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About MSA

The Society aims to represent and promote the activities in membrane science and technology both in the research and industrial sectors.

Our Vision

- To be the nexus of membrane science and technology activity in the Australasia region;
- To promote collaborative engagements across the community to disseminate membrane technology to end users; and
- To capture current research and industry involvement and highlight future trends.

Our Mission

The MSA is to represent Membrane Science and Technology in Australasia realising that this will be aligned with societal needs.

This will be achieved by:

- providing an open forum for transferring and sharing technologies as well as capabilities within the members, industries and high education organizations;
- supporting multidisciplinary networking events;
- providing leadership and mentorship in membrane science for the Australasian membrane community;
- promoting opportunities for young members; and
- and enabling wider understanding of the membrane technologies for public interest.



Messages From the President & Vice President

Thank you to the MSA members and Directors for helping to support the organisation through the 2019-2020 financial year. The organisation has remained very active in supporting our membership, expanding the associations regional and global involvement, and securing important regional technology events, despite the difficulties posed by the 2020 bushfires in Australia and the impacts of COVID-19. As well as assisting to organise and support our members in attending AMS12 in Korea, MEMDES2019 in Perth, IESEEP2019 in Melbourne, NZ Water Symposium 2019, MSA ECR2020 and IMSTEC2020 in Sydney, we have also partnered with IESEEP to bring our members a series of online webinars. In addition, looking forward towards 2020-21, there are a number of high-profile membrane technology events being supported by the MSA including the MSA Annual Workshop (Melbourne, November 2020) and ICOM (London, December 2020).

Despite the recent difficult times due to bushfires and COVID-19, the MSA has continued to grow, providing a platform to students, researchers and companies to share, promote and support the development and application of membrane technologies in Australasia, Asia and the world for the last one year. Adoption and normalisation of membrane technologies are a continuing global trend, driven by growing social and environmental pressures as well as increasing regulation. In Australia for example, energy-efficient separation technologies using membranes are being increasingly applied in communities and industry to address increasing water shortages, air and food quality issues, and health and human costs of inland and coastal droughts. Within this context, we are pleased to acknowledge the work of the MSA's board of directors who continue to connect and grow our community of membrane technology researchers, manufacturers and users, working to develop solutions for important problems like this. Throughout 2019-2020, as an organisation the MSA has continued to develop our value proposition, membership, industry engagement, and communication platforms in line with the organisations strategic plan to benefit our members. We are proud of the Board and MSA members who have helped to these priorities, and we look forward to continuing the momentum to further improve the society next year.

Lastly, we would like to thank our members for your involvement and support and make you aware that the MSA will be holding elections for our Board of Directors and Secretary and the MSA Annual General Meeting soon. We encourage you to get involved. We look forward to seeing you at the next MSA event.



Prof. Ho Kyong Shon
President

Professor in School of Civil and Environmental Engineering
Deputy Director of Centre for Technology in Water and Wastewater
Faculty of Engineering and IT
UNIVERSITY OF TECHNOLOGY SYDNEY
Hokyong.Shon-1@uts.edu.au
PO Box 123 Broadway NSW 2007
Australia

<https://twitter.com/KyongShon>

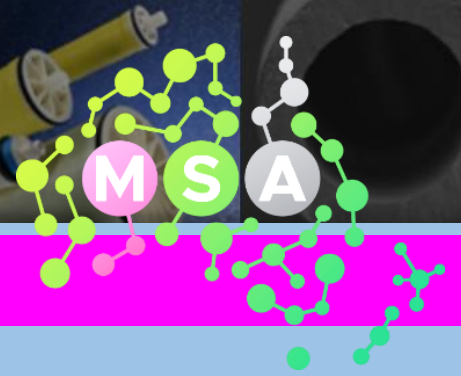
<http://www.uts.edu.au/staff/hokyong.shon-1>



Dr Geoffrey Johnston-Hall,
Vice President

Principal Scientist
Memcor
DuPont Water Solutions
SOUTH WINDSOR, NEW SOUTH WALES,
SYDNEY

<https://www.linkedin.com/in/geoffrey-johnston-hall-3173b37b/?originalSubdomain=au>



2020 MSA Strategic Plans

In October 2019 the MSA Board and honorary members undertook a strategic retreat in Melbourne on the successful highlights and forge discussions on the future direction of the MSA. The strategic planning event received input from the Board and a wider range of our members and identified four priorities for the organisation in 2020 as below:

2019-20 MSA Strategies



Value proposition

- Revise vision and mission statements
- Amend Costitution/gender balance
- Industry proposition statements
- Welcome package
- Membership value/Membership categories
- Honorary Members



Membership

- Define sub-committee
- Developing opportunities for participation
- Identify QLD, WA, SA, NZ membrane researchers
- Increase presence in QLD, WA, SA, NZ
- Workshop/networking in QLD, WA, SA, NZ
- NZ membership growth
- Study-abroad award
- Webinars/contact person for each state towards satellite events



Industry Engagement

- Define sub-committee for industry engagement
- Develop engagement plan with other professional bodies
- MSA networking event /workshop /ECR
- Study-abroad award
- Define Tony Fane Award for academia/industry



Communication & Website

- List all potential target organizations
- Define communication plan
- Review resourcing (sub-committee, casual support)
- ppt slide with Corporate Members logos
- Frequency of updates/posts (e-update, LinkedIn, Twitter)
- ICOM2020 attendance (planning, networking, international networking)
- International engagement (plan of networking events, activities, costing...)
- Newsletter/Conversation with expert + advertising
- Engage with BSc, MSc/student societies

The four strategies including i) improving the MSAs value proposition, ii) growing our membership, iii) supporting industry involvement, and iv) improving our communication and social media presence. We are looking forward to supporting and improving on these goals through 2020

Part of The MSA Board





Starting June this year, MSA, Monash University and the ARC Research Hub-EESep partnered together to develop a new webinar series for the academic and industrial membrane communities to support the ongoing engagements and discussions of research and industry challenges during this COVID-19 time. We hope you will enjoy the following upcoming webinars we have prepared for you.

Scientific & Industry Webinar Series



WHEN AND HOW TO REGISTER:

- You can register online no later than a day before each webinar
- Please register at: <https://www.arc-eesep.org/events-1>
- Contact us: INFO@ARC-EESEP.ORG

Dr Ludovic Dumeé, Deakin University
Perspectives on the development of membrane catalytic reactors – key process and materials bottlenecks
22 July 2020 (Wednesday)
11.00 am – 12.00 pm



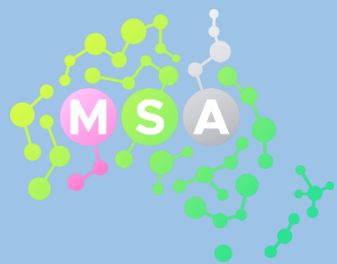
Prof Huanting Wang, Monash University
Nanochannel membranes for fast water evaporation and proton transport
5 August 2020 (Wednesday)
11.00 am – 12.00 pm

Dr Dharma Dharmabalan, Dharmabalan Advisory
The role of Membranes in drinking and recycle water management Post COVID-19
19 August 2020 (Wednesday)
11.00 am – 12.00 pm



Mr Bruce Bilotft & Mr Gerin James, DuPont Water Solutions
UF to MBR, the evolution of advanced WW re-use
9 September 2020 (Wednesday)
11.00 am – 12.00 pm





Pierre Le-Clech



Prof. Ho Kyong Shon



Long Nghiem

IMSTEC2020 Highlights



The International Membrane Science & Technology Conference (IMSTEC) organised by MSA is one of the most important conferences that bring our members together from around the world to share professional experiences, expand our professional networks, and receive updates on the latest advances in the field of membrane sciences and technology. IMSTEC2020 was attended by industry and academic leaders.



