QUARTERLY NEWSLETTER JULY 2018 ISSUE

BUILDING A MEMBRANE COMMUNITY IN AUSTRALASIA

MEMBRANE EVENTS, NEWS AND RESEARCH HIGHLIGHTS



https://www.membrane-australasia.org/

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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:

About MSA



- 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.

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Message From the New President

PROFESSOR AMANDA V ELLIS, FRACI

ARC Future Fellow & Professor in Chemical Engineering/Nanotechnology School of Chemical and Biomedical Engineering Building 165, Room 3.21A Melbourne School of Engineering THE UNIVERSITY OF MELBOURNE, VIC 3010 Australia PH: +61 3 90354665



Dear MSA members

On the afternoon of 12th September 2017 during MSA Board meeting I was officially elected as the new MSA president by the Board Members and I thank-you for the privilege. I would like to offer my sincere thanks for all the hard work Dr Aaron Thornton has done over the last years in driving the MSA to become a highly successful (and financial) and recognised society not only in Australia but throughout the world. He has done a fantastic job and I can only hope I will endeavour to keep up the good work. I look forward to working more closely with you all.

Please join me in thanking Aaron, who will still (thankfully) remain as a Board member and help out with the transition until his term is finalised.

Kind regards Amanda

Message From the New President

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MSA 2017 Retreat

n Dec 2017 the MSA Board and honorary members undertook a strategic retreat in the Blue Mountains to forge discussions on the future direction of the MSA.



MSA 2017 retreat – Blue Mountains, from Left to Right; Ken Morison, Xiwang Zhang, Aaron Thornton, Tony Fane, Colin Scholes, Amanda Ellis, Anita Hill, Ludo Dumée, David Wang, Stefan Smith, Hans Coster. Photo taken by Hokyong Shon.

A great deal was discussed, and proposed, and so the next 1-2 years are going to see some exciting changes for the membership. A few examples of what we have been, or are currently, working on are:

- A new logo for the society
- A new website and membership registration process
- A new Distinguished lecture series
- AMS 11 Brisbane (3-6 July 2018)
- IMSTEC (Jan/Feb Sydney 2019)
- The establishment of sub-committees

All this makes for a dynamic society and I encourage anyone who is interested in being involved with the MSA on a much deeper level to nominate for a position on the Board.

We are involved in a broad range of conferences moving forwards and developing workshops, and a Distinguished lecture series for prominent international membrane leaders. This is an exciting time to be involved in membrane science and technologies. Being part of the MSA gives the members opportunities to join our mentorship program and network both Nationally and Internationally, I encourage you to take advantages of these opportunities and get involved!

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World Association Membrane Society Meeting

PUSH:

Globally united society from NAMS, EMS, AMS and other regional / national societies.

PULL:

Cohesive society with common research interests and strategic goals.

As the former MSA President representing the interests of Australasia, I attended the first World Association of Membrane Societies (WA-MS) meeting, which was held on the 2nd August this year during the 11th International Conference on Membranes and Membrane Processes (ICOM) in San Francisco. The core objective of the WA-MS is to globalize the membrane community and its activities. This will include: 1. Providing a platform to enhance the interactions between the founding societies NAMS, EMS and AMS, and 2. inviting other regional or national societies that may operate outside of NAMS, EMS and AMS.



DR AARON THORNTON CSIRO Materials Science and Engineering Locked BAG 10 Clayton South MDC, VIC 3169 Australia PH: +61 3 9545 8018

Each of the founding societies will have six delegates in the steering committee. As MSA is a partner society within AMS, I was nominated as a delegate for AMS. The founding societies and newly joining societies will be active in topical working groups. There are currently 3 working groups for the website, event calendar and outreach. I was nominated for the website working group. Other ideas for working groups include: education on membranes, membrane terminology, membranes in developing countries, industrial application of membranes and membranes to

meet societal needs.

