

# Symposium Program

The 3<sup>rd</sup> International Forum on Asian Water Environment  
Technology (IFAWET)

March 2-3, 2018

Auditorium at Shaw Foundation Alumni House, National University of Singapore



Friday, 2<sup>nd</sup> March 2018

**FRIDAY, 2 MARCH 2018**

## Morning Session

Time	Contents	Speakers	Affiliation
8:00	Registration		
9:00	Opening Remarks	Hiroaki Furumai	UT, Japan
<b>Session 1: Physicochemical technologies for water and wastewater treatment (Chair: Say Leong Ong)</b>			
<b>Keynote</b>			
9:10	UV technology advancement and application in Singapore	Jiangyong Hu	NUS, Singapore
9:40	Monitoring quorum sensing signaling molecules in MBRs	Tomohiro Tobino	UT, Japan
10:00	Ozonation and electrolysis for seawater application	Youmi Jung	NUS, Singapore
10:20	Application of membrane filtration against highly turbid surface water in tropical region -Pore size selection and particle rejection for appropriate potable water supply-	Takashi Hashimoto	UT, Japan
10:40	New approach to seawater desalination for sustainable water supply	Kim Choon Ng	NUS/KAUST
11:00	Networking Coffee Break and Poster Viewing		
<b>Session 2: Emerging microbial risks in water environment and microbial ecology (Chair: Tomohiro Tobino)</b>			
11:20	Novel methods for rapid detection of viral pathogens in water	Masaaki Kitajima	Hokkaido University, Japan
11:40	Rapid and real-time detection of microbial contamination using a Smart Technology	Sung Woo Bae	NUS, Singapore
12:00	Evaluation of biodegradable organic matter causing regrowth in drinking water	Ikuro Kasuga	UT, Japan
12:20	Lunch, Poster Viewing, and Poster Evaluation		

## Afternoon Session

Time	Contents	Speakers	Affiliation
<b>Session 3: Dynamics of micro-pollutants and dissolved organic matters in water environment (Chair: Ikuro Kasuga )</b>			
<b>Keynote</b>			
14:30	Ecotoxicity of micropollutants in urban water environment	Fumiyuki Nakajima	UT, Japan
15:00	Characterization of natural organic matter in a local reservoir	Fang Yee Lim	NUS, Singapore
15:20	Application of high resolution mass spectrometry to characterize dissolved organic matter in a eutrophic lake	Vitharuch Yuthawong	UT, Japan
15:40	Managing contaminants of emerging concern in Singapore	Mong Hoo Lim	PUB, Singapore
16:00	Networking Coffee Break and Poster Viewing		
<b>Kurita Water and Environment Foundation Special Session: Future of membrane technology in water and wastewater treatment (Chair: Sung Woo Bae)</b>			
16:30	Contribution of advanced membrane technologies to Singapore water projects	Kyaing Kyaing Latt	Toray Singapore Water Research Center, Singapore
17:00	Membrane distillation: principles, application and commercial aspects in water technology	Kyoungjin An	City University of Hong Kong
17:30	Anaerobic membrane bioreactor for wastewater treatment and reuse	How Yong Ng	NUS, Singapore
18:00	Simultaneous nutrients recovery and osmotic concentration of source-separated wastewater and urine	Hokyong Shon	University of Technology Sydney, Australia
18:30	Closing ceremony	Jiangyong Hu	NUS, Singapore
19:00	Networking Dinner		

## SATURDAY, 3 MARCH 2018

### Technical Tour

---

Time	Contents
8:00 – 13:00	Visit to Changi Water Reclamation Plant (Changi WRP) and NEWater Visitor Centre (NVC)  Meeting point: Shaw Foundation Alumni House, NUS

---

## LIST OF POSTERS

**1. Ozonation of a mixture of micropollutants in water**

Miao He, and Jiangyong Hu\*

**2. Electro-Peroxone Process for RO Concentrate Treatment**

Wei Hao Loh, Youmi Jung, Ong Say Leong and Jiangyong Hu\*

**3. Performance of modified AI-WTR columns for phosphorus and pathogen removals in stormwater runoff treatment**

Dong Xu, Lai Yoke Lee, Fang Yee Lim, Jiangyong Hu and Say Leong Ong\*

**4. Pilot-scale evaluation of reverse osmosis(RO)/pressure retarded osmosis(PRO) hybrid system for energy saving seawater desalination**

