Membrane Society of Australasia

www.membrane-australasia.org

April 2010 Newsletter

Editor:
Dr. Bradley Ladewig
bradley.ladewig@eng.monash.edu.au

In this issue:

Welcome from the Co-chair

Welcome to the April 2010 edition of the MSA E-News. We hope that the year has started well for everyone. The key feature of this newsletter is that the MSA will hold its AGM on Monday 10 May, and nominations are now open for a number of positions. We also have some interesting insights into the academic publishing of membrane research featuring in this newsletter.

As always, contributions to for future editions of the MSA newsletter are always welcome. Please send them by email.

Bradley Ladewig – Co-chair of the Inaugural Board

MSA Annual General Meeting and Election of Board Members

The MSA Annual General Meeting will take place on Monday the 10th of May, at 3pm, Melbourne time in Melbourne CBD. It will take place at Victoria University Campus in Flinders street and will be followed by a short meeting to welcome the new board and define the 2010 priorities.

Please find here the invitation to attend the AGM. Furthermore, if you can't physically attend the AGM, please contact the secretary for possible remote access.

Both board nomination forms and ballot papers are available upon requests at ludovic.dumee@csiro.au.

Please RSVP at ludovic.dumee@csiro.au by the 9th of April with your details added into the invitation form. Feel free to contact us if you have any specific requests or questions!

MSA Student Symposium: A successful event!

Two very interactive and constructive workshops were successfully conducted by Prof Vicki Chen and Prof Sandra Kentish who set up a spirited atmosphere that tackled some common gas and liquid separation problems.

Thanks is due to our sponsors,

- CSIRO
- ARCNN
- Dairy Innovation
- SIEMEN
- NMG
- DOW Water & Process Solutions and
- Prof Michel Lefebvre

who made this event possible, and their representatives who were able to attend and contribute significantly to the discussions, Anita Hill, Matthew Hill, Elankovan Ponnampalam, Geoff Johnston-Hall, Clem Powell, Jim Hill and David Halliwell.

Insightful presentations, influential guest speakers, perfect weather and good company. We can honestly say that we are sad that it is over.

Our symposium mentor, Prof Tony Fane, wonderfully led us through the history of membranes, guided the motivating discussions and challenged us into the future of membrane science, for which we are very grateful for. Furthermore, Prof Rose Amal and Prof Gordon Wallace shared with us their novel responsive and functional materials, inspiring us to utilize new technology to combat membrane challenges.

All the student presentations were of such a high standard and many research relationships were formed that will build the Australasian membrane empire (or society) of the future.

For those who are game, there is more photographic evidence of the event to be viewed on the Student Symposium website.

Finally, congratulations go to the following award winners of the event:

- Ludovic Dumee - Best Overall Oral Presentation
- Angela Hausmann - Best 1st year PhD Oral Presentation
- Leonora Velleman - Best Short Notice Oral Presentation
- Patrick Haworth - Best Poster Presentation
- Guangxi Dong - Best Quote “Hollow fibres are better”

- Aaron Thornton on behalf of the MSA Student Symposium committee

New tools to rank peer-reviewed journals on Scopus

Publishing in peer-reviewed journals is a key aim of all researchers which is a gateway for spreading the scientific knowledge, gaining rewards and recognition. The quality of such published research articles is gauged by journal level metrics or article level metrics. Impact factor (IF), a journal level metric, is a buzz word in academia which is popularly used for grant applications and career advancement.

The first step in publishing is the selection of right journal which is quite crucial and relies on IF, response time, and readership. In this note, a quick summary of relevant journals (Journal of Membrane Science, Water Research, Desalination, Separation Science and Technology, Separation and Purification technology, Water Science and Technology & Chemical Engineering Science) and its ranks are presented as a snapshot for membrane researchers (Fig. 1), based on Scopus database. Moreover, Scopus now enables the ranking of journal based on new parameters other than the conventional IF value.

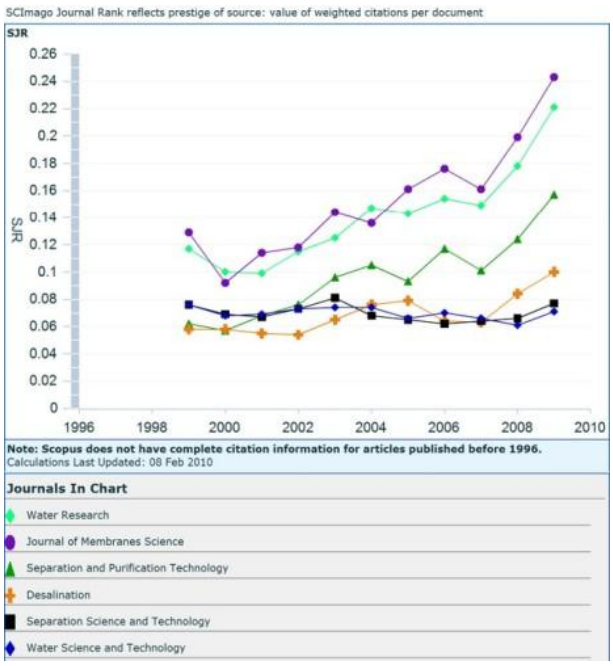

FIG. 1: SCIMAGO JOURNAL RANK (SJR) FOR IMPORTANT MEMBRANE BASED JOURNALS.

