

11th IWA Symposium on Tastes, Odours and Algal Toxins in Water: Occurrence and Control

14th - 16th February 2017, Sydney, Australia

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Day 1 - Tuesday 14 February 2017

08:45-09:30	Arrival, Registration & Morning Tea	
09:30-10:30	09:30-09:50	Welcome to Country: Aboriginal ceremony and acknowledgement of the traditional custodians of the land
	Opening Session (Room C)	
	10:00-10:25	Open & welcome organising committee; <b>Arash Zamyadi</b> (Australia) Welcome SG chair; <b>Andrea M. Dietrich</b> (USA) Welcome UNSW-GWI; <b>Nick Schofield</b> (Australia) Transfer to the technical sessions (5 minutes)
10:30-12:00	Sessions	1. Occurrence & Detection (Room C) Chair: <b>Nicholas D. Crosbie</b> (Australia)
		2. Analytical Methods & Modelling (Room B) Chair: <b>Rita Henderson</b> (Australia)
	10:30-11:00 Theme speech	O19_The drinking water Taste-and-Odour Wheel "2016"; <b>I.H. (Mel) Suffet</b> , <i>Scott Braithwaite, Yubin Zhou, and Auguste Bruchet. (USA &amp; France)</i>
	11:00-11:20	O62_ Fishy odour problem induced by algae in source water during lower temperature period: occurrence and typical odourant identification; <b>Jianwei Yu, Min Yang</b> , <i>Tingting Liu, Zeyu Jia and Ming Su. (China)</i>
	11:20-11:40	O29_Controlling factors on the periods and vertical distribution of algal bloom in a subtropical off-Channel reservoir; <b>Meng-chieh Han</b> and <i>Shian-chee Wu.</i> <i>(Taiwan)</i>
	11:40-12:00	O03_Effects of light and temperature on the growth and 2- methylisoborneol production by benthic and planktonic cyanobacterial species; <b>Te Shu Harn</b> , <i>Yew-Hoong</i> <i>(Karina) Gin, and Chek Yin Boo. (Singapore)</i>
		O044_Can algal toxin production be predicted? A study of the toxic cyanobacterium <i>Cylindrospermopsis raciborskii</i> ; <b>Michele A Burford</b> , <i>Anusuya Willis, Phil Orra, and Brett Neilan. (Australia)</i>
		O25_Monitoring of harmful cyanobacteria in Taiwan's drinking water reservoirs using real time PCR; <b>Y.T. Chiu</b> , <i>Y.H. Chen, H.K. Yen, and Tsair-Fuh Lin. (Taiwan)</i>
		O55_ Identification of fluorophores released by cyanobacterial species using fluorescence spectroscopy and parafac analysis; <b>Sara Imran Khan</b> , <i>Arash Zamyadi,</i> <i>Richard Stuetz and Rita Henderson. (Australia)</i>
		O013_Validation and performance comparison of in situ fluorescence: probes for real-time cyanobacteria monitoring; <b>Florence Choo</b> , <i>Arash Zamyadi, Gayle Newcombe, Richard Stuetz, and Rita Henderson. (Australia)</i>
12:00-12:10	Group photo	
12:10-13:00	Lunch	
13:00-14:30	Sessions	3. Occurrence & Detection (Room C)_ Chair: <b>Mick Bales</b> (Australia)
		4. Analytical Methods & Modelling (Room B) Chair: <b>Ricard Devesa Garriga</b> (Spain)
	13:00-13:30 Theme speech	O02_Occurrence and detection of taste and odour compounds and algal toxins (tentative title); <b>Andrea M. Dietrich</b> . (USA)
		O038_ Intricacies of odour response to chemicals in mixtures; <b>Daniel L. Gallagher</b> , <i>Katherine Phetxumphou, Elizabeth Smiley, and Andrea M. Dietrich. (USA)</i>