Jae-Wuk Koo, Sook-Hyun Nam, Eujoo Kim, Tae Sin Park, Yong Gun Park, Won Il Lee, Tae-Mun Hwang\*

**5. Application of Membrane Distillation for High Salinity Produced Water**

Jae-Wuk Koo, Tae-Mun Hwang\*, Sangho Lee

**6. The Feasibility Study of High-Strength N-methyl-2-pyrrolidone-Containing Process Wastewater Treatment Using Sequencing Batch Reactors and Membrane Bioreactors**

Bing Wu, Chun Heng Loh, Rong Wang

**7. Photoelectrocatalytic Degradation of Trimethoprim: Effect of Reverse Osmosis Concentrate Matrix**

Chen Yiwei, Ding Han, and Hu Jiangyong\*

**8. Deactivation of Sulphonamide Resistance *SUL1* Genes by Ultraviolet, Chlorination and Simultaneous UV/Cl<sub>2</sub> Combined Processes**

Xiaochen Liu, and Jiangyong Hu\*

**9. Removal of estrogenic activity from nanofiltration concentrates of landfill leachate by UV-Fenton process assessed with human breast carcinoma cell line**

Gang Lu, Mianwei Hong, Lingfei Zhu\*

**10. Photocatalytic degradation of acetaminophen in aqueous solution by TiO<sub>2</sub> pellets in a flat plate reactor**

Reza Katal, Mojtaba Salehi, and Jiangyong Hu\*

- 11. Usage of macro and micro-nano bubbling reactors to improvise transferred ozone demand**  
Ying Shen Toh, Lakshmi Jothinathan, Ong Say Leong and Jiangyong Hu\*
- 12. Water Supply Pipe Cleaning Technology Using Ozone Water and Organic Acid**  
Airi Ikedo
- 13. Fe-Mn-GAC Catalyst Activate H<sub>2</sub>O<sub>2</sub> to Degrade Rhodamine B**  
Gucheng Zhang, Lakshmi Jothinathan, Yongli Zhang, Ong Say Leong and Jiangyong Hu\*
- 14. Comparison of Seeded and Conventional Precipitative Softening for Pre-treatment of Industrial Reverse Osmosis Concentrate**  
Huimin Feng, Jonathan Zhiqiang Lee, Lai Yoke Lee, Say Leong Ong, How Yong Ng\*
- 15. Comparison of the Performance and Bioactivity of BAC Columns Treating Fenton and Ozone-treated Reverse Osmosis Concentrate**  
Li Rui, Ong Say Leong and Hu Jiangyong\*
- 16. Impact of Anthropogenic Activities on the Microbiological Water Quality of Drinking Water Sources in Nuwara Eliya District, Sri Lanka.**  
S. W. M. K. U. K. Wanninayake\*
- 17. Effects of bacteria on degradation of sediment eDNA with different fragment length**  
Nan WEI\*, Fumiyuki NAKAJIMA\*, Tomohiro TOBINO\*\*
- 18. Discriminating activated sludge flocs from biofilm microbial communities in a novel pilot-scale reciprocation MBR using high-throughput 16S rRNA gene sequencing**  
Ryan De Sotto, Jaeho Ho, Woonyoung Lee and Sungwoo Bae\*
- 19. Mass Spectrometry Based Metabolomic Profiling of Zebrafish (Danio rerio) Embryos Exposed to the Methyl-Triclosan**  
Fu Jing, Sungwoo Bae\*
- 20. Investigation of Bromide Interference in Standard COD Measurement**  
Tsuey Shan Yeap, Shujuan Huang, Xueqing Shi, How Yong Ng\*
- 21. Pretreatment of saline antibiotic wastewater using marine microalga**  
Shujuan Huang, Tsuey Shan Yeap, Xueqing Shi, How Yong Ng\*
- 22. Removal of crystal violet dye in textile wastewater using rice husk as a biosorbent**  
Poornima Rajapaksha, Awanthi Wathukarage, A.M.A.N.B. Attanayake, M.C.M Iqbal\*

**23. Spatial-temporal distribution of PPCPs as sewage markers and their relationship with microbial fecal indicators following a rainfall event in the Tokyo coastal area**

Chomphunut Poopipattana, Misaki Nakajima and Hiroaki Furumai\*

**24. Tetracycline resistance genes in an oxytetracycline production wastewater treatment system**

Miaomiao Liu, Yu Zhang, Min Yang