For example: the SCImago Journal Rank (SJR) provides more emphasis on a journal's *prestige* as it normalises for differences in citation behaviour among disciplines. Also available on Scopus - the Source-Nornalised Impact per Paper (SNIP) - is a 5min video explaining how these measures are calculated.

Scopus advanced search tool also helps us to see the affiliation based publications' rate. For example, it is interesting to note that the University of Queensland (UQ) has more number of publications in Water based journals (i.e. Water Research: IF=3.587 and Water Science and Technology: IF=1.005) (Fig. 2). The pattern observed serves as an indicator of the nature of research happenings as well.

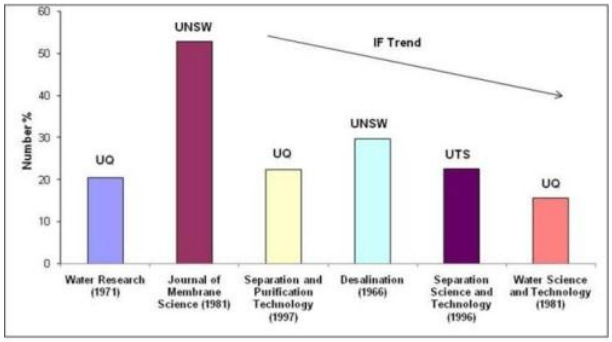

FIG. 2: PERFORMANCE OF THE UNIVERSITIES (IN AUSTRALIA) IN SCHOLARLY PUBLICATIONS CONSIDERING THE SIGNIFICANT MEMBRANE JOURNALS. [UQ: UNIVERSITY OF QUEENSLAND, UNSW: UNIVERSITY OF NEW SOUTH WALES, UTS: UNIVERSITY OF TECHNOLOGY SYDNEY]

Though IF is in vogue for few decades, scientific community has always raised concern in lack of reflection of an individual's research merit by IF measurement. Article level metrics (ALM) is evolving as a novel method of assessment which has several edges over the traditional way of measurement (i.e. journal IF). It includes the impact of an individual articles in terms of readership – number of downloads, average time spent reading, frequency of sharing the article, real-time measurement, comments and rating by readers in the articles.

Probably, in future, the combination of having IF & ALM is a holistic approach to grade the research performance. Happy publishing!

- Dr Pierre Le-Clech and Angayar Pavanasam

Upcoming Events

Membrane Bioreactor Workshop at the University of New South Wales

Membrane Bioreactor Workshop 2010: "From fundamentals to future research in Australia" a 2-day workshop on April the 13-14th, 2010, sponsored by UNSW Water Research Centre & the UNESCO Centre for Membrane Science and Technology.

The University of New South Wales' Water Research Centre (UNSW WRC) and the UNESCO Centre for Membrane Science and Technology in Sydney, Australia, are hosting a 2-day workshop designed to (1) teach students, academics and industry delegates the principles of membrane bioreactors used for wastewater treatment and recycling and (2) offer an insight on the current research activities carried out worldwide on that topic.

Membranes, Molecules and Money - Professor Andrew Livingston

Professor Andrew Livingston, Head of Chemical Engineering at Imperial College London, will present a seminar entitled "Membranes, Molecules and Money" at The University of Auckland on Friday 9th April, 2010. The seminar is jointly sponsored by SCENZ - IChemE in New Zealand, and the Department of Chemical and Materials Engineering, The University of Auckland.

Abstract:

There are many trials and tribulations in taking university research from the laboratory to the commercial scale, and trying to make some profits along the way. This talk will describe one such adventure.

Membrane Extraction Technology (MET) was founded in 1996 to exploit the Extractive Membrane Bioreactor (EMB), at the time a new style of reactor for separating out and degrading toxic organic molecules from chemical industry wastewaters. By 2002, the company had succeeded in demonstrating that a successful business would not grow from this technology, and turned their attention to Organic Solvent Nanofiltration, OSN, and entirely different membrane technology with applications in production processes.

OSN separates molecules present in solutions of organic solvents. In OSN, a pressure gradient is applied across a solvent stable nanoporous film, inducing transport of liquid across the film. Depending on relative permeation rates, molecular species in a feed liquid stream can be concentrated and separated. Typically OSN will use a small fraction of the energy of thermal methods such as evaporation and distillation, and can work at temperatures around ambient. Two challenges for application of OSN technology in the chemicals and pharmaceutical industry have been: (i) the lack of membranes with wide solvent resistance, and which retain their nanostructure with exposure to aggressive liquids such as dipolar aprotic solvents (DMF, DMSO, THF); and (ii) the need for membranes to have minimum extractable components, and so be utilisable in cGMP environments.

MET licensed technology from Imperial College London which met these challenges, and set about commercialising it. The main application areas to date have been in the fine chemicals and pharmaceuticals industries, to concentrations, purification, recycling of organometallic catalysts, solvent exchanges, and metal (Pd) removal from post-reaction mixtures. The scale up of the manufacture of the DuraMemTM series of OSN will be described. This on-going adventure continues, with MET being acquired by German chemical major Evonik Industries AG on 1 March 2010.

For further information contact Dr Darrell Patterson: darrell.patterson@auckland.ac.nz

MSA Membership and Renewal

To join the MSA please download and complete the Membership form.

Renewing members can also use this form to pay their 2010 membership.

This newsletter has been prepared by Dr Bradley Ladewig. He can be contacted at bradley.ladewig@eng.monash.edu.au

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