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Cork, Ireland
11 - 16 September 2016

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Sunday, September 11, 2016

16:30 - 18:30	Conference Check-in (Sherrard Corridor)
18:30 - 19:30	Opening Reception with live Irish music dancers (Orangery)
19:45 - 21:00	Dinner (Bellini's Restaurant)

NOTES

- Technical Sessions will be held in Sherrard Suite B.
- The Poster Sessions will be held in Sherrard Suite A.
- Session A poster presenters should set up their posters on Sunday after 16:30. Session A posters should be removed following the poster session on Monday.
- Session B poster presenters should set up their posters on Tuesday morning after 08:00. Session B posters should be removed by 12:00 on Wednesday.
- All breakfasts and lunches, as well as dinners on Sunday, Monday, and Tuesday, will be in Bellini's Restaurant.
- The conference banquet on Thursday will be in the Orangery.
- Audiotaping, videotaping and photography of presentations are prohibited.
- Speakers – Please leave at least 5 minutes for questions and discussion.
- Please do not smoke at any conference functions.
- Turn your cellular telephones to vibrate or off during technical sessions.
- After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.
- Please do not smoke at any conference functions.
- Please write your name in the front of this program booklet so it can be returned if misplaced.

Monday, September 12, 2016

07:00 - 08:30 Breakfast

08:30 - 09:00 **Welcome and opening remarks**
Isabel C. Escobar, Jamie Hestekin, Conference Chairs
Norman Li, ECI Liaison

Plenary Lecture

09:00 - 10:00 **New variations of the old ‘phase inversion’ process: SNIPS, CIPS , DIPS and more1**
Klaus-Viktor Peinemann, King Abdullah University of Science and Technology (KAUST), Saudi Arabia

10:00 - 10:30 Coffee Break

Advances in Nanocomposite Membranes

Chairs: Nora Savage, National Science Foundation, USA and Bradley Ladewig, Imperial College of London, England

10:30 - 11:00 **Polyamide/TiO₂ nanocomposite membranes applied to the degradation of dyes from textile industry2**
Maria Teresa Pessoa de Amorim, Minho University, Portugal

11:00 - 11:30 **Graphene oxide membranes for gas separation3**
Marek Lanc, University of Chemistry and Technology Prague, Czech Republic

11:30 - 12:00 **PIM-1/graphene pervaporation membranes for bioalcohol recovery4**
Patricia Gorgojo, The University of Manchester, United Kingdom

12:00 - 12:30 **Mixed matrix PVDF membranes with in-situ synthesized PAMAM dendrimer-like particles: A new class of sorbents for Cu(II) recovery from aqueous solutions by ultrafiltration18**
Alex T. Kuvarega, University of South Africa, South Africa

12:30 - 13:30 Lunch

Membranes for Gas Separations

Chairs: Ingo Pinnau, King Abdullah University of Science and Technology, Saudi Arabia and Giulio C. Sarti, University of Bologna, Italy

13:30 - 14:00 **Engineering of pervaporation systems: Modelling of dehydration modules, including recycles19**
Cilian O'Suilleabhain, Cork Institute of Technology, Ireland

14:00 - 14:30 **Functionalized polymers of intrinsic microporosity for highly energy-intensive gas separations33**
Ingo Pinnau, King Abdullah University of Science and Technology, Saudi Arabia

Monday, September 12, 2016 (continued)

- 14:30 - 15:00 **Membranes for CO₂ capture - report on pilot plant tests34**
May-Britt Hägg, Norwegian University of Science and Technology, Norway
- 15:00 - 15:30 Coffee Break
- 15:30 - 16:30 **Poster Session A Pitch**
Chairs: Isabel Escobar, University of Kentucky, USA; Jamie Hestekin, University of Arkansas, USA; and Nora Savage, NSF, USA
- 16:30 - 18:30 **Poster Session A**
Chairs: Isabel Escobar, University of Kentucky, USA; Jamie Hestekin, University of Arkansas, USA; and Nora Savage, NSF, USA
- 19:00 - 20:30 Dinner

Tuesday, September 13, 2016

07:00 - 09:00 Breakfast

Plenary Lecture

09:00 - 10:00 **Membranes in wastewater treatment: Integrated crystallization is essential35**
Bart Van der Bruggen, KU Leuven, Belgium

10:00 - 10:30 Coffee Break

Membranes for Biological & Industrial Applications

Chairs: Bart Van der Bruggen, KU Leuven, Belgium, and Jamie Hestekin, University of Arkansas, USA

