

Message from outgoing President

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I would like to announce my retirement as President of the MSA, and warm introduction to the new President, Dr Aaron Thornton. After more than five years at the helm of the MSA, I have been privileged to work with many enthusiastic people who have brought the society to life and given it a positive presence in our professional circles. The idea to set up the society came to me over a dinner with Dr Anita Hill, after which I was supported with enthusiasm by many friends and colleagues to formally establish a community of passionate membrane scientists and engineers. The society was registered as a Company Limited by Guarantee in 2009, setting it off from the start as an organisation with unlimited potential. The MSA started its own symposium in 2010 (chaired by Dr Aaron Thornton) targeted at students and young professionals, and was a great success. Two more have since been run, each repeating the success of the first. The MSA also ran for the first time, the 2013 International Membrane

Science and Technology Conference, which has built an international reputation over the last 30 years by the University of New South Wales. With this, the MSA activities and of course its members and sponsors, the society has established a positive reputation. Most recently, the MSA has entered into a more financially robust position marking a new phase in its existence and function to members. While I have had a great time leading the society and being part of this exciting growth, it's now time to hand over to Dr Aaron Thornton. Aaron is a passionate and devoted membrane research leader who will confidently take the MSA into the future and promote our virtues globally. Please join me in welcoming Aaron as the next MSA president!

Professor Mikel Duke — Former President of MSA (2009-2014)

Message from incoming President

With an outgoing applause to Mikel for establishing the MSA and all of his hard work over the years, I'd like to introduce myself as the new president.

It's my pleasure to take on this role to serve and build the membrane community here in Australasia, and extend our reach abroad.

I come to the role familiar with the inner workings of the MSA, having served as secretary and treasurer. I also chaired the first MSA student symposium in 2010 and recently developed the first online membrane database hosted on the MSA website.

I'm excited about our opportunities to expand and support the MSA network. So far we have established a very generous funding scheme

for travel, workshops and networking activities for the next few years. We have also made plans for more frequent newsletters and new online content.

I'm also passionate about linking industry with our young researchers that has already started with the new internship program.

Please share your thoughts with me about improving the society as fellow members. So we can continue to grow and deliver membrane research that is world recognised.

Dr Aaron Thornton — President of MSA

4th MSA ECR Membrane Symposium

The 4th Membrane Society of Australasia Early Career Researchers Membrane Symposium will be held at the Institute for Frontier Material (IFM), Deakin University (Waurin Ponds Campus, Victoria - Australia) between the 19th and the 21st of November 2014.

Registration to the Symposium is free of

charge for MSA members and open to all currently enrolled Master and PhD students and Early Career Researchers (ECRs) working in membrane science. The purpose of the symposium is to offer students and ECRs a chance to develop new personal and technical skills around membrane technologies. Specific workshops will be organised with internationally recognised speakers

Upcoming events:

- 4th IWA Regional Conference on Membrane Technology, Ho Chi Minh City—Vietnam, 3rd-6th December 2014
- AMS9 Taipei—Taiwan, 19th-21st September 2015
- 2nd International Conference on Desalination using Membrane Technology, Singapore, 26th-29th July 2015
- Euromembrane, Aachen, Germany, 6th-10th September 2015
- IMSTEC16, Adelaide, Australia, November 2016

from both academia and industry on career development and 'hot' membrane advances through specific case study presentations from senior scientists.

The participants will have a chance to develop their personal career network with peers through a range of team activities and highly interactive workshops. Proceedings of the presentations will be published in a Special Issue of Membranes (MDPI) free of charge and a number of presentation awards will be offered to the best performing presenters and teams.

The board envisions to provide a highly constructive and positive environment with time dedicated for discussions with

selected experienced researchers acting as mentors for grant and paper writing workshops as well providing insightful career development advices.

All attendees will be required to present their research during specific Poster sessions and Awards will be offered by the Patron of the MSA, Prof. Anthony Fane. In addition, an exercise on Grant writing and presentation will be carried out in teams of up to 5 students and the best presentation gratified from a special Team award from the hands of the President of the MSA.

More information can be found on the website including information regarding

Travel Grants and Presentation Awards: <http://ecr2014.membrane-australasia.org/>

Feel free to contact the board if you have any questions!

We look forward to seeing you there.

On behalf of the organising committee - Ludo DUMEE – Deakin University, Chair of the Symposium Committee

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2nd MSA Membrane Workshop and Networking Controlling membrane fouling: Design and operation

The Membrane Society of Australasia hosted its 2nd membrane networking event on Monday the 30th of June, preceded by a half day workshop on membrane fouling. Held at the University of Technology in Sydney, the event brought together 24 researchers from universities in Sydney, Wollongong and Brisbane, and 6 industry guests from Evoqua Water Technologies, Veolia Water, H2Otalent, Bürkert Fluid Control Systems and Toray Membrane Australia. The membrane networking sessions were initiated to provide early career researchers an opportunity to meet each other and to facilitate communication and collaboration among early career researchers and industry professionals.

