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(1) Monday, Jun 10, 7:45 AM
Plenary Session I
Grove Hotel, Ballroom

Frederick F. Stewart, Chair
Idaho National Laboratory,
Idaho Falls, ID
Jerry Lin, Co-Chair
Arizona State University,
Tempe, AZ

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*Menachem Elimelech**
Yale University, New Haven, CT

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Grove Hotel, Evergreen

**S. Ranil Wickramasinghe,
Chair**
University of Arkansas,
Fayetteville, AR
Xianghong Qian, Co-Chair
University of Arkansas,
Fayetteville, AR

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James E. McGrath (3), Benny
D. Freeman (1), Donald R. Paul
(1)*
*(1) The University of Texas at
Austin, Austin, TX*
*(2) The University of Notre
Dame, Notre Dame, IN*
*(3) Virginia Tech, Blacksburg,
VA*

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*(1) Idaho National Laboratory,
Idaho Falls, ID*
*(2) Texas Christian Univeristy,
Fort Worth, TX*

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*Texas A&M University, College
Station, TX*

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*National University of
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Singapore*

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SC*

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Xianghong Qian (1), S. Ranil
Wickramasinghe (1)*
*(1) University of Arkansas,
Fayetteville, AR*
*(2) University of Minnesota,
Minneapolis, MN*

(3) Monday, Jun 10, 9:30 AM
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Grove Hotel, Aspen
Uwe Beuscher, Chair
W.L. Gore & Associates
Hassan Arafat, Co-Chair
Masdar Institute of Science and
Technology, Abu Dhabi, United
Arab Emirates

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*(1) Clemson University,
Clemson, SC*
*(2) University of Arkansas,
Fayetteville, AR*

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*University of Houston, Houston,
TX*

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Tianjin University, Tianjin, China

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Greenberg (2)
(1) University of Colorado at
Boulder, Boulder, CO
(2) University of Colorado
Boulder, Boulder, CO

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Chung-Hak Lee (1), Jung-Kee
Lee (2)

(1) Seoul National University,
Seoul, South Korea
(2) Paichai University, Daejeon,
South Korea

**(4) Monday, Jun 10, 9:30 AM
Forward Osmosis - I**
Grove Hotel, Cedar

Tzahi Cath, Chair

Colorado School of Mines,
Golden, CO

William Phillip, Co-Chair

University of Notre Dame, Notre
Dame, IN

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(1)

(1) Nanyang Technological

University, Singapore,
Singapore
(2) Nanyang Technological
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Membrane Technology Centre,
Singapore, Singapore
(3) Stanford University, Stanford

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(1) Humboldt State University,
Arcata, CA
(2) University of Nevada, Reno,
NV

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National University of
Singapore, Singapore,
Singapore

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(1) Colorado School of Mines,
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(2) New Mexico State
University, Las Cruces, NM

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(1) University of Connecticut,
Storrs, CT
(2) 3M Purification INC.,
Meriden, CT

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(2)
(1) University of Maryland,
College park, MD
(2) University of Maryland,
College Park, MD

**(5) Monday, Jun 10, 9:30 AM
Membrane Reactors**
Grove Hotel, Riverfork

Jay Kniep, Chair

MTR, Newark, CA

Federico Guazzone, Co-Chair
Worcester Polytechnic Institute,
Worcester, MA

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Nanjing University of
Technology, Nanjing, China

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University of Kentucky,
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* Denotes Speaker

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Theodore Tsotsis* (1)
(1) University of Southern
California, Los Angeles, CA
(2) Media and Process
Technology Inc, Pittsburgh, PA

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University of Kentucky,
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(1) Michigan State University,
East Lansing, MI
(2) Michigan State University,
East Lansing

(6) Monday, Jun 10, 2:00 PM Novel Inorganic Membranes Grove Hotel, Cedar

Moises A. Carreon, Chair

University of Louisville,
Louisville, KY

Shiguang Li, Co-Chair

Gas Technology Institute, Des
Plaines, IL

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Nitesh Bhuwania* (1), William J.
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(1) Georgia Institute of
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(2) Shell International
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Inc, Houston, TX

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(3)
(1) The University of Jordan,
Amman 11942, Jordan
(2) Royal Scientific Society,
Amman 11941, Jordan
(3) German Jordanian
University, Amman 11180,
Jordan

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University of Twente, Enschede,
Netherlands

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(1) National Energy Technology
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(2) National Energy Technology
Laboratory, U.S. Department of
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(3) National Energy Technology
Laboratory, Morgantown, WV
(4) National Energy Technology
Laboratory, Pittsburgh, PA