The Steering Committee will meet face to face every year, hosted by one of the founding societies in a 9-years cycle: at each ICOM conference hosted by the society organizing that meeting; in the year after ICOM, hosted by the society organizing the coming ICOM conference; and by the third society in the second year after ICOM. In practice: at ICOM by NAMS in 2017, by EMS in 2018, by AMS in 2019; in 2020 (ICOM) by EMS, in 2021 by AMS, in 2022 by NAMS, in 2023 (ICOM) by AMS, in 2024 by NAMS, and in 2025 by EMS. This cycle is then repeated. The Steering Committee meeting in between ICOM conferences can, but does not have to, be organized at a conference by the hosting society (Euromembrane, Permea, AMS - upon the discretion of the hosting society). As the delegate for AMS, I will ensure that Australasia has a voice at this meeting.

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Prof. Mikel Duke VICTORIA UNIVERSITY Conference Co-Chair



11th Conference of the Aseanian Membrane

his year, the 11th conference of the Aseanian Membrane Society (AMS11) is being held from the 3rd to 6th of July in 2018 in Brisbane, Australia. The AMS conferences are organised every year in rotation with the member countries, except during the years of the International Congress on Membranes and Membrane Processes (ICOM).

The AMS conferences attract leading scientists and engineers, not only from Asia and Oceania, but also around the world, to share their latest innovative work on membrane science and technology. Following the success of the 10th AMS conference in Japan in 2016, we hope to bring you another exciting event in Australia in 2018.

Full list of Conference topics:

- 1 Gas separation
- 2 Pervaporation and membrane distillation
- 3 MF and UF membranes
- 4 NF, RO and FO membranes
- 5 Electrically enhanced membrane operations
- 6 Membrane bioreactors
- 7 Membrane fouling
- 8 Water and waste water treatment
- 9 Wine, food and dairy application
- 10 Application in mining industry and agriculture
- 11 Membranes for energy conversion and storage
- 12 Bioinspired membranes and novel membrane materials
- 13 Process integration
- 14 Resource recovery

On behalf of the organising committee, we welcome you to AMS11, and hope you can also take some time to explore Brisbane and its beautiful nearby places including the world famous Gold Coast and Sunshine Coast.

Dr Simon Smart THE UNIVERSITY OF QUEENSLAND Conference Co-Chair

Key information:

Dates: 3 – 6 July 2018 **Location:** Rydges Southbank Hotel, Brisbane, Australia **More information:** <u>https://www.ams11.com.au/</u>

4 AMS11 Conference Details

https://www.membrane-australasia.org/

AMS11 Conference Highlights

Some highlights and activities: Plenary speakers included:

- **1. Prof. Ahmad Fauzi Ismail** (University of Technology Malaysia, Malaysia): "Innovations in Fundamental and Translational Research: The Experience of AMTEC".
- 2. Dr Bibhash Chakravorty (Genesis Membrane Sepratech Pvt. Ltd., Mumbai, India): "Applications of Membrane Technologies for Various Industries in India".
- **3. Prof. Shingjiang Jessie Lue** (Chang Gung University, Taiwan): "Graphene Oxide-Polymer Nanocomposites for Energy and Water Purification Applications".
- **4. Prof. Zhi-Kang Xu** (Zhejiang University, China): "Surface and Interface Engineering for Advanced Membranes".
- 5. **Prof. Ho-Kyong Shon** (University of Technology Sydney, Australia): "Osmotically driven desalination and energy production: membranes, draw solutions, processes and applications".
- 6. Prof. Rong Wang (Nanyang Technological University, Singapore): "Development of Highly Effective Membranes for Water Reuse, Desalination and Energy Harvesting – from Laboratory to Commercialization".
- 7. Prof. Jong Hak Kim (Yonsei University, South Korea): "Amphiphilic Graft Copolymer Membranes: Synthesis, Nanostructure and Gas Separation".
- 8. Prof. Takeo Yamaguchi (Tokyo Institute of Technology, Japan): "Systematic Membrane Design for Fuel Cells, Bio-inspired Materials and Desalination Processes".













