National University of Singapore</p> <p style="text-align: center;"><i>Thin Film Nanocomposite Membranes Containing Water-Stable Metal-Organic Cages for Desalination</i></p>	<p style="text-align: center;">Oral 14</p> <p style="text-align: center;">Authors: <u>S. Gao</u>, J. Jin Chinese Academy of Sciences, China</p> <p style="text-align: center;"><i>Superwetting Membranes for High-Performance Separation of Oil-in-Water Emulsions</i></p>	<p style="text-align: center;">Oral 15</p> <p style="text-align: center;">Authors: <u>B. X. Gu</u>, Y. L. Ji, and C. J. Gao Zhejiang University of Technology, China</p> <p style="text-align: center;"><i>Polyamide Composite Membranes Incorporated With Fluorinated Organic Nanoparticles For Organic Solvent Nanofiltration</i></p>	<p style="text-align: center;">Oral 16</p> <p style="text-align: center;">Authors: <u>Ziwen Yuan</u>, Li Wei, Jannatul Dil Afroze, Kunli Goh, Yumao Chen, Yanxi Yu, Qianhong She and Yuan Chen The University of Sydney, Australia</p> <p style="text-align: center;"><i>Pressure-retarded membrane distillation for low-grade heat recovery: the critical roles of pressure-induced membrane deformation</i></p>
15:30 ~ 17:30	Coffee Break and Poster Session (Presentation)			
18:30 ~ 21:00	Conference Dinner at NEC @ Level 3 Function Hall 1			

MST2019 Day 2 on 14 June 2019, Friday

TIME	DAY 2 PROGRAMME		
	VENUE: NEC SMALL LECTURE THEATRE (SLT) @ LEVEL 3, NTU		
	PARALLEL SESSIONS		
	Session 5 – SLT Room 3 Advanced membrane materials II Session Chair: Dr. Yuan LIAO	Session 6 – SLT Room 4 Membrane for wastewater treatment and industrial application II Session Chair: Dr. Shuwen GOH	Session 7 – SLT Room 5 Gas separation I Session Chair: Dr. Kunli GOH
08:45 ~ 09:15	<p>Keynote 5 Prof. Zhongyi JIANG Tianjin University, China Author: Zhongyi Jiang <i>Bioinspired membranes and membrane processes</i></p>	<p>Keynote 6 Prof. Hokyong SHON University of Technology Sydney, Australia Authors: J. Jiang, F. Volpin, S. Phuntsho, H.K. Shon <i>Resource Recovery From Wastewater And Urine Using Membrane Technology</i></p>	<p>Keynote 7 Prof. Ali Akbar BABALUO Sahand University of Technology, Iran Author: Ali Akbar Babaluo <i>Ceramic Membranes Engineering for Liquid and Gas Separation Processes</i></p>
09:15 ~ 09:35	<p>Oral 17 Authors: Rika Wijiyanti, Triyanda Gunawan, Zulhairun Abdul Karim, Ahmad Fauzi Ismail, <u>Nurul Widiastuti</u> Institut Teknologi Sepuluh Nopember, Indonesia <i>Preparation, characterization and performance of zeolite templated carbon as filler in polysulfone membrane</i></p>	<p>Oral 18 Authors: <u>S. Goh</u>, S. R. Suwarno, S. Bhuvana and J. A. Prince Ngee Ann Polytechnic, Singapore <i>Recovery of acetone from an industrial acetone-water mixture using pervaporation</i></p>	<p>Oral 19 Authors: <u>Euntae Yang</u>, Kunli Goh, Chuah Chong Yang, Rong Wang, Tae-Hyun Bae Nanyang Technological University, Singapore <i>Asymmetric flat-sheet Matrimid5218 membranes incorporated with nitrogen-doped graphene nanosheets for highly selective gas separation</i></p>
09:35 ~ 09:55	<p>Oral 20 Authors: <u>Bosirul Hoque</u>, M. Inês G. S. Almeida, T.G. Gopakumar, Robert W. Cattrall, Spas D. Kolev The University of Melbourne, Australia <i>Compatibility of cross-linking polymers in polymer inclusion membranes (PIMs) and their effect on membrane performance, stability and morphology</i></p>	<p>Oral 21 Authors: <u>H. Abdelrazeg</u>, M. Khraisheh, and M. K. Hassan Qatar University <i>Treatment of Synthetic Industrial Wastewater using Electrospun Polystyrene in Direct-Contact Membrane Distillation</i></p>	<p>Oral 22 Authors: <u>Shenzhen Cong</u>, Jing Wang, Yatao Zhang, Jindun Liu Zhengzhou University, China <i>ZIF-8@PIM-1 composite membrane prepared by Zn(OH)₂ nanosheet as template to achieve gas separation</i></p>