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Wei Liu*
Pacific Northwest National
Laboratory, Richland, WA

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New Mexico State University,
Las Cruces, NM

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University of Alabama,
Tuscaloosa, AL

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Doosan Hydro Technology,
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(1) Penn State University, State
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Kitty Nijmeijer (3)
(1) Wetsus, Leeuwarden,
Netherlands
(2) Wageningen University,
Wageningen, Netherlands
(3) University of Twente,
Enschede, Netherlands

* Denotes Speaker

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University of Texas at San Antonio, San Antonio, TX

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U.S. Environmental Protection Agency, Cincinnati, OH
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Membrane Technology and Research

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Flemish Institute for Technological Research (VITO), Mol, Belgium

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The University of Texas at Austin, Austin, TX

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(1), Martin Weber (3), Christian Maletzko (3)

(1) National University of Singapore, Singapore, Singapore

(2) BASF South East Asia Pte Ltd, Singapore, Singapore

(3) BASF SE, Ludwigshafen, Germany

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National University of Singapore, Singapore, Singapore

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John Tang (1), Sudipto Majumdar (2), Kamallesh K. Sirkar (1)*

(1) New Jersey Institute of Technology, Newark, NJ

(2) Compact Membrane Systems, Inc, Wilmington, DE

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*Jing Zhao, Fei Wang, Fusheng Pan, Mingxuan Zhang, Zhongyi Jiang**

Tianjin University, Tianjin, China

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Grove Hotel, Riverfork

Peter Pintauero, Chair

Vanderbilt University, Nashville, TN

Ryszard Wycisk, Co-Chair

Vanderbilt University, Nashville, TN

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Leibniz-Institut fuer

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Pacific Northwest National Lab, Richland, WA

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University of Utah, SALT LAKE CITY, UT

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(1) Samsung Advanced Institute of Technology, Yongin-si,

Gyeonggi-do, South Korea

(2) Sangmyung University

* Denotes Speaker

(3) Samsung Advanced Institute of Technology

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Wonsung Choi* (1), Dong Joon Lee (2), Dongmin Im (3), Seok-Gwang Doo (2)

(1) Samsung Advanced Institute of Technology, Yongin, South Korea

(2) Samsung Advanced Institute of Technology

(3) Samsung Advanced Institute of Technology

(10) Tuesday, Jun 11, 7:45 AM Plenary Session II

Grove Hotel, Ballroom

Jerry Lin, Chair

Arizona State University, Tempe, AZ

Frederick F. Stewart, Co-Chair

Idaho National Laboratory, Idaho Falls, ID

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Michael Carolan*

Air Products and Chemicals, Inc., Allentown, PA

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Grove Hotel, Riverfork

Bruce Hinds, Chair

University of Kentucky, Lexington, KY

Francesco Fornasiero, Co-Chair

LLNL, Livermore, CA

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Hanyang University, Seoul, South Korea

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Imperial College London,

London, United Kingdom

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Gihane Nasr (1), Thomas

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(1) Institut Europeen des Membranes, Montpellier, France

(2) Institut Europeen des membranes, Montpellier, France

(3) Institut Européen des Membranes, Montpellier, France

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University of Kentucky, Lexington, KY

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(1), Phillip Gibson (2), Heidi

Gibson (2)

(1) Lawrence Livermore National Laboratory, Livermore, CA

(2) U.S. Army Natick Soldier Research, Development and Engineering Center, Natick, MA

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Xueping Yao, Yong Wang*
Nanjing University of Technology, Nanjing, China

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Grove Hotel, Cedar

Jamie A. Hestekin, Chair

University of Arkansas, Fayetteville, AR

Isabel C. Escobar, Co-Chair

The University of Toledo, Toledo, OH

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University of North Carolina at Chapel Hill, Chapel Hill, NC

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(1) Michigan State University, East Lansing, MI

(2) Polytechnic University of Catalonia, Barcelona, Spain

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David Jassby*

UC Riverside, Riverside, CA

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Mavis C.Y. Wong* (1), Guy Z. Ramon (2), Eric M.V. Hoek (3)

* Denotes Speaker

(1) University of California, Los Angeles, Los Angeles, CA
(2) Princeton University, Princeton, NJ
(3) UCLA, Los Angeles, CA

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(1) Yale University, New Haven, CT
(2) Cornell University, Ithaca, NY

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Irina Valtcheva, Santosh Kumbharkar, Jeong Kim, Andrew G. Livingston*
Imperial College London, London, United Kingdom