13:30-13:50	O16_Occurrence of phenylacetone nitrile as an odorous nitrogenous disinfection by-products in drinking water and its amino acid and algal precursors; <b>Xiaoyan Ma, Jing Deng, Jiao Feng, Narasimhamurthy Shanaiah, Elizabeth Smiley, and Andrea M. Dietrich</b> . (China & USA)	O53_How can one define objection and rejection of drinking water tastes and odours in water supply?; <b>I.H. (Mel) Suffet, Shannon Roback and Michael J. McGuire</b> . (USA)
13:50-14:10	O36_Nationwide typical organism-derived drinking water odour incidents in China: characterization and causes (2007-2015); <b>Ze-hua Liu, Yin Hua, and Dang Zhi</b> . (China)	O43_Improving water quality by investing in sensory education and training; <b>Evelyne Canterranne - FlavorActiv Ltd</b> . (UK)
14:10-14:30	O63_Occurrence of 52 typical odour causing compounds in drinking water of major cities across China; <b>Hongyan Li, Jianwei Yu, Chunmiao Wang, Yu Zhiyong and Min Yang</b> . (China)	O6_Variations between odorous VOCs detected by assessors via gas chromatography coupled with mass spectrometry and olfactory detection port (ODP) system; <b>Radoslaw Barczak, Ruth M. Fisher, Xinguang Wang, and Richard M. Stuetz</b> . (Poland & Australia)
14:30-15:00	Afternoon Tea	
15:00-17:00	Session	Workshop
	15:00-17:00	Water Sensory and Proficiency Workshop (Room LG01 & LG02) <b>Evelyne Canterranne (UK)</b>
17:15-20:00	Reception & Social Networking Event at UNSW The Whitehouse (Located in the campus; walking distance from the venue)	

#### Day 2 - Wednesday 15 February 2017

08:30-09:00	Arrival		
09:00-10:30	Sessions	5. Occurrence & Detection (Room C) Chair: <b>Ron Hofmann (Canada)</b>	6. Customer perception (Room B) Chair: <b>Dries Vandamme (Belgium)</b>
	09:00-09:30 Theme speech	O60_Surveillance and management of bloom-forming cyanobacteria in shallow urban water bodies – research needs, policy and guidance for a warming climate; <b>Nicholas D. Crosbie, Brendan Gladman, Trish Grant, and Judy Blackbeard</b> . (Australia)	O34_Predicting water taste liking from mineral composition; <b>Ricard Devesa Garriga, S. Platikanov, c, A. Hernández, S. González, J.L Cortina, and R. Tauler</b> . (Spain)
	09:30-09:50	O37_Sources of taste and odour in the Mid-Brisbane River water supply; <b>Hannah M. Franklin, David Roberts, and Michele Burford</b> . (Australia)	O31_Assessment of drinking water quality and user perceptions between filling stations and water fountains on a college campus: a mixed methods approach; <b>Courtney A. Crist, Andrea M. Dietrich, Matthew Schroeder, and Susan E. Duncan</b> . (USA)
	09:50-10:10	O51_Response of cylindrospermopsin production to varying light intensities by cylindrospermopsis sp. Isolated from tropical waters; <b>Yew-Hoong (Karina) Gin, N.H. Mohamed Nor, S.H. Te, B.F. Tan, and J.R. Thompson</b> . (Singapore)	O8_Effect of drinking water minerals on sweetness and metallic taste perception and emotional response of sweetened beverage; <b>Susan E. Duncan, Aili Wang, and Andrea M. Dietrich</b> . (USA)
	10:10-10:30	O68_Light effect on the growth and odour production potential of two typical MIB-producing algae; <b>Jianwei Yu, Min Yang, Zeyu Jia, Ming Su and Tingting Liu</b> . (China)	O48_Improving consumer lexicon to describe aesthetic issues in water quality; <b>Katherine Phetxumphou, Aarathi Raghuraman, Daniel L. Gallagher, and Andrea M. Dietrich</b> . (USA)
10:30-11:00	Morning Tea		
11:00-12:30	Sessions	7. Treatment Techniques (Room C) Chair: <b>Arash Zamyadi (Australia)</b>	8. Aqua Culture (Room B) Chair: <b>Radoslaw Barczak (Poland)</b>