The 10th conference, IMSTEC2020, was successfully held from 2 to 6 February 2020 at the University of Technology Sydney. The conference was chaired by Professors Pierre Le-Clech, Long Nghiem, Ho Kyong Shon, and Chuyang Tang focussing on thematic areas of inorganic membranes, polymeric membranes, membrane science, membrane fabrication and modification, with membrane applications in filtration, distillation, desalination and biological separations for health, energy and sustainability as well as future materials and devices. The conference.

MSA Travel Awards

This year's IMSTEC2020 conference, MSA awarded 12 Travel Awards to 11 PhDs/1 ECRs to cover the cost of conference registration fees for them to attend the conference and present their research work. They are,

Awardee	Name	Affiliation	Country
HDR 1	Albert Galizia	University of Girona	Spain
2	Lluís Godo Pla	University of Girona	Spain
3	Elenora Ricci	University of Bologna	Italy
4	Marie Enfrin	University of Surrey/Deakin Univ.	UK/AUS
5	Victoria Sanahuja-Embuena	Technical University of Denmark	Denmark
ECR 1	Dr Liang Yong Yeow	Universiti Malaysia Pahang	Malaysia

IMSTEC2020 Highlights

Plenary speakers included:



Prof. Maria Forsyth, Deakin University
Deputy Director Institute for Frontier Materials (IFM)
“**Novel Ionomer Membranes for Next Generation Solid State Batteries**”



Prof. Wanqin Jin, Nanjing Tech University
Deputy Director of State Key Laboratory of Material-Oriented Chemical Engineering
“**Precisely Tuning the Interlayer Channels of GO Membranes**”



Prof. Rong Wang, Nanyang Technological University
Chair in the School of Civil and Environmental Engineering
“**Development of Novel Microporous Hollow Fiber Membranes Used for Gas-Liquid Membrane Contacting Processes**”



Prof. Michael Guiver, Tianjin University
The State Key Laboratory of Engines
“**Membranes designed for carbon dioxide and other gas separations**”



Prof. Jeff McCutcheon, University of Connecticut
Executive Director, Fraunhofer USA Center for Energy Innovation
“**Where Additive Manufacturing Meets Membrane Technology: Opportunities for Printing Membranes for Separations**”



Associate Prof. Baoxia Mi, University of California Berkeley
Energy, Civil Infrastructure and Climate, Environmental Engineering
“**The Promises and Challenges of 2D Nanomaterials**”



Prof. Claus Helix-Nielsen, Technical University of Denmark
Head of Environmental Engineering Department
“**Biomimetic and Bioinspired Membranes – Challenges and Future Prospects**”

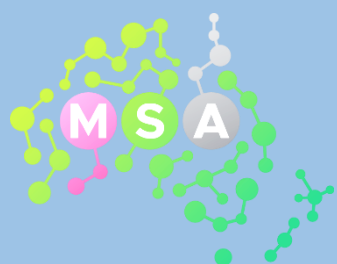


Dr. Geoffrey Johnston-Hall, Evoqua Water Technologies (then), Dupont (now)
Principal Scientist for MEMCOR® Products
“**Experiences in Low Pressure UF Membrane Design and Development**”

Conference Dinner

The conference dinner was held on the world's most beautiful harbour during the dinner cruise. Dinner on board the John Cadman II vessel exploring the Sydney Harbour over 3-hours of networking and delectable meals. A special highlight of the night was the announcement of the recipients of Inaugural MSA Industry Award (Bruce Biltoft) and MSA Tony Fane Award (Huanting Wang). Application detail is opened all year round and can be found on page 13 of this newsletter.





Victoria Sanahuja-Embuena

PhD Candidate

Technical University of Denmark

Supervisor: Professor Claus Helix-Nielsen



Presenting her talk at IMSTEC2020

MSA Travel Awardee Reflections I

Q1. Tell us a little bit about your background. How did you get started in membrane research?

Victoria Sanahuja-Embuena is an Industrial PhD student in Aquaporin A/S and the Department of Environmental Engineering at the Technical University of Denmark. During my master's in chemical engineering, I had some courses about membranes and water treatment, and I was fascinated with the whole process and its possible applications. Afterwards, I took more courses in membrane filtration knowing that I would like to work with membranes after my studies.

Q2. What does receiving the MSA Travel Award mean to you? How did you hear about the award?

I hear about the award from the membrane group team at University of Technology Sydney while I did my exchange there. Receiving the award was a fantastic opportunity and allowed me to come to the IMSTEC conference and the MSA symposium which open my network to Oceania and Asia.

Q3. If any, what are the outcomes or opportunities that further arose from your travel activities? How has the MSA Travel Award helped you advance your work or career?

The conferences in Sydney allowed me to meet many researches in Oceania-Asia that I never heard of before and other relevant figures form membrane technology that I knew but never had the chance to meet. With this opportunity I was able to acquire many contacts in my field and a few possible collaborations for the future in Australia, America and Japan. I had interesting conversations with other membrane groups which I could talk about my project and exchange ideas. As well, I was a presenter at the conference which permitted me to gain practice in my communication skills and learn how to properly present my results to have the public's interest. This is a great motivation to continue the hard work of an ECR.

Q4. What would you tell someone who's thinking, but not sure yet, of applying for the award this year?

There is nothing to be unsure about! The award is a great opportunity to travel and meet new colleagues in your field. It is easy to apply and the MSA is always ready to help you. If you don't try it, you will never know.

Q5. Why is it important to you that there is a strong MSA community of HDR/ECR in membrane?

It is hard for young researchers to create a network and obtained collaborations, so it is important to have a nice community where this is promoted. These young researchers will one day become senior professors and researchers and they will give back the opportunities given.

MSA Travel Awardee Reflections II

Q1. Tell us a little bit about your background. How did you get started in membrane research?

I come from France and have been awarded a BSc and MSc in Chemistry from the National Graduate School of Chemistry of Montpellier (ENSCM). I am currently a joint PhD research student at the University of Surrey (UK) and at Deakin University (Australia). I first started working on membranes during an internship at the European Institute for Membrane (IEM, Montpellier, FRANCE). I then carried on in the membrane field through my PhD research project.

Q2. What does receiving the MSA Travel Award mean to you? How did you hear about the award?

I am a member of the MSA hence I was already aware of the award. Receiving the MSA travel award showed that my work deserved to be presented at the conference so it gave me more research confidence.

Q3. If any, what are the outcomes or opportunities that further arose from your travel activities? How has the MSA Travel Award helped you advance your work or career?

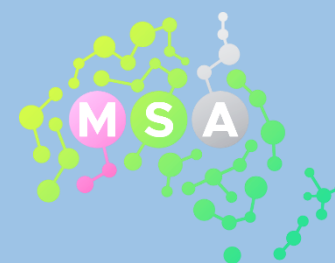
Attending IMSTEC2020 allowed me to present my work on membrane and microplastics. Although interest on microplastic pollution is growing, I was the only one at IMSTEC2020 to discuss the risk microplastics constitute for membranes in term of fouling. I had the chance to discuss with a R&D representative from a European water company who confirmed that they had already started investigating this microplastic issue whereas Australian water companies seem not to consider microplastics as a top priority. I hope that giving a talk in front of a membrane expert audience would have raised awareness on the need to consider microplastics when working with water treatment processes such as filtration membranes.