TIME	DAY 2 PROGRAMME			
09:55 ~ 10:15	<p>Oral 23</p> <p>Authors: R. M. Iqbal, W. P. Utomo, D. Hartanto, M. H. D. Othman, <u>H. Fansuri</u></p> <p>Institut Teknologi Sepuluh Nopember, Indonesia</p> <p><i>Morphology of $La_{0.7}Sr_{0.3}Co_{0.2}Fe_{0.8}O_{3-\delta}$ and $La_{0.7}Sr_{0.3}MnO_{3-\delta}$ Membranes Prepared By Various Ratio of PEG-H₂O Additive</i></p>	<p>Oral 24</p> <p>Authors: Nick Guan Pin Chew, <u>Yujun Zhang</u>, Kunli Goh, Jia Shin Ho, Rong Xu, Rong Wang</p> <p>Nanyang Technological University, Singapore</p> <p><i>Hierarchically-Structured Janus Membrane Surfaces for Enhanced Membrane Distillation Performance</i></p>	<p>Oral 25</p> <p>Authors: <u>Kunli Goh</u>, Euntae Yang, Chong Yang Chua, Wen Li, S.A.S.C. Samarasinghe, and Tae-Hyun Bae</p> <p>Nanyang Technological University, Singapore</p> <p><i>Engineering Membranes for Enhancing O₂/N₂ Separation</i></p>	
10:15 ~ 10:45	Coffee Break			
	<p>Session 8 – SLT Room 3</p> <p>Novel membrane and membrane processes</p> <p>Session Chair: Prof. Jianqiang MENG</p>	<p>Session 9 – SLT Room 4</p> <p>Nanofiltration/Reverse osmosis</p> <p>Session Chair: Dr. Jeng Yi CHONG</p>	<p>Session 10 – SLT Room 5</p> <p>Gas separation II</p> <p>Session Chair: Dr. Yunpan YING</p>	<p>Session 11 – SLT Room 6</p> <p>Membrane fouling and characterization</p> <p>Session Chair: Prof. Lei YAO</p>
10:45 ~ 11:15	<p>Keynote 8</p> <p>Asst. Prof. Yan ZHOU</p> <p>Nanyang Technological University, Singapore</p> <p>Authors: Jianbo Liu, Yan Zhou</p> <p><i>Membrane Fouling Control in Anaerobic Membrane Bioreactor Based on Quorum Quenching</i></p>	<p>Keynote 9</p> <p>Prof. Seoktae KANG</p> <p>Korea Advanced Institute of Science & Technology, Korea</p> <p>Authors: Y.K. Chung, S. Kang</p> <p><i>Facile preparation of ceramic nanofiltration (NF) membranes with controllable molecular weight cut-off (MWCO)</i></p>	<p>Keynote 10</p> <p>Prof. Shaomin LIU</p> <p>Curtin University, Australia</p> <p>Authors: Shaomin Liu, Xiaoyao Tan</p> <p><i>Nickel hollow fibre membranes for high temperature hydrogen separation and production from reforming reactions</i></p>	<p>Keynote 11</p> <p>Prof. I Gede WENTEN</p> <p>Institut Teknologi Bandung, Indonesia</p> <p>Authors: I G. Wenten, Khoiruddin, A. Harimawan, Y.P. Ting</p> <p><i>Comparison of Different Membrane Assisted Biosorptions During Sorption Processes</i></p>
11:15 ~ 11:35	<p>Oral 26</p> <p>Authors: Yunlong Xue, Bing Cao, and <u>Pei Li</u></p> <p>Beijing University of Chemical Technology, China</p> <p><i>A Handy-making Process for Fabricating PVA-based Interpenetrating Polymer Networks (IPNs) with High Performance of Desalination by Pervaporation: From Theory to Practice</i></p>	<p>Oral 27</p> <p>Authors: <u>Wangxi Fang</u>, Shoujian Gao, Xuesong Li, Jian Jin, and Rong Wang</p> <p>Chinese Academy of Sciences, China</p> <p><i>High-Performance Thin Film Composite (TFC) Membranes: Design Consideration Underneath the Polyamide Thin Film</i></p>	<p>Oral 28</p> <p>Authors: <u>Rongrong He</u>, Jing Wang, Yatao Zhang, Jindun Liu</p> <p>Zhengzhou University, China</p> <p><i>Constructing CO₂-philic membrane by adjusting EO chain ratio for sustainable CO₂ separations</i></p>	<p>Oral 29</p> <p>Authors: <u>Jingyuan Fei</u>, Weiting Mai, Paking Shing, Zongwen Liu, Qianhong She</p> <p>The University of Sydney, Australia</p> <p><i>Comparison of thin-film composite (TFC) and cellulose acetate (CTA) membrane in gypsum scaling</i></p>