The AMS11 would not be possible without the strong supports of the sponsors,

Silver: Evoqua, Scinor and Arkema

Bronze: Anton Paar and CSIRO

Conference Sponsors: 2D Water

Award Sponsors : MSA, MDPI, PTMem

Special Issue "Selected Papers from the 11th Conference of the Aseanian Membrane Society (AMS11)" Deadline for manuscript submissions: **15 October 2018** Membranes special issue, <u>click here to find out more</u>.



membranes

an Open Access Journal by MDPI

AMS11 Highlights

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ARC Research Hub Success

Transforming Australian Industries: ARC Research Hub for Energy-efficient Separation (2017-2022)



PROF. XIWANG ZHANG Director of ARC EESep Hub Department of Chemical Engineering MONASH UNIVERSITY Room 213, Building 36, Clayton Campus, Clayton Vic 3800 Australia T: +61 3 9905 1867 Australian membrane researchers recently were successful with the application for Australian Research Council Industry Transformation Research Hub for Energy-efficient Separation (EESep), which involves 10 Australian universities/institutes and 12 industry partners. The EESep is the largest Hub among the three research hubs awarded in this year under the ARC Linkage Projects scheme. \$4 million was funded for five years to match industry contributions on the innovation and application of high performance separation materials, equipment and processes.

The EESep hub will create an Australian multidisciplinary platform to develop advanced separation materials including membranes, absorbents, catalysts and resins for advanced manufacturing which will enhance Australia's capability as a world-leading separation technology provider.

The Hub aims to develop advanced separation materials, innovative separation products and smart separation processes to reduce the energy consumption of separation processes which underpin Australian industry. The Hub focuses on the development, synthesis, characterisation and integration of advanced materials (membranes, adsorbents and resins), across scales to enable novel products. The intended research outcomes allow the majority of Australian industry to become more energyefficient and cost-competitive in a global economy. The Hub also aims to develop a highly-trained, industry-ready workforce for Australian industry related to separation.

To learn more about how your organization can get involved and participate in the ARC EESep Hub, please contact Hub Director: Prof. Xiwang Zhang, <u>xiwang.zhang@monash.edu</u>



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ARC Funding Success

Discovery Early Career Researcher Award (DECRA) Dr Ludovic Dumee Development of two-dimensional nano-porous membranes.

This project aims to develop new desalination membranes able to selectively remove contaminants from liquid effluents with greater cost efficiency and lower environmental footprint. It aims to do this by forming hierarchical membranes, where nano-scale pores generated across nano-porous two-dimensional materials are seeded with highly selective micro-porous crystals. These membranes will reduce the cost of desalination, developing new markets beyond the sole field of water desalination, in resource, solvent recovery and protein fractionation.

Discovery Project

Dr Huacheng Zhang; Dr Xinyi Zhang; Dr Aaron Thornton; Professor Benny Freeman

Engineered ion channels for selective and switchable ion conduction

This project aims to develop an innovative bio-inspired approach for fabricating angstrom-sized ion-channel membranes with specific ion selectivity, high ion conductivity and efficient gating function comparable to biological ion channels. Engineering of artificial channels with ion-channel-like shapes, ion selectivity filters and functional gates is expected to bring high-efficiency technologies to applications such as membrane separation and energy conversion. This project has potential to result in new knowledge of biomimetic design of artificial ion-channel membranes and directly benefit manufacturing industry for Australia.

Discovery Project

Professor Vicki Chen; Associate Professor Deanna D'Alessandro



ARC-DECRA Fellow Institute for Frontier Materials DEAKIN UNIVERSITY



Senior Research Scientist Future Industries CSIRO Materials Science and Engineering

Putting metal organic frameworks to work at interfaces.

This project aims to develop new strategies to better synthesize ultrathin Metal-organic framework (MOF) membranes by nano-structured and chemically functionalized substrates. MOF materials have enormous potential due to the extraordinary structural and chemical diversity of these crystalline microporous materials and their potential applications in gas storage, separation, catalysis and sensing. However, a major challenge is fabricating thin robust MOF films or patterns on porous, flexible, and nonporous substrates, quickly and easily in order to construct useful devices. The project will grow ultrathin layers of molecular sieving and electroactive MOFs to produce technology platforms for large scale device manufacturing.



Head of School School of Chemical Engineering THE UNIVERSITY OF NEW SOUTH WALES

ARC Funding Success

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Prof Huanting Wang (Chair) hosted the opening ceremony.

IBMM2018 & IEESep2018 Conference Recap

The 1st International Conference on Bio-inspired Materials and Membranes (IBMM2018) and the 1st International Conference on Energy-efficient Separation (iEESEP2018) was successfully held in Pullman Albert Park, Melbourne from 23 – 27 January 2018. Prof Marc Parlange (Provost and Senior Vice-President of Monash University) delivered his welcome speech at the opening ceremony.