Q4. What would you tell someone who's thinking, but not sure yet, of applying for the award this year?

Receiving this award gives you the opportunity to travel to a conference to present your work and get feedback from peers. Your project/career can be pushed further by networking with people in your field.

Q5. Why is it important to you that there is a strong MSA community of HDR/ECR in membrane?

Membrane science has been and will be pushed further up by scientists willing to develop new technologies and concepts via unconventional pathways. HDR and ECR greatly contribute to this development by bringing novel creative ideas further enhanced within multidisciplinary research groups and collaborations. A strong MSA community will help to highlight the work done by HDR and ECR to experts in membrane science and technology from research in industry sectors.



Marie Enfrin

PhD candidate

University of Surrey / Deakin University
Supervisor: Dr Judy Lee and Dr Ludovic Dumeé



Enjoying the Sydney Harbour cruise at the IMSTEC2020 conference dinner

7th Early Career Researcher Symposium Highlights



MSA ECR 2020

1-2 February 2020 || Sydney

Event website:

<http://msaecr2020.com>

Organizing Committee:

- Chair: **Dr. Sherub Phuntsho**
- Vice Chair for Program: **Dr. Gayathri Naidu Danasamy**
- Vice Chair for Logistics: **Dr. Luong Ngoc Nguyen**
- Vice Chair for International Linkage: **Dr. Yunchul Woo**
- Secretary: **Dr. Sungil Lim**
- Operations and Publicity Manager: **Ralph Rolly Gonzales**
- Treasurer: **Zainab Mustafa**
- MSA Representative: **Dr. Andrea Merenda**
- Staffers: **Nawshad Akther, Dr. Nirenkumar Pathak, Van Huy Tran, Federico Volpin, Yi Yang, Ziwen Yuan**



MSA ECR 2020

Earlier this year, the 7th MSA Early Career Researcher Symposium (MSA ECR 2020) was successfully held on 1-2 February 2020 at the University of Technology Sydney (UTS). This event served as a pre-conference event for the 10th International Membrane Science and Technology Conference (IMSTEC2020). MSA ECR 2020 brought together research students and early career researchers working on membrane science and technology from all over the world.

MSA and UTS hosted over 90 delegates (coming from 11 different countries) during MSA ECR 2020. The symposium featured seven (7) plenary and keynote presentations, two (2) invited presentations from sponsors, 21 oral presentations, and a workshop on academic writing and scientific publishing.

Symposium chair **Dr. Sherub Phuntsho** and **MSA president Prof. Ho Kyong Shon** opened the event. What came next were one and a half days, arranged seamlessly by Organizing Committee led by Dr. Phuntsho, wherein all delegates were provided an avenue for exchange of ideas, mentorship, and networking. After the first day of the symposium, the delegates were able to feast over a sumptuous Spanish banquet and free-flowing drinks during the gala dinner at Tapavino in Circular Quay.

The symposium was divided into different sessions: (1) Novel membrane and materials, (2) Membrane applications, (3) Wastewater treatment, (4) Fouling, (5) Filtration, and (6) Energy generation and conversion. Each session commenced with a keynote presentation, followed by the ECR and student presentations. The keynote presentations include:

- **Prof. Anthony Gordon Fane** (University of New South Wales) – Non-invasive observation techniques for membrane processes
- **Dr. Amit Chanan** (City of Sydney) – Sustainable development goals and membrane technology: A call to action
- **Dr. Geoffrey Johnston-Hall** (DuPont Water Solutions) – Personal reflections on a research career in industry
- **Prof. Johannes Vrouwenvelder** (King Abdullah University of Science and Technology) – Early warning of biofouling of spiral wound membranes
- **Prof. Saravanamuthu Vigneswaran** (University of Technology Sydney) – Alternative water sources towards water security
- **Dr. Judy Lee** (University of Surrey) – A short-cut method for quantifying the effective transmembrane pressure for a system with significant concentration polarisation
- **Dr. Jeffrey McCutcheon** (University of Connecticut) – Discerning the important from the unimportant: How hype cycles can steer us wrong in membrane research

The last session featured **Ms. Deirde Dunne**, Elsevier journal manager, and **Prof. Ho Kyong Shon**, Editor to *Desalination*, who facilitated a workshop on scientific writing and publication.



Photo credits: **Van Huy Tran**

7th Early Career Researcher Symposium Highlights

Travel awards for local and international delegates were provided during the symposium to the following: **Dr. Huacheng Zhang** (Monash University), **Ehsan Ghasemiastahbanati** (Monash University), **Dr. Noel Peter Tan** (University of San Carlos), **Tippawan Sirinupong** (Prince of Songkla University), and **Prasad Talluri** (University of Chemistry and Technology).

The best presentations during the MSA ECR 2020 were recognized and two ECRs and two students were chosen:

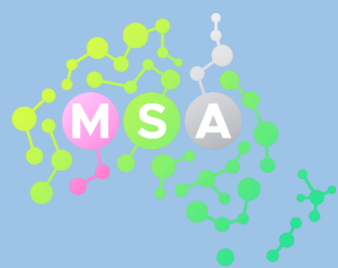
- **Dr. Jingwei Hou** (University of Queensland) – Interfacial structure-performance correlation of flexible metal-organic framework membranes
- **Dr. Christopher Davey** (Cranfield University) – Membrane distillation for water recovery from concentrated blackwater
- **Roberto Katigbak** (Deakin University) – Design of membranes and separation modules for sperm sexing with high viability
- **Seongchul Ryu** (University of Technology Sydney) – Hybrid membrane distillation and adsorption system for selective recovery of Cu^{2+} from AMD

The event would not be possible without the support of the sponsors:

- Platinum sponsors: **University of Technology Sydney** and **Korea Institute of Civil Engineering and Building Technology**
- Gold sponsor: **Shimadzu Australia**
- Bronze sponsor: **Origin Water** and **Monash Centre for Membrane Innovation**

The symposium was also affiliated with MDPI and invited papers will be published a special issue in *Membranes*, which is now the official publication partner of MSA.





NZ Water Symposium



Dr Filicia Wicaksana

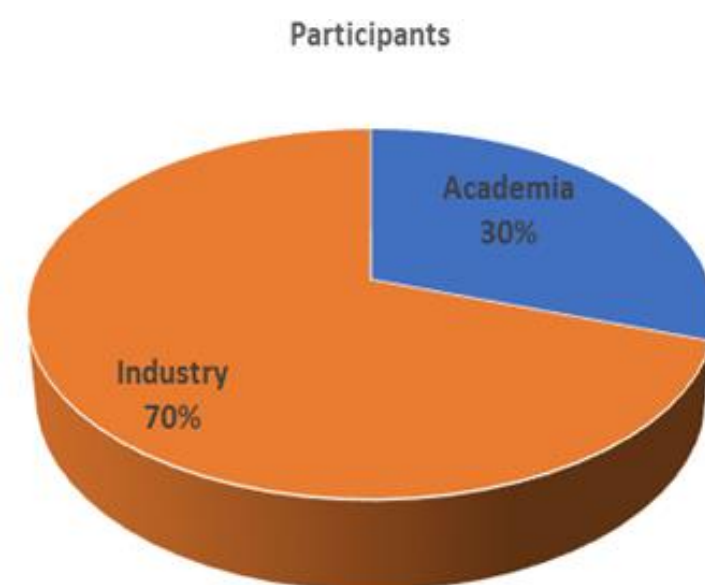
Event Coordinator

Department of Chemical and Materials
Engineering
UNIVERSITY OF AUCKLAND
Engineering Block 5 – Building 405
5 Grafton Road
AUCKLAND 1023, New Zealand
E: f.wicaksana@auckland.ac.nz
T: +64 9 923 1861