11:35 ~ 11:55	<p>Oral 30</p> <p>Author: <u>Rakesh Joshi</u></p> <p>University of New South Wales, Australia</p> <p><i>Application of GO/rGO membranes for purification and separation</i></p>	<p>Oral 31</p> <p>Authors: <u>Jeng Yi Chong</u> and Rong Wang</p> <p>Nanyang Technological University, Singapore</p> <p><i>From micro to nano: Polyamide thin film on ceramic tubular membranes for nanofiltration</i></p>	<p>Oral 32</p> <p>Authors: <u>Yunpan Ying</u>, and Dan Zhao</p> <p>National University of Singapore</p> <p><i>Plasticization Resistance-Enhanced CO₂ Separation at Elevated Pressures by Mixed Matrix Membranes Containing Flexible Metal-Organic Framework Fillers</i></p>	<p>Oral 33</p> <p>Authors: <u>Yinghong Lu</u>, Hideyuki Komori, Kunihiro Hayakawa, Jia Shin Ho, Lee Nuang Sim, Tzyy Haur Chong</p> <p>Kurita R&D Asia, Singapore</p> <p><i>Application of the stabilized chlorine biofouling control agent in seawater reverse osmosis (SWRO)</i></p>

TIME	DAY 2 PROGRAMME			
11:55 ~ 12:15	<p style="text-align: center;">Oral 34</p> <p>Authors: Meng You, Jian Yin, Rongbo Sun, <u>Jianqiang Meng</u> Tianjin Polytechnic University, China <i>Water/salt transport properties of cellulose triacetate nanocomposite films</i></p>	<p style="text-align: center;">Oral 35</p> <p>Authors: Yujian Yao, <u>Xuan Zhang</u> Nanjing University of Science & Technology, China <i>Toward Enhancing the Chlorine Resistance of Reverse Osmosis Membranes: An Effective Strategy via an End-capping Technology</i></p>	<p style="text-align: center;">Oral 36</p> <p>Authors: <u>Jing Wang</u>, Shenzhen Cong, Yatao Zhang, Jindun Liu Zhengzhou University, China <i>NH₂-Co/ZIF-8 embedded PEO Based Mixed Matrix Membranes for Efficient CO₂ Separation</i></p>	<p style="text-align: center;">Oral 37</p> <p>Authors: <u>M. Margarito</u>, A. Beltran, A. Orbecido, M.A. Promentilla, B. Basilia and R. Damalerio De La Salle University, Philippines <i>Characterization and preliminary evaluation of antifouling performance of Composite Polymer-Metal Complex Membrane for Membrane Bioreactor Application</i></p>
12:15 ~ 12:35	<p style="text-align: center;">Oral 38</p> <p>Authors: <u>Xin Li</u>, Chang Liu, Wenqiang Yin, Tzyy Haur Chong, Rong Wang Nanyang Technological University, Singapore <i>Design and development of layer-by-layer based low-pressure antifouling nanofiltration membrane used for water reclamation</i></p>	<p style="text-align: center;">Oral 39</p> <p>Authors: <u>L.-F. Fang</u>, M.-Y. Zhou, B.-K. Zhu, H. Matsuyama Zhejiang University, China <i>Positively Charged Nanofiltration Membrane Based On Polyvinyl Chloride Copolymer</i></p>	<p style="text-align: center;">Oral 40</p> <p>Authors: <u>Chong Yang Chuah</u>, Wen Li, S. A. S. C. Samarasinghe, Yanqin Yang, Tae-Hyun Bae Nanyang Technological University, Singapore <i>Tailoring Structural Properties of Microporous Materials in Mixed-Matrix Membranes for CO₂/CH₄ Separation</i></p>	<p style="text-align: center;">Oral 41</p> <p>Authors: <u>Lei Yao</u> and Zhe Chen Wuhan Institute of Technology, China <i>Effect of Pore Resistance and Electrolyte Concentration in Membrane Characterization by Electrochemical Impedance Spectroscopy</i></p>