The organiser of the two conferences, Australian Research Council Research Hub for Energy-efficient Separation (ARC-EESEP), hosted 157 participants and aimed to review and discuss the recent research progress and future direction of two vital research topics - bio-inspired materials and membranes. Bio-inspired materials are the focus of an emerging research topic, which aims to develop high-performance functional materials by learning from nature.

In the last a few years the applications of bio-inspired materials in membranes has increased significantly. Within this context, the two conferences together provided the perfect opportunity to gather experts from both research fields - including academic and industry partners - to exchange innovative ideas and experience in developing advanced materials and membranes for energy-efficient separation.

Professor Huanting Wang (Chair) and Professor Xiwang Zhang (Co-Chair), along with their organising committee, created a scientific program which aimed to provide researchers tangible benefits and collaboration opportunities, thereby stimulating research in the development of new bio-inspired materials and membranes. The participants of the conference were greatly benefited from the five plenary, 25 keynote and 15 invited speakers' talks.

An important element of the conferences was the opportunity for

students to present their research in a supportive environment, which included mentors, future collaborators and leaders of their fields. Students were encouraged to present a poster or enter the 3MT competition, with awards given to the top three in each category.

Congratulations to 3MT award winners: 1st - Van Huy Tran (University of Technology Sydney) 2nd - Wang Zhao (Monash University) 3rd - Yun Xia (Monash University)

Congratulations to best poster award winners: 1st - James Maina (Deakin University) 2nd - Yuqi Wang (Monash University) 3rd - Yun Lu (Monash University)

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IBMM2018 & IEESep2018 Conference Recap

Some highlights and activities: Plenary speakers included:

- **Professor Tony Fane** (UNESCO Centre for Membrane Science and Technology at UNSW, Australia), *Bioinspired membrane engineering for water applications*
- **Prof Lei Jiang** (ICCAS, and Dean of School of Chemistry and Environment, Beijing University of Aeronautics and Astronautics, China and Department of Chemical Engineering, Monash University, Australia), *Smart interfacial materials from super-wettability to binary cooperative complementary systems*
- **Prof Liang-Yin Chu** (School of Chemical Engineering, Sichuan University, China), *Bioinspired smart gating membranes*
- Dr Anita Hill (Future Industries, CSIRO, Australia), Architecturing nanospace for highly efficient gas separations
- **Prof Dongyuan Zhao**, (Department of Chemistry, Laboratory of Advanced Materials and Collaborative Innovation Center of Chemistry for Energy Materials, Fudan University, China and Department of Chemical Engineering, Monash University, Australia), *Functional mesoporous nanomaterials: fabrication and enhanced bioapplications*

The plenary talks of the conference have been uploaded on <u>https://www.arc-eesep.com/</u>.

Early Career Researcher Workshop was held on the first day of conference to help the young researcher to further develop their skills or in search of opportunities in the academia and industry.

A tour of Monash Campus and the Australian Synchrotron was organised to tie up Australian leading research institutions with the international research community and enable further collaborations.



Prof Xiwang Zhang (Co-Chair & Director of ARC-EESEP) introduced the ARC Research Hub of Energy-efficient Separation.

The conference dinner was held at the Crown Towers to officially close the conference in style with amazing Jazz and food.

We would like to thank the sponsors,

Platinum: Australian Research Council, ARC Research Hub of Energyefficient Separation, Monash University, and 2D Water

Gold: Membrane Society of Australasia

Silver: FB Rice and CSIRO MOFWORX.

The next IBMM will be held in Sichuan, China in 2020. See you all there!

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Dr Shuaifei Zhao (co-Chair of the event) gave the closing speech.

Early Career Researcher Symposium Highlights

The 5th MSA ECR symposium was successfully held at Macquarie University from the 4-6 February 2018. Prof. Barbara Messerle delivered her welcome speech at the opening ceremony. 14 senior membrane scientists from Victoria, Western Australia and Sydney regions provided excellent mentorship throughout the symposium to the next generation of membrane researchers.