The workshop focused on techniques available to control fouling during design and operation of membrane processes, as well as characterisation and detection of common membrane foulants. Techniques for fouling control in both high and low pressure membrane systems were highlighted and included membrane material properties, membrane module design considerations, pre-treatment, backwashing and chemical cleaning.



2nd MSA Workshop on 30th June 2014 at University of Technology, Sydney

The evening networking session started with presentations on the types of membrane related jobs in the water industry and some practical advice for researchers looking to join industry, followed by drinks at the Unibar. Researchers were encouraged to start building connections to industry early by attending confer-

ences, collaborating with industry and participating in networking events.

By Zenah Bradford-Hartke, University of New South Wales

3rd MSA Membrane Workshop Integration of Oxidation and Membrane Technologies

Tuesday 18th of November 2014: 10:00 am – 6:30 pm. Victoria University, 300 Flinders Street, Melbourne

Oxidation processes including ozonation and UV/H₂O₂ have been increasingly used as pre- and post-treatment for membrane processes. While membrane processes and oxidation technology can be used as independent treatment processes, the combination of these technologies has the potential to achieve high quality water and/or foul-

ing reduction suitable for a number of applications. This workshop provides an introduction to ozone and UV/H₂O₂ and is aimed at membrane researchers and engineers. The workshop will also focus on the latest techniques available to control fouling and methods to improve the quality of RO permeate and concentrate.

The MSA is offering a website-style workshop that allows remote participants to watch the presentations and give questions in real-time from a conference room set up in NSW, QLD and WA. Please refer to the [MSA website](#) for the program and other information.

Places limited (50 seats), so register now by using this online [registration form](#).

Program Schedule

9:45 – 10:00 *Arrival & Registration*

10:00 – 10:05 *Welcome Address*

Oxidation Technology

10:05 – 10:55 **Ozone**

Paul Rutherford, Mitsubishi Electric

10:55 – 11:45 **Advanced Oxidation Process**

Louis Wiart, Xylem Water Solutions

11:45 – 12:15 **Ozonation at the Eastern Treatment Plant**

John Mieog, Melbourne Water

12:15 – 1:10 *Lunch Break*

Combined Oxidation and Membrane Technologies

1:10 – 1:40 **Ozone / Membrane Treatment: A Case Study**

Paul Rutherford, Mitsubishi Electric

1:40 – 2:10 **MF Membrane in Combination with Ozone**

Nicholas Milne, Victoria University

2:10 – 2:40 **Combining Ceramic Membrane and Ozone**

Takahiro Fujioka, Uni of Wollongong

2:40 – 3:00 *Coffee Break*

3:00 – 3:30

Fouling of Ceramic Membranes by Algal Organic Matter and the Effect of UV/H₂O₂ on Fouling Mitigation
Linhua Fan, RMIT University

3:30 – 4:00

Post Membrane Filtration: Impact of UV/H₂O₂ and Final Disinfection on Disinfection By-products
Katrin Doederer, University of Queensland

4:00 – 4:30

Ozonation of Trace Organic Chemicals in the Reverse Osmosis Concentrate from Water Recycling Applications
Takahiro Fujioka, Uni of Wollongong

4:30 – 6:00

Networking: Seminar and Drinks

Sponsor



Report on ICIM2014 in Brisbane

223 delegates from 32 countries gathered in Brisbane from the 6th to 9th of July for the biennial International Conference on Inorganic Membranes (ICIM). As the premier venue for reporting and discussing the latest developments in the field of inorganic membranes, MSA was delighted to host the 13th incarnation of the event in Australia. It was the first time ICIM had taken place outside the northern hemisphere and despite the long travel and associated jet lag it was fantastic to see so many researchers and students attending. Chaired by Prof. Joe da Costa of The University of Queensland, ICIM2014 focused on the most urgent and pressing needs facing society in the early 21st century, namely “**Water, Food, Health, Energy and the Environment**” and the background membrane research pointing to the way forward.

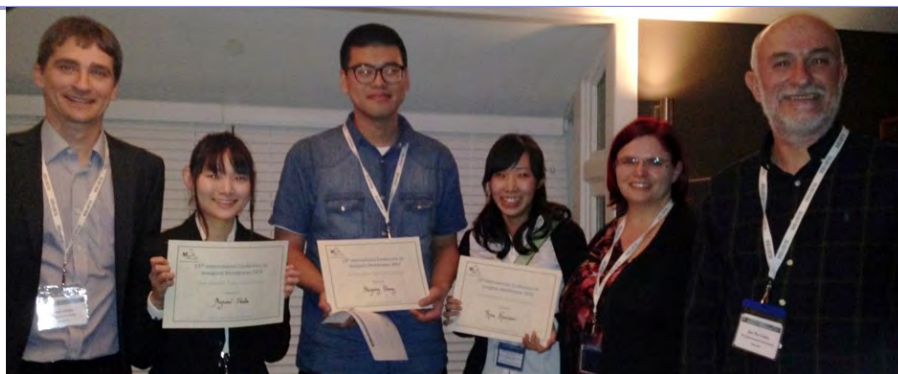
We were privileged to have 6 fantastic plenary speakers in Jürgen Caro (*University of Hannover, Germany*), Jerry Lin (*Arizona State University, USA*), Arian Nijmeijer (*Shell, The Netherlands*), Motoharu Noguchi (*Metawater, Japan*), Toshinori Tsuru (*Hiroshima University, Japan*), Ingolf Voigt (*Fraunhofer IKTS, Germany*) talking to both ends of the



