



Guest editorial in honour of Professor Tony Fane



This special issue of *Desalination* has been prepared to honour Professor Tony Fane on the occasion of his 70th birthday that occurred in March 2010 to mark his contributions to membrane science and technology and his legacy to the membrane community.

Tony received a PhD in chemical engineering in 1968 from Imperial College, London. He has been working on membranes since 1973 when he joined the University of New South Wales (UNSW) in Sydney, Australia. He was a former Head of the School of Chemical Engineering and Industrial Chemistry at the UNSW. He also held the Temasek Professorship at Nanyang Technological University (NTU) in Singapore from 2002 to 2006, and has been a Nanyang Professor at NTU since 2008.

Tony is an internationally known expert in membrane technology. Over the last 38 years he has published over 350 papers in the membrane area as well as 40 more in other areas of chemical engineering. His papers have had a significant impact as measured by over 7250 citations and a Web of Science h index of 49. He also has co-edited 2 membrane books and authored 11 chapters, all of which have been on aspects of membrane science and technology.

Tony has rendered exceptional service to membrane science and technology in many capacities. He is a member of the Editorial Boards for *Desalination* and the *Journal of Membrane Science* for which he also served as an Editor from 1992 to 2005. He is a Fellow of the Australian Academy of Technological Sciences and Engineering, a recipient of the Centenary Medal in 2002 for services to Chemical Engineering and the Environment and an Honorary life member of the

European Membrane Society. He is also a Patron of the Membrane Society of Australasia. In recognition of Tony's contributions to the membrane discipline, he was recently honoured in November 2010 at the American Institute of Chemical Engineers annual meeting with three dedicated sessions, which reflects on his professional lifetime of contributions to membrane science and technology.

One of Tony's major contributions has been his leadership role in the following Centres of Excellence in Membranes:

- UNESCO Centre for Membrane Science & Technology (UNESCO CMST)
The UNESCO CMST was founded in 1988 with his colleagues Christ Fell and Hans Coster, and Tony was co-Director from 1991 to 2005. The CMST is the largest academic membrane research centre in Australia and one of the best known globally. The Centre is recognized for its fundamental studies on membrane process characterization, fouling, module assessment and modeling and applications in industry. Over the past 15 years the CMST has increasingly focused on environmental and water applications. The CMST has trained over 60 PhDs, of whom 45 have been supervised by Tony. One of the signature activities of the Centre has been hosting the International Membrane Science and Technology Conference (IMSTEC) which has been held in Sydney for over twenty years. Under Tony's leadership, the Centre maintained a high international profile, hosting numerous conferences, workshops as well as academic and student visitors. The CMST also has an outreach into South East Asia with many past students and visitors from the region. In 2006, Tony stepped down as Director of the CMST to capitalize on an opportunity to catalyze membrane research in Singapore.

- Temasek Professor (TP) Programme and Singapore Membrane Technology Centre (SMTC)

Tony has spent most of the past decade leading research in Singapore into the application of membrane technology for water and the environment. From 2002 to 2006 he held the prestigious Temasek Professorship (TP) position at Nanyang Technological University (NTU) leading a programme on Membrane Technology for Sustainable Water. The majority of the researchers trained in the TP programme are now engaged in membrane or water related industries (Hyflux, Sembcorp, MINT), the Public Utilities Board (PUB) or academic research in Singapore. On completion of the TP programme Tony was invited to lead a proposed new membrane research centre in Singapore. His concept was the Singapore Membrane Technology Centre (SMTC) based at NTU that could build on and expand the research activities of the TP programme. The SMTC, a part of the ecosystem of Nanyang Environment & Water Research Institute (NEWRI), was launched in January 2008 with support from the Economic Development Board (EDB) of Singapore. Over the past three years under Tony's leadership, the SMTC has grown to 80 researchers (including 33 PhD students) engaged in

fundamental and applied research on membrane technology for sustainable water and the environment. Projects include water treatment, desalination, fouling control, novel MBRs, membrane distillation, forward osmosis, novel membranes such as biomimetic membranes, membranes for water softening and CO₂ capture, hybrid processes, monitoring and sensing and life cycle assessment of membrane processes. The SMTC is now one of the largest academic research centres globally, and has a highly visible international profile.

We have been very fortunate to work closely with Tony for many years, witnessing his great passion for membrane research. In spite of his exceptional achievements and international recognition, Tony is very unassuming, humble and down to earth. He is remarkably generous in sharing his wisdom, enthusiasm and time with people, especially young colleagues and students. To us, Tony is not only a colleague, but also a friend and a great mentor. We are very pleased to see the completion of this special issue that contains contributions from many of Tony's former and current colleagues, collaborators and

students. On behalf of all the authors, UNESCO CMST and SMTC, we sincerely wish Professor Tony Fane good health, happiness, continued success and all the best for many more years to come.

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