The Membrane Society of Australia (MSA), in association with the Department of Environmental Science and Energy and Environmental Contaminants Research Centre at Macquarie University, hosted 67 participants at the early career researcher (ECR) symposium. The symposium was focused on fundamental and applied membrane science in engineering and technology across the areas of water treatment, gas separation, food and chemical processing ranging from materials development through to end use applications.

Dr Shuaifei Zhao (Co-Chair) and Dr Stefan Smith (Co-Chair), along with their organising committee, created a forum for young and emerging membrane scientists and engineers to share their latest innovative work on membrane science and technology and to receive mentorship from senior membrane scientists. Over 50 ECR participants greatly benefitted from the 14 invited speakers' talks. 18 oral and 9 post presentations were presented by ECR's at the symposium and awards were given to 3 outstanding presentations (further info on next page).

The symposium website can be found via: <u>https://www.msaecr18.com/</u> The next MSA ECR symposium will be held in Melbourne in 2019



Participant group photo on the second day.



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Early Career Researcher Symposium Highlights

Some highlights and activities: Plenary and keynote speakers included:

- **Prof. Tony Fane** (UNESCO Centre for Membrane Science and Technology at UNSW, Australia): "Membranes Past and Future".
- **Prof. Vicki Chen** (UNSW): "Engineering New Nanocomposite Membranes for Gas Separation".
- **Prof. Hokyong Shon** (UTS): "Application of Membrane Technology for Desalination and Water Treatment".
- **Prof. Sandra Kentish** (University of Melbourne): "Novel Approaches to Dairy Processing".
- **Dr Paul Feron** (CSIRO): "Water production through CO₂ capture".
- **Prof. Amanda Ellis** (University of Melbourne): "The future is membranes".
- **Prof. Shaomin Liu** (Curtin University): "Nickel hollow fibre membranes for hydrogen production from high temperature reforming reactions".
- **Prof. Huanting Wang** (Monash University): "Metal-organic framework membranes: From gas separation to ion selection".
- A/Prof. Pierre Le-Clech (UNSW): "Tools for improving the use of membranes in the industry".
- **Prof. Long Nghiem** (UTS): "Recent development of membrane distillation for low carbon desalination and brine mining".

Two Early Career Researcher Workshops on proposal writing and career development were held to help develop ECR skills in writing grants and pursuing career opportunities in both academia and industry. The conference dinner was held at the Ranch Hotel.



Dr Stefan Smith (co-chair of the event) talked about his career at CSIRO.

MSA ECR Highlights

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Congratulations to 4 minute presentation award winners:

- 1st Gloria M Gonsalve-Bravo (University of Queensland)
- Highly Commended Mahdi Moshref-Javadi (Monash University)

Congratulations to best poster award winner:

• Anbharasi Vanangamudi (Victoria University)

The ECR Symposium would not be possible without the strong supports of the sponsors,

Platinum: Macquarie University, Australian Nanotechnology NetworkSilver: University of Technology Sydney and InstrumentWorksBronze: CSIRO and Deakin University

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Chemistry Festival at 100th RACI Congress



DR LUDOVIC (LUDO) DUMÉE ARC-DECRA Fellow Institute for Frontier Materials DEAKIN UNIVERSITY 75 Pigdons Road, Waurn Ponds Victoria 3216 - AUSTRALIA Phone: +613 5227 1038 Email: Iudovic.dumee@deakin.edu.au The Australian Chapter – American Chemical Society (ACS) Chemistry Festival, an outreach program aimed at primary and high-school students to promote chemical sciences, took place on Thursday the 27th of July during the Centenary RACI Congress in Melbourne. The Chemistry Festival started over 15 years ago through the ACS and its Puerto Rico chapter, nowadays attracting twice a year over 10,000 attendees and being the largest scientific event in Puerto Rico. This initiative led by Prof. Ingrid Montes has also spanned to mainland USA as a nationwide 10 days Chemistry Festival where students compete with their classmates, teachers and academic volunteers for the most imaginative and yet simple demonstration for how chemistry affects our daily lives.