Oral Presentation Prize Winners Mr Emiel Kappert (top) and Ms Yen Chua (bottom) being presented with their awards on behalf of the MSA by Dr Dana Martens and Prof. Mikel Duke.

research spectrum with new and innovative concepts as well as real industrial trials and applications of inorganic membrane technologies. The insight and invigorating discussion that came from these sessions, along with the 20 keynote presentations, was exciting for all delegates. One of the real strengths was the diversity of topics under discussion from the staples of water treatment, the food industry and gas separation to new fields including new materials, biological and biomedical applications and hybrid membrane structures.

The highlights of the conference included the conference dinner held at The Summit restaurant on top of Mt Cootha, overlooking all of Brisbane city and the student involvement in all aspects of the conference. MSA sponsored 5 awards – 3 poster prizes and 2 oral awards and the awardees all demonstrated excellence in their respective fields. The oral presentation awardees were Mr Emiel Kappert and Ms Yen Chua (MSA member). In addition to their poster prize students Rina Kunimori, Shiyang Cheng and Ayumi Ikeda relished the special opportunity to present their work at the closing ceremony to the collective dele-



Poster Prize winners (left to right) Ayumi Ikeda, Shiyang Cheng and Rina Kunimori with Prof Mikel Duke (far left), Dr Dana Martens (second from right) and ICIM2014 chair Prof. Joe da Costa (far right).

gation.

Finally, on behalf of Joe, Prof. Mikel Duke and myself we would like to thank the rest of the organizing committee, particularly Dr Dana Martens and conference organisers Elsevier, for their tireless work in making the event a success; and acknowledge ICIM 2014 sponsors ItN Water Filtration and exhibitors Noritake for their support. After a very successful event in Brisbane, the inor-

ganic membrane community looks to the next ICIM hosted by Georgia Tech and chaired by Prof. David Sholl in Atlanta, USA in 2016.

By Simon Smart, Uni of Queensland

MSA Travel Awards Program

As a result of the success of IMSTEC, the MSA Board is proud to announce that it will be offering travel awards to assist students and ECRs to attend important conferences in the field of membranes and membrane processes. This began with the 10th ICOM this year in Suzhou and will include important events such as the MSA ECR Symposium in Geelong, the IWA Regional Conference on Membranes in Vietnam later this year.

Awards will be open to all MSA members who are also eligible for the student or ECR concession membership and who gain an oral or poster presentation at the conference. The application will general-

ly be due at the same time as abstracts to the conference and will be decided in roughly the same time frame so that applicants will know the outcome of both for any plans that need to be made. The awards are paid straight into the business account that travel is paid from.

The following conference will be targeted by this program in the next year (subject to potential changes by the MSA board):

- MSA ECR Symposium 2014 – November, Geelong
- 4th IWA Regional Conference on Membranes 2014 – December, Ho Chi Minh City, Vietnam

- 9th Conference of the Aseanian Membrane Society 2015 – July, Taipei, Taiwan
- Euromembrane 2015 – September, Aachen, Germany

We encourage you all to attend these conferences and apply for the awards in order to further your research and careers. If you have any other questions, please contact Dr Nicholas Milne (Nicholas.Milne@vu.edu.au). Good luck to all applicants.

ICOM Travel Awards

With great pleasure we announced the winners of the MSA ICOM 2014 Travel Award for students and ECRs travelling to Suzhou, China. The judging panel decided to award the three students with the \$1,000 prize. The award was presented by Dr Nicholas Milne, Prof Mikel Duke, and A/Prof Long Nghiem during the closing ceremony of ICOM2014. Congratulations go to:

- Jieun Lee (University of Sydney): Carbon nanotubes/polyaniline/polyethersulfone membranes for enhanced removal of natural organic matter in water.
- Yong Yeow Liang (UNSW): CFD Modelling of Electro-osmotic Mass Transfer Enhancement in Spacer-Filled Membrane Channels.
- Xuefei Sophie Liu (UNSW): Effect of fibre movement on membrane shear stress in sMBR.

Thank you to all who applied, and don't forget to look for future MSA Travel Awards.