

## 2<sup>nd</sup> WORKSHOP “STATE-OF-THE-ART TECHNIQUES FOR CHARACTERIZING MEMBRANES”

September 27-28, 2018, IEM, Montpellier, France

### THURSDAY, SEPTEMBER 27<sup>TH</sup> 2018

9h30-10h00

Welcome – Registration

10h00-10h40 **An overview on novel membrane developments for water applications and the state-of-the-art membrane characterization at SMTC**, Rong Wang, Nanyang Technological University, Singapore.

10h40-11h00 New method of testing: Testing the effectiveness of micro-filtration membranes, Vincent Edery, Roger Ben Aïm, IFTS, France.

11h00-11h20 Impact of porous structure parameters and surface chemistry on water transport of non-oxide and oxide microfiltration membranes, Sylvain Masson, IEM, France.

11h20-11h40

Break

11h40-12h20 **Hydrophobicity/hydrophilicity measurement of a membrane surface and membrane foulants: Implications for modeling foulant-membrane interactions**, Volodymyr Tarabara, Michigan State University, USA.

12h20-12h40 Membrane layers characterization and fouling detection using in-situ Electrical Impedance Spectroscopy (EIS), Jia Shin Ho, Nanyang Technological University, Singapore.

12h40-13h00 Membrane fouling analysis via three-dimensional (3D) Optical Coherence Tomography (OCT) imaging, Yining Wang, Nanyang Technological University, Singapore.

13h00-14h00

Lunch

14h00-14h40 **Analysis on solvent-induced swelling of thin films using in situ spectroscopic ellipsometry**, Nieck Benes, University of Twente, the Netherlands.

14h40-15h00 Ellipsometric porosimetry measurements and kinetic study of solvent diffusion in nanoporous hybrid thin films - impact of plasma post-treatments, Vincent Rouessac, IEM, France.

15h00-15h20 Evaporimetry characterization of membrane pore-size distribution, Jia Wei Chew, Nanyang Technological University, Singapore

15h20-15h40 Pore network simulations and fluid-fluid porometry and evaporimetry, O. Maalal, M. Prat, D. Lasseux, R. Peinador, IFTS, France.

15h40-16h00

Break

16h00-18h00 Visit of IEM



**FRIDAY, SEPTEMBER 28<sup>TH</sup> 2018**

- 9h00-9h40 **Advanced electrokinetic characterization of membrane materials**, Anthony SZYMCZYK, Institut des Sciences Chimiques de Rennes (UMR CNRS 6226), France.
- 9h40-10h20 **In situ and operando  $\mu$ -Raman spectroscopy for understanding water transport across perfluorosulfonic acid membranes and water distribution in the fuel cell**, Stefano Deabate, IEM, France.
- 10h20-10h40 *Break*
- 10h40-11h20 **Acoustic emission monitoring: a novel diagnostic tool for the characterization of porous ceramic membranes during gas permeation**, Anne Julbe, IEM, France.
- 11h20-11h40 **Identical-Location Transmission Electron Microscopy (IL-TEM) for analyzing the degradation of Pd/C electrocatalysts designed for direct alkaline fuel cells**, Umit B. Demirci, IEM, France.
- 11h40-12h00 *Break*
- 12h00-13h00 **Round table - Feedbacks from the workshop and cooperation perspectives**
- 13h00-14h00 *Lunch*

### ORGANIZING INSTITUTIONS

**Institut Européen des Membranes (IEM) - [www.iemm.univ-montp2.fr](http://www.iemm.univ-montp2.fr)**



Institut  
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**Institut de la Filtration et des Techniques Séparatives (IFTS) - [www.ifts-sls.com](http://www.ifts-sls.com)**

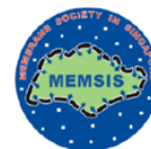


**Nanyang Technological University (NTU Singapore) - [www.ntu.edu.sg/](http://www.ntu.edu.sg/)**



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### FUNDING INSTITUTION

**Institut Français Singapour (IFS) - [www.institutfrancais.sg](http://www.institutfrancais.sg)**



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### REGISTRATION

The registration to attend this event in Montpellier is free but mandatory. A message has to be sent to [andre.ayral@umontpellier.fr](mailto:andre.ayral@umontpellier.fr) before September 1<sup>st</sup>, 2018.