Our Festival, the first in Australia, welcomed over 300 attendees, in majority grade 7 to 11 students over the day for hands-on activities and demonstrations. Two booths managed by Deakin University, presented work carried out at IFM on photo-catalysis and membrane separation, while two other booths were led by Latrobe University and Monash University on adsorption by nappies and low cost pH design.

metal membranes and reverse osmosis



12 Chemistry Festival at 100th RACI Congress

Andrea Merenda, two members of the Separation Materials Team at Deakin, generated great interest from the high school students, with numerous – and unexpected! – high level questions on topics such as band-gap calculations in semi-conductors and chemistry or reuse of membrane materials. The response from both the teachers and students was outstanding, with many asking for more demonstrations at their respective high schools.

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Chemistry Festival at 100th RACI Congress

The teams did an amazing job both in terms of organization, planning and pitching the experiments to a large and diverse audience. I am very grateful for their pro-activity, hard work and passion which allowed for a very successful event. The teams put together particularly impressive and yet simple experiments. In addition to the ACS, I would also like to thank the Institute for Frontier Materials and the Membrane Society of Australasia for joint funding.



I hope to have opportunities to continue this initiative over the next few years and that we can get more volunteers to support the event! So if you are interested to be involved next year, please let me know!

LUDO DUMÉE, Chair of the 1st Australian Chemistry Festival <u>http://festivalofchemistry17.weebly.com/</u>

Chemistry Festival at 100th RACI Congress 13

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Fulbright Fellowship Story

Professor Benny Freeman

Richard B. Curran Centennial Chair in Engineering McKetta Department of Chemical Engineering The University of Texas at Austin <u>http://membrane.ces.utexas.edu/</u>

Prof Freeman was esteemed as a Fulbright Fellow this year and he has made full use of this prestigious position in Australia. During the Fulbright Fellowship program, Prof. Freeman connected with many previous Australian colleagues as well as many new colleagues in areas related to his research, polymer membranes for low energy separations related to gas purification and water filtration.

He delivered 15 lectures and seminars in Australia in total during his 20 weeks' stay.

Some of the highlights and activities are,

- Sir Jerry Price Lecture at the Australian Synchrotron.
- Victorian Parliament on issues related to the nexus of food, energy, and water, and the role of separation membranes in the nexus linkages.
- Meetings of the Australian Academy of Technological Sciences and Engineering, and gave an invited lecture.
- Nominated several Australian colleagues for recognition in professional societies in the United States.



- Discussed with Membrane Society of Australasia to help plan strategies for hosting the International Congress on Membranes in 2023.
- 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.
- Daily visit from his friend, a humble Australian sulphur-crested cockatoo.

14 Fulbright Fellow Prof Benny Freeman

For information on Fulbright Scholar Program visit http://www.cies.org/

https://www.membrane-australasia.org/

Travel Award Winners



From left to right: Ludo Dumée, Tony Fane, Yunchul Woo, Lin Li, Francois-Marie Allioux, Laura Chekli, Winny Fam, Qianhong She Missing in photo: Sungil Lim

At last year's 11th ICOM conference, MSA has awarded seven PhDs / ECRs with \$1000 AUD cash prizes to help with the cost towards attending the conference and presenting their research work. They are Winny Fam, Francois-Marie Allioux, Yunchul Woo, Sungil Lim, Qianhong She, Laura Chekli and Lin Li.

Also, congratulations to



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Mr Yunchul Woo, a final year PhD student at UTS, for winning the Best Poster Presentation Award for, *"Superhydrophobic co-axial electospun nanofiber membranes for water desalination by direct contact membrane distillation"*,

Dr Qianhong She, an USYD Lecturer, who also won NAMS Young Membrane Scientist Award on his presentation for, "A novel osmotic-resistance filtration model for understanding of mass transport, fouling mechanisms and membrane design in osmosis-related membrane processes".

Aaron, Yunchul Woo, Hokyong

Travel Award Winners 15

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Newsletter Taskforce



DR DAVID WANG ARC-DECRA Fellow | Lecturer School of Chemical and Biomolecular Engineering THE UNIVERSITY OF SYDNEY NSW 2006 T+61 2 8627 6050 E: david.wang1@sydney.edu.au http://sydney.edu.au/engineering/peopl e/david.wang1.php Last year we have formed a group of Newsletter Taskforce around Australia to assist MSA in gathering important pieces of news, events and research highlights related to membranes and membrane technologies in a quarterly fashion. The members of Newsletter Taskforce were carefully selected 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.