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Grove Hotel, Aspen

Xiaotong Wei, Chair
Membrane Technology and Research, Inc., Newark, CA
Ho Bum Park, Co-Chair
Hanyang University, Seoul, South Korea

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GE Global Research, Niskayuna, NY

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(1) MTR, Newark, CA
(2) Membrane Technology and Research, Inc., Newark, CA

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(1) West Virginia University Research Corporation, Morgantown, WV
(2) National Energy Technology Laboratory, Pittsburgh, PA
(3) Chemistry, University of Pittsburgh, Pittsburgh, PA
(4) University of Pittsburgh, Pittsburgh, PA
(5) URS Corporation, Pittsburgh, PA

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Hanyang University, Seoul, South Korea

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Arizona State University, Tempe, AZ

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David Hopkinson* (1), Shan Wickramanayake (2), David Luebke (3)
(1) National Energy Technology Laboratory, Morgantown, WV
(2) US DOE /NETL/URS Energy and Construction, Pittsburgh, PA
(3) National Energy Technology Laboratory, Pittsburgh, PA

(14) Tuesday, Jun 11, 9:30 AM Novel Polymer Membranes - II
Grove Hotel, Evergreen

S. Ranil Wickramasinghe, Chair
University of Arkansas, Fayetteville, AR
Xianghong Qian, Co-Chair
University of Arkansas, Fayetteville, AR

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University of Arkansas, Fayetteville, AR

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Yanbo Li* (1), Thierry Verbiest (2), Ivo Vankelecom (1)
(1) Centre for Surface Chemistry and Catalysis, K.U. Leuven, Heverlee, Belgium
(2) Molecular and Nanomaterials, KU Leuven, Heverlee, Belgium

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* Denotes Speaker

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(1) *Virginia Tech, Blacksburg, VA*

(2) *The University of Texas at Austin, Austin, TX*

(3) *Hanyang University, Seoul, South Korea*

(4) *Virginia Tech*

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*Laurentia Setiawan**, *Rong Wang*, *Jilei Liu*, *Zexiang Shen*
Nanyang Technological University, Singapore, Singapore

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*Laura H. Arias Chavez**, *Yunxia Hu*, *Menachem Elimelech*
Yale University, New Haven, CT

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*Seetha Soundara Manickam**, *Jeffrey R. McCutcheon*
University of Connecticut, Storrs, CT

(15) Tuesday, Jun 11, 2:00 PM Gas Separation - I

Grove Hotel, Evergreen

Ingo Pinnau, Chair

KAUST, Thuwal, Saudi Arabia

Zhiping Lai, Co-Chair

KAUST, Saudi Arabia

Synthesis and Characterization of Two Isomeric Thermal Rearrangable (TR) Polyimides

for Gas Separation Membranes..... 131

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*Hailun Borjigin** (1), *Qiang Liu* (2), *Donghoon Lee* (1), *Kyle Gaines* (1), *Benny Freeman* (3), *Sue Mecham* (1), *James E. McGrath* (1)

(1) *Virginia Tech, Blacksburg, VA*

(2) *The University of Texas at Austin, Austin, TX*

(3) *University of Texas at Austin*

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*Seungju Kim** (1), *Chi Hoon Park* (2), *Elena Tocci* (2), *Young Moo Lee* (1)

(1) *Hanyang University, Seoul, South Korea*

(2) *Institute on Membrane Technology (ITM-CNR), Rende, Italy*

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*Raja Swaidan**, *Xiaohua Ma*, *Octavio Salinas*, *Eric Litwiller*, *Ingo Pinnau*
KAUST, Thuwal, Saudi Arabia

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*Qiang Liu** (1), *Hailun Borjigin* (2), *Donald R. Paul* (1), *James E. McGrath* (2), *Benny D. Freeman* (1)

(1) *The University of Texas at Austin, Austin, TX*

(2) *Virginia Tech, Blacksburg, VA*

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*Xiaoli Ma** (1), *Xiaotong Wei* (2), *Jay Kniep* (3), *Jerry Lin* (1)

(1) *Arizona State University, Tempe, AZ*

(2) *Membrane Technology and Research, Inc., Newark, CA*

(3) *MTR, Newark, CA*

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*Masakoto Kanezashi**, *W. N. Shazwani*, *Hiroki Nagasawa*, *Tomohisa Yoshioka*, *Toshinori Tsuru*

