

Oral session 11 - Facilitated transport membranes

Monday July 14, 1:40 PM

Room: Sapphire

Chair

Jonghak Kim, Yonsei University, Korea

Co-chair

Toshiki Aoki, Department of Chemistry and Chemical Engineering, Niigata University, Japan

O11-1 1:40 PM

Dynamic-site complexant constitutional membranes: toward an adaptive facilitated transport

Mihail D. Barboiu

Institut Europeen des Membranes, France

O11-2 2:00 PM

Transport of thiourea across PVC/C apriquat polymer inclusion membranes with different capriquat anions

Yukio Sakai¹, Keisuke Kadota¹, Takashi Hayashita², Robert W Cattrall³, Spas D. Kolev³

1: The Faculty of Education and Culture, University of Miyazaki, Japan

2: Department of Chemistry, Faculty of Science and Technology, Sophia University, Japan

3: School of Chemistry, Faculty of Science, The University of Melbourne, Australia

O11-3 2:20 PM

Electronic and atomistic structure of alcanolamine for CO₂ capture

Mohamed Ismael¹, Ai Suzuki¹, Michihisa Koyama², Hideyuki Tsuboi¹, Nozomu Hatakeyama¹, Akira Endou¹, Hiromitsu Takaba¹, Carlos A Del Carpio¹, Momoji Kubo¹, Shinkichi Shimizu³, Akira Miyamoto¹

1: Tohoku University, Japan

2: Kyusyu University, Japan

3: Research Institute of Innovative Technology for the Earth, Japan

O11-4 2:40 PM

Crude Jatropha oil refining with ultrafiltration membranes

Tsair-Wang Chung¹, Shih-Hong Hsu¹, Mai-Tzu Chen²

1: Department Chemical Engineering/R&D center for Membrane Technology, Chung Yuan Christian University, Taiwan

2: National Federation of Rural Cooperatives Indonesia, Taipei Representative Office, Taiwan

Oral session 12 - Transport mechanism in membrane

Monday July 14, 1:40 PM

Room: Ruby

Chair

Shigetoshi Ichimura, Kanagawa Institute of Technology, Japan

Co-chair

Xiao-Lin Wang, Tsinghua University, China

O12-1 1:40 PM

Determining transport mechanisms within pores of different size, shape and composition

Aaron William Thornton¹, Anita Hill¹, Kate Nairn¹, James Hill²

1: Commonwealth Scientific and Industrial Research Organization, Australia

2: University of Wollongong, Australia

O12-2 2:00 PM

Molecular insights into fluids confined in nanoporous materials

Jianwen Jiang

National University of Singapore, Singapore

O12-3 2:20 PM

Analysis of the transmembrane potential arising across nanofiltration membranes

Cong-Hui Tu, Yan-Yan Fang, Xiao-Lin Wang

State Key Laboratory of Chemical Engineering, Department of Chemical Engineering, Tsinghua University, China

O12-4 2:40 PM

Characterization of skin layer of commercial RO membrane by membrane potential measurement

Ryosuke Takagi¹, Takuji Shintani², Arto Pihlajamaki³, Marianne Nystrom³

1: Shukugawa Gakuin College, Japan

2: Nitto Denko Corporation, Japan

3: Lappeenranta University of Technology, Finland

Oral session 13 - Membrane fouling

Monday July 14, 1:40 PM

Room: Emerald

Chair

Vicki Chen, University of New South Wales, Australia

Co-chair

Kazuho Nakamura, Yokohama National University, Japan

O13-1 1:40 PM

Ultrasonic image analysis for membrane fouling in ultrafiltration of phospholipids from crude oil

Li-Hua Cheng¹, Yi-Hsun Lin², Yun-Chen Yang¹, Junghui Chen¹, Shyh-Hau Wang²

1: R & D Center for Membrane Technology, Department of Chemical Engineering, Chung Yuan University Taiwan

2: Department of Biomedical Engineering, Chung Yuan University, Taiwan

O13-2 2:00 PM

Submerged hollow fiber systems as potential pretreatment for reverse osmosis: Effect of operating modes and fouling characterization

Yun Ye, Lee Nuang Sim, Vicki Chen, Anthony Gordon Fane

UNESCO Centre for Membrane Science and Technology, University of New South Wales, Australia

O13-3 2:20 PM

Low pressure membrane fouling via interactions between organic compounds

Stephen Richard Gray¹, Noel Dow¹, John Orbell¹, Thuy Tran², Brian Bolto²

1: Victoria University, Australia

2: CSIRO Materials Science and Engineering, Australia

O13-4 2:40 PM

Pilot-scale performance of integrated coagulation-submerged microfiltration water treatment system: membrane autopsy and membrane fouling

Jeonghwan Kim¹, Mooseok Lee²

1: Inha University, Department of Environmental Engineering, Korea

2: ECO Research Institute, KOLON Central Research Park, Korea

Oral session 14 - Membrane preparation and modification IV

Monday July 14, 1:40 PM

Room: Topaz

Chair

Zhen-Liang Xu, East China University of Science and Technology, China

Co-chair

Ryotaro Kiyono, Shinshu University, Japan

O14-1 1:40 PM

Modification of porous poly(vinylidene fluoride) membrane using amphiphilic polymer in phase reversion processes

Xiao-Ting Ma, Wei-Dong Liu, Yue-Ming Chen, Bao-Ku Zhu, You-Yi Xu

Department of Polymer Science and Engineering,, Zhejiang University, China

O14-2 2:00 PM

Preparation of honeycomb-patterned films based on amphiphilic block copolymers of polylactide

Ye Tian¹, Heng-Yu Ma¹, Xiao-Lin Wang¹, Yan-Qiao Shi², Guan-Wen Chen²

1: State Key Laboratory of Chemical Engineering, Department of Chemical Engineering, Tsinghua University, China

2: Laboratory of New Materials, Institute of Chemistry, the Chinese Academy of Sciences, China

O14-3 2:20 PM

Plasma induced grafting of poly(ethylene glycol) methacrylate onto ePTFE membrane by atmospheric pressure plasma jet

Ta-Chin Wei, Yung Chang, Chia-Jen Chang, Yu-Ju Shih, Ying-Lin Liu

R&D Center for Membrane Technology and Dept. of Chemical Engineering, Chung-Yuan University, Taiwan

O14-4 2:40 PM

Development of braid reinforced hollow fiber membrane with enhanced durability by structure optimization

Mooseok Lee, Jaehee Ryu, Yongcheol Shin

ECO Research Institute, KOLON Central Research Park, Korea