10:30 - 11:00 **Development of novel membrane structures for enhanced purification of plasmid DNA using small pore size ultrafiltration membranes36**
Andrew L. Zydney, The Pennsylvania State University, USA

11:00 - 11:30 **Understanding reverse osmosis polyamide active layer macrostructure and performance through indirect microscopic observation of film growth51**
Caleb V. Funk, Dow Water & Process Solutions, USA

11:30 - 12:00 **Novel reverse electrodialysis biobattery52**
Christa Hestekin, University of Arkansas, USA

12:00 - 12:30 **Alternative treatment methods for the removal and destruction of algal toxins53**
Isabel C. Escobar, University of Kentucky, USA

12:30 - 13:30 Lunch

Sustainable Water Treatment

Chairs: Mihail Barboiu, Institut Europeen des Membranes, France and Andrew Zydney, The Pennsylvania State University, USA

13:30 - 14:00 **Salt-excluding artificial water channels exhibiting enhanced dipolar water and proton translocation54**
Mihail Barboiu, Institut Europeen des Membranes, France

14:00 - 14:30 **Voltage activated membrane platforms55**
Bruce Hinds, University of Washington, USA

14:30 - 15:00 **Impact of energy fluctuation on permeate quality in autonomous and directly coupled renewable energy powered nanofiltration and reverse osmosis systems56**
Andrea Schaefer, KIT, Germany

Tuesday, September 13, 2016 (continued)

15:00 - 15:30 **Optimizing hollow fiber membranes and modules for osmotic processes: Membranes, modules, and models57**
Jeff McCutcheon, University of Connecticut, USA

15:30 - 16:00 Coffee Break

Membranes for Energy Applications I

Chairs: May-Britt Hägg, Norwegian University of Science and Technology, Norway and Jeffrey McCutcheon, University of Connecticut, USA

16:00 - 16:30 **New facilitated transport membranes for CO₂ capture and separation58**
Winston Ho, The Ohio State University, USA

16:30 - 17:00 **Surface-enhanced separation performance of porous inorganic membranes for biofuel conversion applications59**
Michael Z. Hu, Oak Ridge National Laboratory, USA

17:00 - 18:00 **Poster Session B Pitch**

Chairs: Isabel Escobar, University of Kentucky, USA; Jamie Hestekin, University of Arkansas, USA; and Nora Savage, NSF, USA

18:30 - 20:00 Dinner

20:00 - 22:00 **Poster Session B**

Chairs: Isabel Escobar, University of Kentucky, USA; Jamie Hestekin, University of Arkansas, USA; and Nora Savage, NSF, USA

Wednesday, September 14, 2016

07:00 - 08:30

Breakfast

Transport, Modeling and Gas Separations

Chair: Winston Ho, The Ohio State University, USA, and Stephen M.C. Ritchie, University of Alabama, USA

08:30 - 09:00

Influence of polymer backbone rigidity on water and salt transport properties of low water content membrane polymers for desalination60
Geoffrey M. Geise, University of Virginia, USA

09:00 - 09:30

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Daniel J. Miller, Lawrence Berkeley National Laboratory, USA

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Giulio C. Sarti, University of Bologna, Italy

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Light responsive membranes for gas separation63
Bradley Ladewig, Imperial College of London, England

10:30 - 11:00

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Membranes for Energy Applications II

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11:00 - 11:30

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Andriy Yaroshchuk, ICREA & Polytechnic University of Catalonia, Spain

11:30 - 12:00

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Marius Sandru, SINTEF, Norway

12:00 - 12:30

Salinity gradient energy: Assessment of pressure retarded osmosis and osmotic heat engines for energy generation from low-grade heat sources66
Johan Vanneste, Colorado School of Mines, USA

12:30 - 14:00

Lunch

14:30

Excursion to Blarney Castle and Gardens followed by dinner at The Lemon Tree in Blarney Castle Hotel

Buses will return to the hotel at approximately 20:30.

Thursday, September 15, 2016

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Dibakar Bhattacharyya, University of Kentucky, USA

10:00 - 10:30 Coffee Break

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Chairs: Caleb V. Funk, Dow Water & Process Solutions, USA and Dibakar Bhattacharyya, University of Kentucky, USA

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Laurentia Setiawan, Nanyang Technological University, Singapore

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Henk van Veen, Energy research Centre of the Netherlands (ECN), Netherlands

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12:30 - 13:30 Lunch

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Chairs: Rong Wang, Singapore Membrane Technology Centre, Nanyang Technological University, Singapore

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Oranso T Mahlangu, University of South Africa, South Africa

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19:00 - 20:30 Banquet

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Kamallesh K. Sirkar, New Jersey Institute of Technology, USA
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