Late last year, the Department of Chemical and Materials Engineering, University of Auckland, New Zealand organized “Water and Wastewater Treatment: Advanced Processing and Membrane Technologies Symposium” on November 11th 2019. The symposium aimed to bring together researchers and professionals from academia and industry to share ideas and discuss experience in the area related to water and wastewater treatment application. This unique event also aimed to raise awareness of membrane technology and its application in New Zealand, promote interactions and encourage collaborations among participants. Topics covered were membrane technology as well as other techniques, such as hydrothermal processing, sludge rheology and nutrient recovery, for water and wastewater treatment applications. More than 50 participants; 70% from industry and 30% from academia attended the symposium.

Speakers:

- Prof Anthony Fane, UNSW, Australia, “Membrane technology for water and wastewater treatment - trends and developments”
- Prof Hokyoung Shon, University of Technology Sydney, Australia, “Membrane Society of Australasia and Members’ Research Activities”
- Dr Filicia Wicaksana, the University of Auckland, New Zealand, “Membrane Fouling: causes and control strategies”
- Prof Krist Gernaey, Technical University of Denmark, “Resource recovery from waste streams”
- Assoc Prof Nicky Eshtiaghi, RMIT, Australia, “Sludge Rheology and its impact on process unit operation”
- Dr Paul Bickers, Watercare Services Limited, New Zealand, “Thermal hydrolysis project in Rosedale Wastewater treatment plant”
- Dr Geoffrey Johnston-Hall, Evoqua Water Technologies Membrane Systems Pty Ltd, Australia, “MEMCOR Introduction-MF/UF Technology Design”.
- Thomas Board, Apex Environmental, New Zealand, “Design and Start-up of Membrane Systems”
- Dr Ludovic Dumeé, Deakin University, Australia, “Microplastics remediation from wastewaters”
- Dr Bipan Bansal and Brooke Clark, Fonterra, New Zealand, “Water Reuse at Fonterra: Developments & Challenges”
- Dr Saeid Baroutian, the University of Auckland, New Zealand, “Hydrothermal Deconstruction of Organic Waste”
- Prof Brent Young, the University of Auckland, New Zealand, “Phosphorus recovery: the linkage between water quality improvement and resource management”



NZ Water Symposium

Some highlights and activities:

Prof Tony Fane delivered his keynote speech



Prof Hokyong Shon, UTS, Australia

Dr Ludovic Dumeénil, Deakin University, Australia



Dr Geoffrey Johnston-Hall, Evoqua, Australia

Mr Thomas Board, Apex Environmental, New Zealand



Dr Bipan Bansal and Brooke Clark, Fonterra, New Zealand

Water and Wastewater Treatment Symposium speakers and participants



This event was sponsored by the Membrane Society of Australasia and Anton Paar. We would also like to acknowledge Engineering New Zealand and IChemE for disseminating the event.

Distinguished Lectureship Story

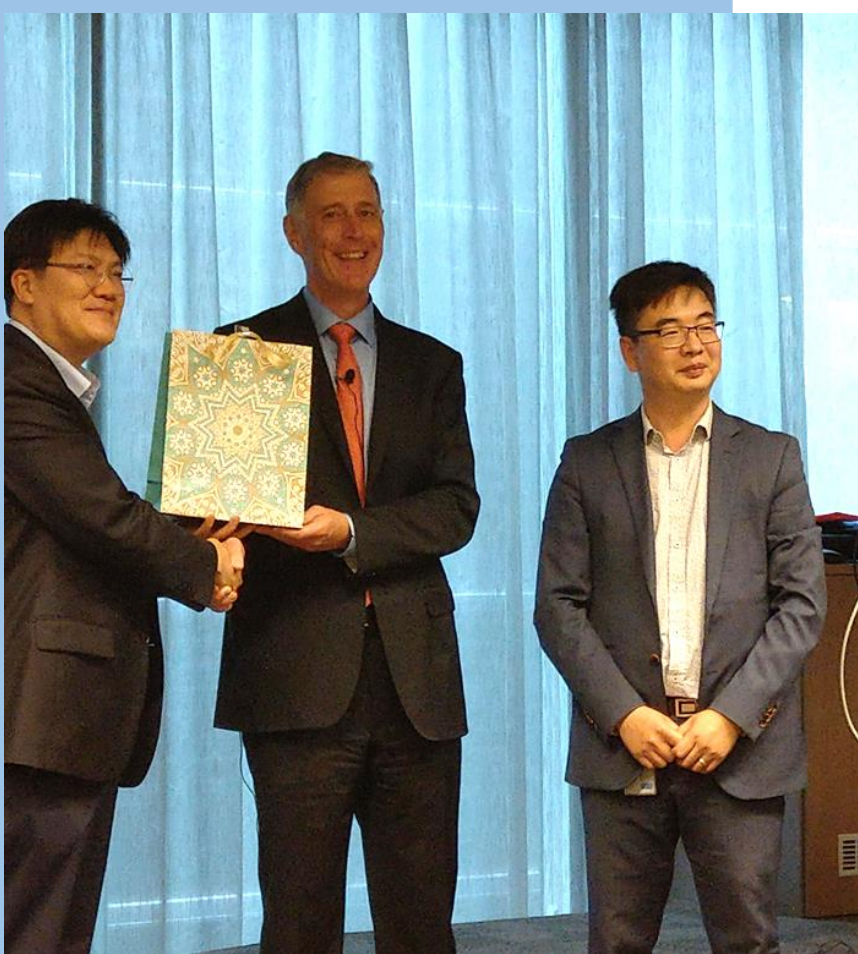
Professor Benny Freeman

Richard B. Curran Centennial Chair in Engineering
McKetta Department of Chemical Engineering
The University of Texas at Austin

<http://membrane.ces.utexas.edu/>



Prof Benny Freeman was sponsored by MSA under the Distinguished Lectureship Scholar program to strengthen collaborative research ties between Membrane researchers located in Australia and North America (USA) this year. In November 2019, Professor Benny D. Freeman (University of Oxford, UK) travelled to Australia as the second MSA Distinguished Scholar. Supported by the ARC Hub for Energy Efficient Separations, CSIRO and the Monash Centre for Membrane Innovation, Prof Freeman presented five seminars across three states on the historical development of membranes, advanced membranes for gas purification and water filtration, as well providing an insightful perspective on the future of membranes as a low energy solution to many emerging and unrevealed separation challenges. Professor Benny D. Freeman is the William J. (Bill) Murray, Jr. Endowed Chair in Engineering in the Chemical Engineering Department at The University of Texas at Austin, and is director of the Center for Materials for Water and Energy Systems (M-WET). Leading a research group of 20 Ph.D. students and 2 postdoctoral fellows, he has over 450 publications, 25 patents/patent applications and seeded several start-up companies from his fundamental research into new polymer membranes for desalination, hydrogen separation, natural gas purification, and carbon capture.