12:35 ~ 13:45	Lunch Break			
	VENUE: NEC AUDITORIUM @ LEVEL 2, NTU			
	PLENARY SESSIONS Session Chair: Asst. Prof. Tzyy Haur CHONG, NTU			
13:45 ~ 14:25	<p>Plenary Lecture 5</p> <p>Prof. Michael GUIVER, Tianjin University China Authors: Michael D. Guiver, Zhihua Qiao, Song Zhao, Zhi Wang, Chongli Zhong, Shaofei Wang, Zhongyi Jiang <i>Strategies for thin film composite membranes targeting CO₂ separations</i></p>			
14:25 ~ 15:05	<p>Plenary Lecture 6</p> <p>Prof. Dr. Ivo VANKELECOM, KU Leuven, Belgium <i>Novel approaches towards IFP for the preparation of GS, (SR)NF and RO membranes</i></p>			
15:05 ~ 15:35	<p>Awards Ceremony</p> <p>MST2019 Best Oral and Poster Award Prof. Rong WANG, NTU</p> <p>Membrane Society of Australasia (MSA) Travel Award Prof. Hokyong SHON, MSA President</p> <p>Closing Speech</p> <p>Prof. Juin-Yih LAI, Chung Yuan Christian University, Taiwan</p>			
15:35 ~ 16:00	Coffee Break			
16:00 ~ 18:00	SMTC Lab Tour and NTU Campus Tour			

POSTER

No	Titles	Authors
1	A Self-standing, Support-Free Membrane for Forward Osmosis with No Internal Concentration Polarization	Meng Li, Xuan Zhang, <u>Lianjun Wang</u> Nanjing University of Science & Technology, China
2	Biofouling prevention of drinking water Reverse Osmosis membrane by Vanillin: Comparative Metagenomics	<u>Smita Pal</u> , Asifa Qureshi, Hemant J. Purohit Academy of Scientific & Innovative Research (AcSIR), India
3	Preparation and performance of nonwoven fabric reinforced PVDF/GR hollow fiber composite microfiltration membrane	<u>Xiujuan Lan</u> , Huiying Chen, Yubin Hong Suntar Environmental Technology Co., Ltd, China
4	Improved rejection ability of interfacially synthesized polyester thin-film composite membrane by surface cross-linking	<u>Zhenhua Lü</u> , Meihong Liu and Sanchuan Yu Zhejiang Sci-Tech University, China
5	Triblock copolymer polymersomes incorporating Aquaporin Z proteins for biomimetic membranes	<u>R. Gorecki</u> , D. M. Reurink, M. M. Khan, K. Trzaskus and C. Helix-Nielsen Technical University of Denmark
6	Design and fabrication of hierarchical porous membrane for flow-through removal of aqueous micropollutants	<u>Dongxue Yao</u> , Na Ma, Ying Pan, Jian Yin, Jianqiang Meng Tianjin Polytechnic University, China
7	Synthesis of thin film composite polyamide membranes: Effect of chemical additives in aqueous and organic phases on membrane morphology and performance	<u>Meng You</u> , BinFei Wang, Hua Wang, Jianqiang Meng Tianjin Polytechnic University, China
8	Effect of UV Treatment and PEG Grafting on Polysulfone Membrane Surface to Improve Hydrophilicity for Wastewater Treatment	<u>S. Ruangdit</u> , T. Chittrakarn, C. Kaew-on and S. Sirijarukul Prince of Songkla University, Thailand
9	Dye Sensitizer of Chlorophyll as Mixed with TiO ₂ nanoparticle in photocatalytic for enhancing the hydrogen production	<u>W. Bootluck</u> , N. Junchoo, N. Meesiang, W. Khongnakorn and T. Chittrakarn Prince of Songkla University, Thailand
10	Tailoring the characteristics of graphene oxide membranes for gas separation and water purification	<u>T. Foller</u> , X. Jin, F.Wang, Y. You, R.K. Joshi University of New South Wales, Australia
11	Versatile Through-Hole Membranes with Ordered and Tuneable Pore Geometry	<u>Him Cheng Wong</u> , Mei Chee Tan, and Hong Yee Low Singapore University of Technology and Design