	11:00-11:30 Theme speech	O32_Kinetics and management of cyanotoxin removal and cyanobacterial lysing in water treatment; <b>Craig Adams</b> , Ben Stanford, Eric Wert, Arash Zamyadi, Elisa Arevalo, and Erik Rosenfeldt. (USA & Australia)	O4_Overview of off-flavours in water and fish in aquaculture systems with or without water recirculation; <b>Niels O G Jørgensen</b> , Mikael A. Petersen, and Raju Podduturi. (Denmark)
	11:30-11:50	O64_Seasonal occurrence of T&O and micro pollutants in drinking water sources – evaluation of treatment strategies using oxidation and biological active filtration; <b>Louis Wiart</b> and Jens Scheideler. (Germany & Australia)	O5_Off-flavour characterization of Nile tilapia cultured in net cages of hydroelectric reservoirs, São Paulo State, Brazil; <b>Niels O G Jørgensen</b> , <b>Raju Podduturi</b> , Mikael Agerlin Petersen, Louise Schlüter, and Gianmarco da Silva David. (Denmark & Brazil)
	11:50-12:10	O18_Characterization of disinfection-by-product precursors derived from green algae; <b>Lap-Cuong Hua</b> , Jr-Lin Lin, and Chihpin Huang. (Taiwan)	O22_Microbial populations causing off-flavour in recirculated aquaculture systems; <b>Mie Bech Lukassen</b> , Edward Schramm, and Jeppe Lund Nielsen. (Denmark)
	12:10-12:30	O23_Removal of geosmin and 2-MIB using photo-Fenton oxidation; <b>Jeong-Ann Park</b> , Hye-Lim Nam, Boram Yang, Sung-Mok Jung, Chanhyuk Park, JunSu Ha, and Sanghyup Lee. (Korea)	O33_Cage aquaculture, eutrophication and toxins in large freshwater reservoirs in south-eastern Brazil; <b>Gianmarco S. David</b> , Louise Schlüter, Andrea Tucci, Andréa S. Dias, Cacilda T. J. Mercante, Reinaldo J. Silva, and Niels O. G. Jørgensen. (Brazil & Denmark)
12:30-13:30	Lunch		
13:30-15:00	Sessions	9. Treatment Techniques (Room C) Chair: <b>Madjid Mohseni</b> (Canada)	10. Management (Room B) Chair: <b>Claire McInnes</b> (Australia)
	13:30-14:00 Theme speech	O10_Treatment characteristics and prediction models for the removal of typical groups of odourants by activated carbon adsorption or oxidation in drinking water treatment plants; <b>Chao Chen</b> , Xin Li, Qiangyong Qu, Jun Wang, Xiaojian Zhang, and Mel Suffet. (China & USA)	O7_Management of cyanobacterial metabolite risk in DWTPs: a packaged solution for prediction & operating control through water monitoring and operational tools; <b>David Cook</b> , D Steinmann, A Humpage, L van der Linden, S Courtois, U Kaeding, and Gayle Newcombe. (Australia & France)
	14:00-14:20	O39_A test to determine remaining GAC adsorptive capacity for geosmin and MIB; <b>Ron Hofmann</b> , Zhijie Nie, Audrey Murray, Yifeng Huang, Yi Li, and Arash Zamyadi. (Canada)	O59_Development of early warning parameters for the removal capacity of T&O by BAC; <b>M.-L. Pype</b> , G. De Vera, M. Espino, J. Keller, and K. Doederer. (Australia)
	14:20-14:40	O35_T&O control by rapid sand filtration – a pilot-study; <b>K. Doederer</b> , M. Fluggen, and J. Keller. (Australia)	O30_ATRAPP - Algal Blooms, Treatment, Risk Assessment, Prediction and Prevention through Genomics. <b>Sébastien Sauv�</b> . (Canada)
	14:40-15:00	O49_Biochemical characterization of algal flocs using spectroscopic techniques: towards improved understanding of coagulation and flocculation; <b>Andrea Gonzalez</b> and Rita Henderson. (Australia)	O58_Sedimentation versus flotation based separation of marine microalgae; <b>Dries Vandamme</b> , Y.W. Wong, O. Vronska, B. Tamburic, and R.K. Henderson. (Belgium & Australia)
15:00-15:30	Afternoon Tea		
15:30-17:00	Session	Poster (Room LG01 & LG02)	
	15:30-17:00	Poster session with 3-minutes optional elevated pitch per each poster	
	<b>Gala Dinner</b> <b>Date:</b> Wednesday 15th February <b>Time:</b> 6.30pm – 10.30pm		

17:15-22:30	<p><b>Location:</b> Sea Life Sydney Aquarium in Darling Harbour.</p> <p><b>Additional Information:</b> The Aquarium will open from 6.00pm with the dinner function to commence in the Dugong Island at 6.30pm.</p> <p>Transport: from the UNSW conference area, there is a bus organised to leave at 5.15pm. The bus will return from the Aquarium at</p>
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Day 3 - Thursday 16 February 2017