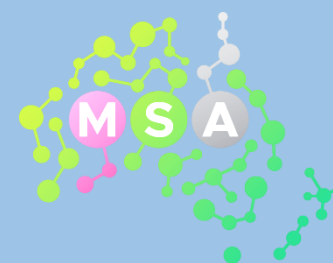


Prof Shon (MSA President and Prof Long (chair of the UTS Seminar) presented the award to Prof Freeman.

Some of the highlights and activities are,

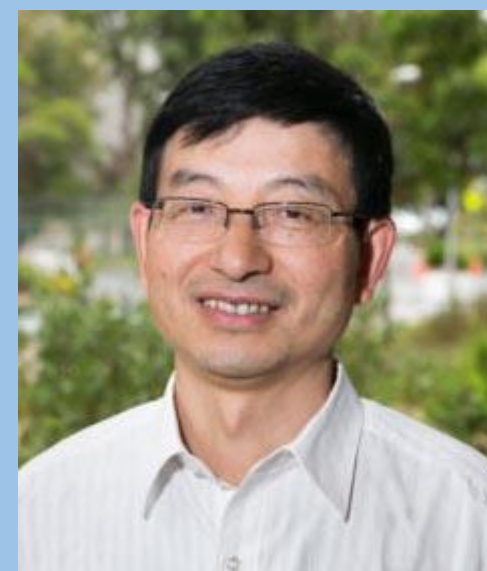
- ❖ Dean's Seminar at the University of Technology Sydney.
- ❖ Distinguished Seminar at Monash University, Clayton.
- ❖ Keynote Speaker – Water Research Australia Workshop.
- ❖ Plenary Speaker, IESEEP2019, Melbourne.
- ❖ Distinguished Seminar at CSIRO, Hobart TAS.
- ❖ Offered technical know-how and deepen mutual research ties by collaborating on several proposals and manuscripts with Australian colleagues. These lectures allowed him to further expand his professional network and establish new research collaborations for the future.

ARC Success Story



Professor Huanting Wang

Monash University



Huanting served on the Board of MSA (2011-2015) and he is the first ARC Laureate Fellow in the field of Membrane Science and Technology. Big congratulations to Huanting again!

Fellowship project summary:

FL200100049: This project aims to create a novel class of advanced membranes by making fundamental breakthroughs in nanofluidics, and harnessing this for developing new renewable energy and low-energy separation technologies. This project addresses the key challenges in understanding selective mass transport at the angstrom scale, thereby allowing the development of innovative materials design strategies to realise the ultrafast molecular and ionic permeation, and the ultrahigh selectivities observed in biological cell membranes. This new cross-disciplinary research will benefit Australia by the development of new materials for accelerating renewable hydrogen and biofuel futures, and enabling sustainable production of energy materials.

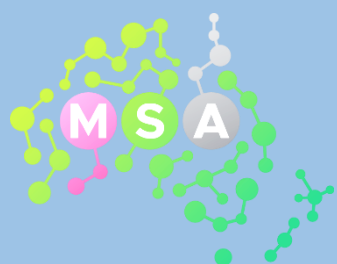
Australian Research Council funding: \$2,906,992

About Professor Huanting Wang

Huanting Wang is a Professor in the Department of Chemical Engineering, Associate Dean (International) of Faculty of Engineering and Director of the Monash Centre for Membrane Innovation at Monash University.

Originally qualified in material science and engineering at the University of Science and Technology of China, he completed a postdoctoral research fellowship in Chemical Engineering at the California Institute of Technology and University of California Riverside. Professor Wang was awarded an ARC QEII Fellowship in 2004, an ARC Future Fellowship in 2010, RACI R.K. Murphy Medal in 2019 and the Membrane Society of Australasia Tony Fane Award in 2020. He was elected as a Fellow of the Australian Academy of Technology and Engineering in 2019.

Find out more about Professor Wang's research by visiting his profile page on the [Monash University website](#). For further information about this funding scheme, please visit the [Australian Laureate Fellowships scheme](#) page.



Dr Zongli Xie

Travel Award Coordinator

Team Leader - Catalysis & Materials
Discovery
CSIRO Manufacturing
Locked Bag 10
Clayton South MDC, VIC 3169
Australia

Contact details: +61 3 9545 2938

E: Zongli.Xie@csiro.au



Past Winners

Mikel Duke (2018)

Huanting Wang (2020)

New MSA Funding Initiative II

Industry Travel Award

Industry Travel Award Scheme

In order to assist MSA members from industry ([junior/mid-career researchers](#)) to attend international conferences, the MSA will sponsor [two travel awards per calendar year](#) to support their travel and attendance costs to a maximum of \$500 AUD. Details of travel award application on each conference will be announced to MSA members several months before the deadline of its abstract submission. The recipients will receive the cash prize into their project or travel account. Their success in receiving the award will be announced to MSA members.

Eligibility

- [Must be a current member \(industry-based\) of the MSA](#)
- [Must be considered a junior or mid-career researcher/employee and under 40 years old](#)
- Must have their abstract accepted and be the presenting author of an oral or poster presentation at the conference
- Must not have previously won a travel grant from MSA during the calendar year
- Indicate in the application the projected travel budget including the amount of any departmental or other support available

The Tony Fane Award

Tony Fane Award Scheme

The Membrane Society of Australasia (MSA) seeks to recognize individuals who have made outstanding and distinguished contribution to the advancement of membrane science and technology in Australasia through the Tony Fane Award. Nominations for this award will be assessed by an assessment panel appointed by the MSA Board. The nominee need not be a member of MSA to be eligible but it requires independent nomination. The panel will base their assessment on the track record of the nominee, the strength of claims and evidence provided to support the claims, and the long term contribution and the difference made by the nominee to the membrane field and community in Australasia. After the panel has deliberated and selected the award winner, they will forward the decision to the MSA Board for final confirmation. Awarding of the Tony Fane Award will be given during the gala night of an MSA-sponsored major conference (such as the International Membrane Science and Technology (IMSTEC) conference). The panel and the board reserve the right not to award any nominees in the respective year if no one meets the expected quality and calibre for an awardee.

The Tony Fane Award winner will receive a plaque of recognition and inclusion in the Tony Fane Award gold tablet list of distinguished membranologists.

If you would like further information on the MSA funding program, contact (funding@membrane-australasia.org or Zongli.Xie@csiro.au)

MSA Travel Support

MSA Travel Award (PhD/ECR)

In order to assist MSA members (students and early career researchers (ECRs)) attend MSA affiliated symposiums and conferences, MSA will sponsor travel awards to support their conference registration costs or to partially cover their conference expenses. Subject to the approval of the MSA executives, MSA executive will directly pay the registration costs of the award recipients to the organizing committee. The award winners will be announced during the conference closing ceremony and published in our newsletter post-conference.

(ECRs here are defined as those researchers within 5 years post-PhD graduation)

Eligibility

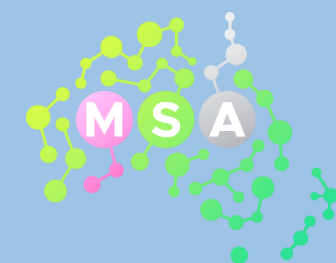
- Must be a current member (HDR student or ECR) of the MSA.
- Must have their abstract accepted and be the presenting author of an oral or poster presentation at the conference.
- Must not have previously won a travel grant from MSA during the calendar year.

Selection Criteria

Applicants will be selected by a panel of judges according to their track record relative to opportunity, the quality of abstract and significance of research, justification of eligibility and the need for financial assistance.