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

Taskforce Member / Project	Supervisors	UNI
NSW		
Mr Nirenkumar Pathak <i>Osmotic membrane bioreactor for wastewater</i> <i>treatment and reuse</i> – Final year PhD	Prof Hokyong Shon Dr Sherub Phuntsho	UTS
QLD		
Miss Nur Hafizah Ab Hamid Forward Osmosis (FO) Membrane-based Technoloav in Urban Wastewater Treatment	Dr Liu Ye Dr Simon Smart Dr David Wang	UQ

- 2nd year PhD

VIC

Dr Ze Xian Low	Prof Davide Mattia	UBath
From membrane material synthesis to fabrication	Dr Darrell Patterson	MonashU
and function (SynFabFun)		
– 2 nd year Postdoc		
Mr Riyadh Al-Attabi	Prof Yosry Morsi	DeakinU
Functional Electrospun Nanofibers Membranes for	Dr Ludo Dumée	
Nanomaterials Filtration		
– 2 nd year PhD		

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MSA Funding Support Programs

MSA Workshop Funding Support Program 2018 Call for Proposals and Applications

The MSA Funding Support Program provides funding support to membrane-related events such as workshops 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.

How to apply?

The application form must be submitted to the MSA at your earliest time before the date of the event. 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.

Contact us

For further information, contact the program coordinator, Hokyong Shon, at the following email address: <u>Hokyong.Shon-1@uts.edu.au</u>

MSA Travel Award Program



PROF. HOKYONG SHON

ARC Future Fellow Deputy Director of Centre for Technology in Water and Wastewater Associate Professor in School of Civil and Environmental Engineering Faculty of Engineering and IT UNIVERSITY OF TECHNOLOGY SYDNEY T: +61 447 332 707 PO Box 123 Broadway NSW 2007 Australia https://twitter.com/KyongShon http://www.uts.edu.au/staff/hokyong.shon-1



MSA periodically sponsors students and ECRs, who are members of MSA, to attend international conferences and 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.

Contact Program Coordinator:

Prof. Greg Leslie (award@membrane-australasia.org)

PROF. GREGORY LESLIE

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2018 Key Membrane Events

PAST EVENT	DATE	YEAR
SSEAC Membrane Masterclass and Workshop University of Sydney, Australia	27 Nov	2017
Water, Membrane, Environment & Energy Expo Bangkok, Thailand	14–16 Dec	
1 st International Conference on Bio-inspired Material and Membrane (IBMM2018) & 1 st International Conference on Energy-efficient Separation (IEESep2018) Monash University, Australia	23-27 Jan	2018
International Conference on Nanoscience and Nanotechnology University of Wollongong, Australia	29 Jan – 2 Feb	
5 th MSA Early Career Researcher Symposium Macquarie University, Australia	5-6 Feb	
27 th Annual Meeting North American Membrane Society Lexington, Kentucky, USA www.membranes.org/2018/index.html	9-13 Jun	
15 th International Conference on Inorganic Membranes Dresden, Germany www.icim2018.com	18-22 Jun	
1 st Cutting Edge Symposium on the Current and Future Challenges of Energy Efficient Separation Palm Cove, Australia http://www.cfcees2018.org/	27-29 Jun	
CURRENT EVENT	DATE	ABSTRACT DEADLINE
11 th Conference of Aseanian Membrane Society Brisbane, Australia www.ams11.com.au	3-6 Jul	Expired

Euromembrane 2018 Valencia, Spain http://euromembrane2018.org

2nd African Membrane Society International Congress Johannesburg, South Africa http://www.sam-ptf.com/safrica/index.html

6th IWA Regional Conference on Membrane Technology Gujrat, India http://www.indianmembranesociety.com http://www.iwa-rmtc2018.in/ 9-13 JulExpired29 Jul - 1 AugExpired10-12 Dec31 Jul



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BOARD MEMBERS

THANK YOU

We wish to thank the Newsletter Taskforce for their outstanding contributions to the collection of news content for the July 2018 Newsletter issue.



Amanda Ellis



Hokyong Shon



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