08:30-09:00	Arrival		
9:00-10:30	Sessions	11. Treatment Techniques (Room C) Chair: <b>Chao Chen</b> (China)	12. Management (Room B) Chair: <b>Andrea M. Dietrich</b> (USA)
	9:00-9:30 Theme speech	O45_Impact of oxidants on cyanobacteria cells and metabolites in water: development and validation of quantitative kinetic models; <b>Tsair-Fuh Lin</b> , C.-W. Chang, D.-R. You, and Y.-T. Chiu. (Taiwan)	O40_Control strategies for periodic T&O events – a perspective from the Great Lakes region; <b>Ron Hofmann</b> . (Canada)
	9:30-9:50	O41_Degradation of Microcystin-LR with Vacuum UV (VUV) advanced oxidation; <b>Madjid Mohseni</b> and <b>Pranav Chintalapati</b> . (Canada)	O17_Application of in situ fluorescence probes for real-time: cyanobacteria monitoring in Australian water treatment plants; <b>Florence Choo</b> , Arash Zamyadi, Gayle Newcombe, Richard Stuetz, and Rita Henderson. (Australia)
	9:50-10:10	O15_Suppression of algae by solid polymer electrolyte (spe) membrane-based electrolysis; <b>Gurminder Sardool</b> , Yoshiteru Hamatani, Megat Johari Megat Mohd Noor, Motoo Utsumi, Masafumi Goto, Norio Sugiura, and Zaini Ujang. (Malaysia & Japan)	O21_Proper management of residual chlorine concentration in tap water for reduce chlorine odour; <b>Shingo Kitada</b> . (Japan)
	10:10-10:30	O42_Impact of chlorine on cyanobacterial neurotoxin $\beta$ -N-methylamino-L-alanine (BMAA): reaction rate and intermediates; <b>Yi-Ting Chen</b> , Wan-Ru Chen, and Tsair-Fuh Lin. (Taiwan)	O24_Managing cyanobacterial toxin risks to recreators: A case study of inland lakes in South-East Queensland; <b>Cameron J Veal</b> , Catherine, Neelamraju, Andrew Watkinson, Duncan Shillito, and Arran Canning. (Australia)
10:30-11:00	Morning Tea		
11:00-12:30	Sessions	13. Treatment Techniques (Room C) Chair: <b>Tsair-Fuh Lin</b> (Taiwan)	14. Management (Room B) Chair: <b>I.H. (Mel) Suffet</b> (USA)
	11:00-11:30 Theme speech	O61_Complex septic odour problem in one river source water in China: odour causing compounds identification and control verification in a full-scale advanced treatment plant; <b>Jianwei Yu</b> , <b>Min Yang</b> Qingyuan Guo, Kai Yang, Xia Ping, and Zhang Dong. (China)	Development & application of online methods for real time management of toxic cyanobacterial blooms in water supply systems; <b>Rita Henderson</b> , Arash Zamyadi, Florence Choo, Richard Stuetz, Gayle Newcombe. (Australia)
	11:30-11:50	O65_Powder activated carbon adsorption of odourants of alcohols, aldehydes, ketones and esters in drinking water; <b>Qiangyong Qu</b> , Xin Li, Jun Wang, Xiaojian Zhang, and Chao Chen. (China)	O14_A persistent algal bloom from a tropical eutrophic reservoir; <b>Gurminder Sardool</b> , Megat Johari Megat Mohd Noor, Motoo Utsumi, Masafumi Goto, Norio Sugiura, and Zaini Ujan. (Malaysia & Japan)
11:50-12:10	O69_Treatment Technology potassium permanganate (Tentative title); <b>John Boll</b> and <b>Sean Davenport</b> . (USA)	O67_The application of Phytoxigene™ CyanoDTec Test as a cyanobacteria screening tool for prediction, monitoring and management of harmful algal blooms in public water supplies; <b>Mark Van Asten</b> and <b>Brett Neilen</b> . (Australia)	

	12:10-12:30	O46_Liquid phase urine and faecal odour control using membranes; <b>Edwina Mercer</b> and Ewan McAdam (UK)	O20_Probabilistic fugacity modelling of cyanobacterial toxins in a drinking water reservoir; <i>Stuart Khan, S. Chen, C. Huang, R. Barton, A. Davie, and Bala Vigneswaran . (Australia)</i>
12:30-12:40	Awards & Close (Room C)		
12:40-13:30	Lunch		
15:00-19:00	<p>Informal Social Event at Coogee Pavilion by the ocean</p> <p><b>Informal Social Event</b></p> <p><b>Date:</b> Thursday 16th February 2017 <b>Time:</b> 3.00pm - 7.00pm</p> <p><b>Location:</b> Coogee Pavilion - 169 Dolphin St, Coogee NSW.</p> <p><b>Additional Information:</b> The Coogee Pavilion is an informal social event.</p> <p>Transport: There are a number of public transport options available - Bus, taxi or Uber.</p>		