Travel Funding use – What the MSA grant support program is for?

This travel award is provided specifically for the sponsorship of the above mentioned conference registration or conference expenses.



Dr Zongli Xie

Travel Award Coordinator

Team Leader - Catalysis & Materials
Discovery

CSIRO Manufacturing

Locked Bag 10

Clayton South MDC, VIC 3169

Australia

Contact details: +61 3 9545 2938

E: Zongli.Xie@csiro.au

How to apply?

Call for application will be made through the general MSA email list. Please stay in touch with the MSA to receive all the relevant updates for these Travel Awards. The application form must be submitted via email to the MSA Travel Funding Committee (funding@membrane-australasia.org) with the subject line: “[conference name] travel award application” at the announced deadline. The outcome of the application will be announced within 6 weeks after the deadline.

Conditions

To qualify for this travel funding program, the awardee has to meet the following terms and conditions:

Reporting – write a short article as a contribution to the MSA Newsletter, highlighting relevant points of interest to MSA members (can be about the conference or other member-related topics);

Acknowledgment – the MSA (including the logo) must be acknowledged for providing financial support in the presentation materials.

Contact us

If you would like further information on the MSA travel funding program, contact Travel funding program coordinator:

Dr Zongli Xie (funding@membrane-australasia.org or Zongli.Xie@csiro.au)



MSA DARRELL PATTERSON TRAVEL AWARD for ICOM2020

Award Overview

This award is created to acknowledge the late Dr Darrell Patterson's passion in supporting the New Zealand membrane community for the MSA. Dr Darrell Patterson was a Senior Lecturer at the University of Auckland before joining the University of Bath in the UK. Dr Patterson was actively involved in MSA when he was in New Zealand. The main purpose of the award (\$1,000 per awardee) is to assist MSA member (students and early career researchers/ECRs) in New Zealand to attend International Congress on Membranes & Membrane Processes (ICOM2020) in London. The award winners will be announced to all MSA members as well as at the ICOM closing ceremony.

(ECRs here are defined as those researchers within 5 years post-PhD)

Eligibility

- Must be a current member (HDR student or ECR) of the MSA
- Must have their abstract accepted and be the presenting author of an oral or poster presentation at ICOM2020.
- Must not have previously won a travel grant from MSA during the calendar year



Selection Criteria

Applicants will be selected by a panel of judges based on their track record relative to opportunity, the quality of abstract and significance of research, justification of eligibility and the need for financial assistance. First priority will be given to applicants from New Zealand institutions. If there is no applicant from New Zealand that meets the selection criteria, second priority will be given to applicants from Australia, followed by countries outside New Zealand and Australia.

Travel Funding use – What the MSA grant support program is for?

This travel award is provided specifically for partial support of travel fare to ICOM2020.

How to apply?

Please send an email to (funding@membrane-australasia.org or Zongli.Xie@csiro.au).

The application form must be submitted via email to the MSA Travel Funding Committee (funding@membrane-australasia.org) with the subject line: "ICOM2020 travel award application" at the announced deadline. The outcome of the application will be announced within 6 weeks after the deadline.

MSA travel award application submission deadline: 27 September 2020

Conditions

To qualify for this travel funding program, the awardee has to meet the following terms and conditions:

- Reporting – write a short article as a contribution to the MSA Newsletter, highlighting relevant points of interest to MSA members (can be about the conference or other member-related topics);
- Acknowledgment – the MSA (including the logo) must be acknowledged for providing financial support in the presentation materials



CURRENT EVENTS	2020 / 2021	ABSTRACT SUBMISSION
<p>MSA – MonashU – ARC Research Hub Webinar Series (see page 3) Dr Ludovic Dumee Prof Huanting Wang Dr Dharma Dharmabalan Mr Bruce Bilotft & Mr Gerin James https://www.arc-eesep.org/events-1</p>	1 day prior	N/A
<p>1st MSA Annual Conference 2020 Monash University / CSIRO, Australia www.msa-agm.org</p>	23 – 24 Nov	Now
<p>International Congress on Membranes & Membrane Processes 2020 London, UK www.icom2020.co.uk</p>	6 – 11 Dec	31 Jul 2020
<p>16th International Conference on Inorganic Membranes Taipei, Taiwan www.icim2020.org</p>	6 – 10 Mar 2021	31 Oct 2020

MSA Annual Meeting 2020

23-24 November 2020

MONASH UNIVERSITY / CSIRO
CLAYTON, VICTORIA

ICOM

2020

12th International Congress on Membranes and Membrane Processes

6–11 December 2020 - London, UK

ICIM 16

THE 16TH INTERNATIONAL CONFERENCE ON INORGANIC MEMBRANES

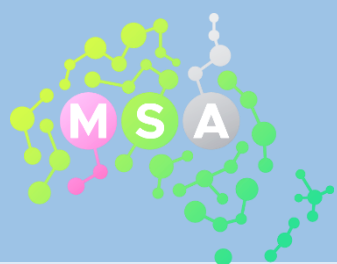
March 6-10, 2021

FIRST ANNOUNCEMENT

The International Conference on Inorganic Membranes (ICIM) is the premier international meeting in the area of inorganic membranes. ICIM is organized every other year devoted exclusively to the science and technology of inorganic membranes. The former conferences provided excellent opportunities for researchers from academia and industries to report and discuss the fundamentals and applications of inorganic membranes. ICIM 16 will continue this tradition.

WWW.ICIM2020.ORG

1st Montpellier 1989
 2nd Montpellier 1991
 3rd Worcester 1994
 4th Gattinburg 1996
 5th Nagoya 1998
 6th Montpellier 2000
 7th Dalian 2002
 8th Cincinnati 2004
 9th Lillehammer 2006
 10th Tokyo 2008
 11th Washington 2010
 12th Enschede 2012
 13th Brisbane 2014
 14th Atlanta 2016
 15th Dresden 2018
16th TAIPEI 2021



Dr Stefan Smith

Membership Coordinator

Centre Manager, Monash Centre for
Membrane Innovation
Monash University, Clayton Campus,
VIC 3800 Australia
E: stefan.smith@monash.edu

Ordinary Membership

In 2009, the MSA was founded with the goal bringing together key academics, industrial professionals, and emerging membranologists to further membrane science and technology within Australasia. Becoming an MSA member means connecting with a whole community of people who are dedicated to the same important goal. The MSA is launching a campaign to renew the membership program by providing more benefits to its current and future members. It is a great pleasure for me to introduce the membership with newly rolled out benefits:

All paid Members have the right to:

- attend and to speak at general meetings;
- nominate, to be nominated and to be appointed a Director; and
- vote at general meetings and on resolutions put to the membership.

Customised MSA Website and Social Media Alerts

Visit our new web home, the upgraded MSA website with more options and tools. Receive up-to-date information on domestic and international research, upcoming conferences, commercial new products via MSA website and email-alert targeted for Academic members. Follow the MSA on the most well-established social networks, i.e. [Twitter](#), [Facebook](#) and [LinkedIn](#).

MSA e-Update

Do not miss out on the most important membrane-related headline news. The MSA is launching a brand-new weekly e-Update, containing membrane news, recent publications, job opportunities and funding information. Our staff will collect the most important news for you, just one click away.

Discounted rates at MSA or MSA sponsored conferences

From membrane science and technology basics to recent advances and breakthrough outcomes. The MSA promotes during the year seminars, workshops and conferences encompassing a wide range of membrane topics. Discounted fees and the possibility of joining via webinar will be offered to all the MSA members.

All these plus all the usual benefits:

Vast membrane society networks

Networking platforms with other MSA members and industry partners along the MSA-sponsored events.

Exclusive member awards, benefits and savings

Apply for travel awards and scholarships to attend international conferences and visit fellow academic partners worldwide.

Corporate Membership

Since 2011, MSA has received strong support from our corporate members including Veolia, Dupont (Evoqua Water Technologies), CSIRO, Memphasys, OriginWater, and Monash University. The benefits and MSA-sponsored features for Corporate Members include:

Included multiple individual memberships

The corporate membership will include up to 5 individuals from your company annually, the membership is interchangeable in case of employment change or under similar circumstances.

Corporate corner

Joining other membrane elites in Australia and overseas, you will gain higher exposure rates as your company is featured in MSA website's Corporate directory.

Customised MSA Website and Email Alerts

Stay in the front line of membrane world as you will receive up-to-date information on research, international news, commercial new products via MSA website and email-alert targeted only for Corporate members.

MSA e-Update

Advertise new product information and new job opportunities via the MSA's weekly e-Update, containing membrane news, recent publications, job opportunities and funding information etc.

Discounted rates at MSA or MSA sponsored conferences

Now and then, MSA hold or sponsors seminars, workshops and conferences in a wide range of membrane topics and at various venues, corporate members will be eligible to enjoy reduced (and sometimes FREE) conference registration rates. Also, opportunities to set up company promotional booth in conferences may also be available, subject to applications and in the sole discretion of MSA committees.

All these plus all the usual perks:

Vast membrane society networks

Be able to link and cross network with other membrane companies and individual professionals in MSA member community in Australia and internationally.

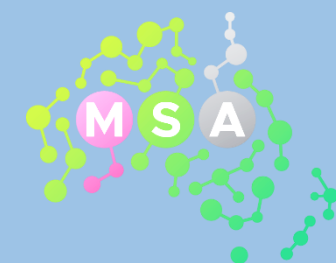
Exclusive member awards, benefits and savings

Access to application of travel awards, scholarships etc.

We encourage you and your team to visit our website and membership program and get in touch with our Membership Coordinator, Dr Stefan Smith (E: Stefan.Smith@csiro.au) to discuss the membership details:

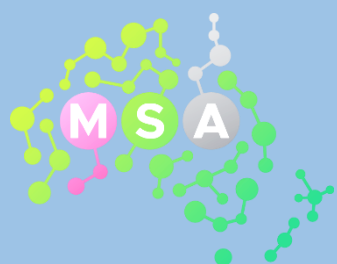
<https://membrane-australasia.org/>

<https://membrane-australasia.org/product/membership/>



MONASH
University

MONASH
MEMBRANE
INNOVATION



Dr Filicia Wicaksana

Event Coordinator

Department of Chemical and Materials
Engineering
UNIVERSITY OF AUCKLAND
Engineering Block 5 – Building 405
5 Grafton Road
AUCKLAND 1023, New Zealand
E: f.wicaksana@auckland.ac.nz
T: +64 9 923 1861

MSA Funding Support Programs

MSA Workshop Funding Support

This program provides funding support to membrane-related events such as workshop and symposia that are held in Australasia.

Who can apply for the MSA workshop support program?

All MSA members can apply for funding support from the MSA.

Funding use – What the MSA workshop funding support program is for?

Financial support is provided for activities and projects that are beneficial to membrane technology in Australasia. This includes a range of activities, such as:

- Sharing of knowledge on one particular topic related to membrane technology in the laboratory, pilot or full scale level,
- Dissemination of results/outcomes at the end of a project and highlight future trends,
- Promoting new activities.

Funding support is available to help out with:

- Administrative activities (e.g., venue, materials),
- Catering (e.g., cost of lunch, coffee),
- Sponsoring speakers (e.g. travel and accommodation expenses),
- Awards,
- Free or discount registration fees for ECR.

A maximum of \$2,000 per event will be allocated.

How to apply?

The application form ([click to download](#)) must be submitted to the MSA Workshop Committee at least 3 months before the date of the event with the subject “MSA Workshop funding application”. Please advise the MSA as soon as possible of any planned event so that we can consider it for budgeting. The chances of success are likely to be improved by an early application. The outcome of the application will be announced approximately 1 month after the submission of the application.

Conditions

To qualify for this funding program, your group has to meet the following terms and conditions:

Matched funding – your application must include at least an equal monetary or in-kind contribution from you or your project partners;

Registration fees – the event should provide free or more than \$50 discount registration fees for MSA members;

Reporting – write a short article on the event for publication in the MSA newsletter, highlighting relevant points of interest to MSA members (this is a requirement before reimbursement is given);

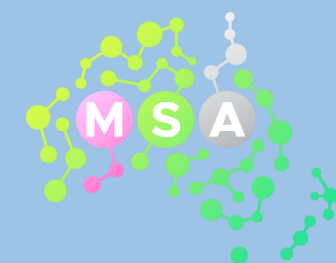
Acknowledgment – the MSA (including the logo) must be acknowledged for providing financial support in all printed media (programs, flyers, cover slides, websites, etc.) and presentation materials.

Contact us

If you would like further information on the MSA funding program, please contact workshop program coordinator:

Dr Filicia Wicaksana E: (f.wicaksana@auckland.ac.nz).

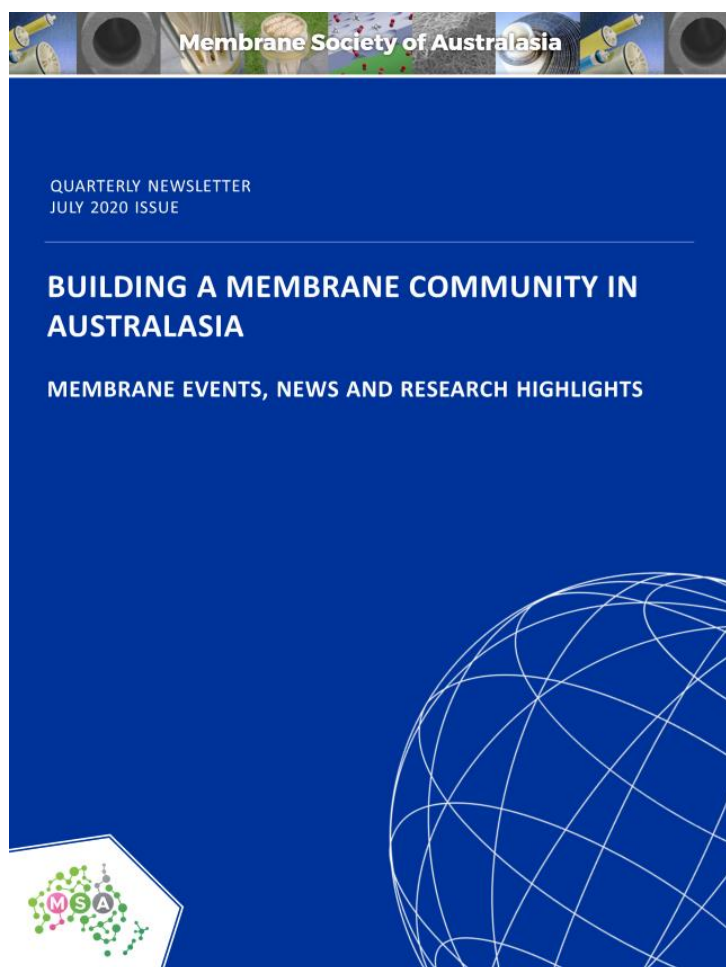
Quarterly Newsletter



Every quarter, MSA Newsletter publishes important pieces of news, events and research highlights related to membranes and membrane technologies. You are encouraged to get in touch with the Newsletter Editor, David Wang, to contribute a piece of news-worthy article or two from an area of your work, research or group. To facilitate this process, we have formed a team of Newsletter Taskforce based on Board nominations and their relevance to membrane field. Please welcome them to the MSA family during news gathering time by offering your kind assistance.

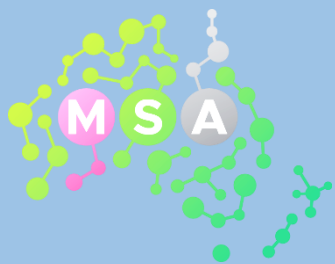


Dr David Wang
Newsletter Editor and Marketing
 Senior Lecturer
 School of Chemical and Biomolecular Engineering
 THE UNIVERSITY OF SYDNEY
 NSW 2006, Australia
 T +61 2 9351 3832
 E: david.wang1@sydney.edu.au
<http://sydney.edu.au/engineering/people/david.wang1.php>



Should you wish to nominate someone in your state / in your research group for the Taskforce, please get in touch with the Newsletter Editor.

Taskforce Member / Project	Supervisors	Uni.
NSW		
Mr Gholamreza Vahedi Sarrigani <i>Interfacial Diffusion Membrane Using Novel Nanoconfined Polymer Crystallization for Natural Gas Processing</i> – 3 rd year PhD	Dr David Wang Prof Dianne Wiley	USYD
QLD		
Miss Nur Hafizah Ab Hamid <i>Forward Osmosis (FO) Membrane-based Technology in Urban Wastewater Treatment</i> – 4 th year PhD	Dr Liu Ye Dr Simon Smart Dr David Wang	UQ



MSA Communication Forum



Dr Andrea Merenda

Secretary

Postdoctoral Fellow, DEAKIN UNIVERSITY
75 Pigdons Road, Waurn Ponds, VIC,
3216, Australia

E: a.merenda@deakin.edu.au
secretary@membrane-australasia.org



Prof. Faisal Hai

Communication Coordinator

Director - Strategic Water Infrastructure
Laboratory

Research Director of School of Civil,
Mining and Environmental Engineering
UNIVERSITY OF WOLLONGONG, Australia

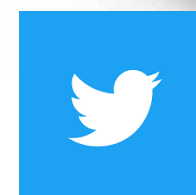
E: faisal@uow.edu.au

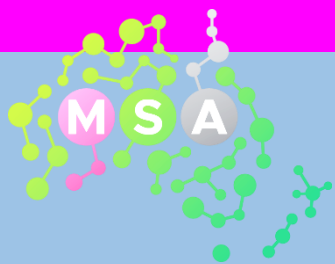
One of the MSA objectives arisen from our strategic meeting in 2019 is to ensure our members stay up-to-date of the membrane-related development, events and news by enhancing our communications with our members and the community.

Given the very nature of the “new” normal during COVID-19, we use social media – often through mobile applications, online chat rooms, and virtual meeting platforms to improve ways of interacting and communicating news with our members more quickly and effectively.

This year, we have now rolled out a suite of forums and dissemination media such as e-Updates (via MailChimp), Twitter, Facebook and LinkedIn online platforms to readily and easily share news with the MSA community.

We will check on the effectiveness and efficacy of these communication platforms by seeking your feedback and input from time to time, and more importantly, we will regularly monitor the levels of engagement of our members to further offer a communication system that is purposeful and sustainable.





1. Battery Recycling: Hydrometallurgical – membrane separation

Led by Deakin University and Murdoch University and funded by the Future Battery Industries CRC (FBI-CRC).

Dr. Ludo DUMEE and Prof. Aleks Nikoloski have received funding to tackle the issue of spent battery effluent treatment and minerals recovery. The 4-year funding (1.2M AUD) will support the development of hybrid hydrometallurgical – membrane separation systems supporting brine management and selective resource recovery and precipitation. These projects, co-located across the two institutions in Perth and Geelong, also fall under Deakin's Circular Economy strategic funding stream to reduce footprint of battery manufacturing and end-of-life repurposing. For information – please contact Ludo.



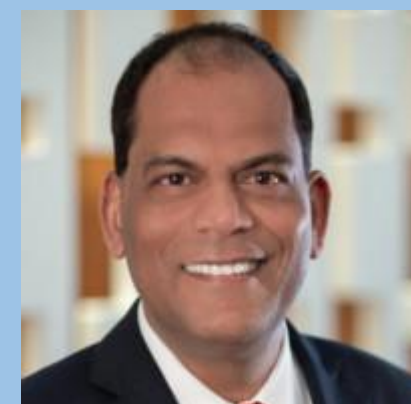
2. DuPont acquires Evoqua Water Technologies

In 2019, Dupont acquired 4 membrane technology companies – Desalitech, Inge, OxyMem, and the Australian based membrane manufacturer MEMCOR. This is a significant change to the global membrane technology landscape, with Dupont significantly increasing its portfolio of water and separation technologies. Adding to its existing range of RO, NF, IF and IX technologies; these acquisitions support Dupont by providing access to MBR and Submerged UF, MABR, market leading PES UF, and packaged DESAL systems.

As pointed out by the global vice president and general manager of the DuPont Water Solutions, Mr Hara Prasad Nanda, in the Water Technology article: “With the addition of the Inge and Memcor portfolios, DuPont became the leading UF supplier across multiple market segments such as residential, industrial, utility, wastewater, and other specialty solutions.”

The information about DuPont recent acquisitions of membrane technology companies can be found in the article link here:

<https://www.watertechonline.com/wastewater/article/14074717/dupont-acquires-four-water-purification-companies>



THANK YOU



BOARD DIRECTORS



Ho Kyong Shon



Geoffrey Johnston-Hall



Stefan Smith



Ludovic Dumée



Xiwang Zhang



David Wang



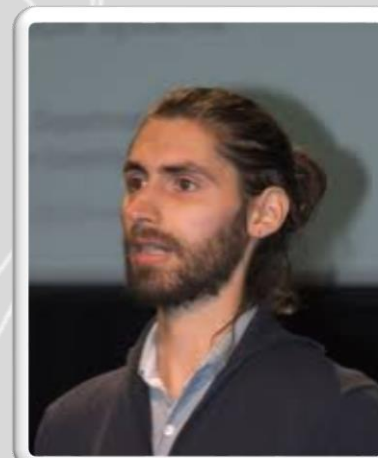
Leonard Tijing



Filicia Wicaksana



Zongli Xie



Andrea Merenda



Faisal Hai

Board Directors

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Vice President– Geoffrey Johnston-Hall, DuPont Water Solutions

Secretary– Andrea Merenda, DeakinU

Treasurer– Leonard Tijing, UTS

Newsletter / Marketing– David Wang, USYD

Communication Coord – Faisal Hai, UOW

MSA Awards Coord– Zongli Xie, CSIRO

Industry Engagement – Xiwang Zhang, MonashU

International Engagement – Ludovic Dumée, DeakinU

Membership Coord – Stefan Smith, Monash Centre for Membrane Innovation

Event Coord – Filicia Wicaksana, UAuckland