Hiroshima University, Higashi-Hiroshima, Japan

(16) Tuesday, Jun 11, 2:00 PM Membrane Contactors/Membrane Distillation

Grove Hotel, Cedar

Kamalesh K. Sirkar, Chair

New Jersey Institute of Technology, Newark, NJ

Enrico Drioli, Co-Chair

Institute on Membrane Technology of the National Research Council - (ITM-CNR), Rende, Italy

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Rinku Thomas, *Elena Guillen-Burrieza*, *Hassan Arafat**
Masdar Institute of Science and Technology, Abu Dhabi, United Arab Emirates

* Denotes Speaker

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*Chang-Kyu Lee**, *June-Seok Choi*
Korea Institute of Construction Technology, Goyang-Si, South Korea

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Elena Guillen-Burrieza (1), *Alba Ruiz-Aguirre (2)*, *Guillermo Zaragoza (2)*, *Hassan Arafat* (1)*
(1) Masdar Institute of Science and Technology, Abu Dhabi, United Arab Emirates
(2) Plataforma Solar de Almeria, Almeria, Spain

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New Jersey Institute of Technology, Newark, NJ

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*Prashant Praveen**, *Kai-Chee Loh*
National University of Singapore, Singapore, Singapore

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*Randall Partridge**
ExxonMobil Research and Engineering Company, Annandale, NJ

(17) Tuesday, Jun 11, 2:00 PM

Membranes for Environmental Applications
Grove Hotel, Riverfork
D.B. Bhattacharyya, Chair
University of Kentucky, Lexington, KY
Rong Wang, Co-Chair
Nanyang Technological University, Singapore, Singapore

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Rong Wang (1)*, *Yuan Zhang (2)*
(1) Nanyang Technological University, Singapore, Singapore
(2) NTU, Singapore, Singapore

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(1) Michigan State University, East Lansing, MI
(2) Michigan State University, East Lansing

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*Jinwen Wang**, *Yibing Mo*, *Shaily Mahendra*, *Eric M.V. Hoek*
UCLA, Los Angeles, CA

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Hang Zheng Chen (1)*, *Pei Li (2)*, *Tai-Shung Chung (3)*
(1) National University of Singapore, Singapore, Singapore
(2) national university of sigapore, singapore, Singapore
(3) National University of Singapore, Singapore, Singapore

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*Charan Tej Tanneru**, *Shankar Chellam*
University of Houston, Houston, TX

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Nanyang Technological University, Singapore, Singapore

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Grove Hotel, Aspen
Tzahi Cath, Chair
Colorado School of Mines, Golden, CO
William Phillip, Co-Chair
University of Notre Dame, Notre Dame, IN

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Divina Kaombe (1)*, *May-Britt Hägg (2)*
(1) Norwegian University of Science and Technology, NTNU, Trondheim, Norway
(2) NTNU, Trondheim, Norway

* Denotes Speaker

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Jason T. Arena* (1), Seetha S Manickam (1), Kevin K. Reimund (1), Benny D. Freeman (2), Jeffrey R. McCutcheon (1)
(1) University of Connecticut, Storrs, CT
(2) The University of Texas at Austin, Austin, TX

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Ryan Holloway*, Tzahi Cath
Colorado School of Mines, Golden, CO

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Young Hoon Cho* (1), Michael D. Guiver (2), Ho Bum Park (1)
(1) Hanyang University, Seoul, South Korea
(2) National Research Council Canada, Ottawa, ON, Canada

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Aaron D. Wilson*, Frederick F. Stewart, Mark L. Stone
Idaho National Laboratory, Idaho Falls, ID

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Mavis C.Y. Wong* (1), Eric M.V. Hoek (2), Richard Kaner (3)
(1) University of California, Los Angeles, Los Angeles, CA
(2) UCLA, Los Angeles, CA

(3) University of California, Los Angeles, CA

(19) Wednesday, Jun 12, 8:00 AM

Gas Separation - II
Grove Hotel, Evergreen

Ingo Pinnau, Chair
KAUST, Thuwal, Saudi Arabia
Zhiping Lai, Co-Chair
KAUST, Saudi Arabia

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Carine Achoundong*, William J. Koros
Georgia Institute of Technology, Atlanta, GA

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Marius Sandru* (1), Maria T. G. Gutierrez (2), May-Britt Hagg (2)
(1) SINTEF, Trondheim, Norway
(2) NTNU, Trondheim, Norway

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Salman Shahid*, Kitty Nijmeijer
University of Twente, Enschede, Netherlands

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Asim Khan* (1), Chalida Klaysom (2), Ivo Vankelecom (2)
(1) COMSATS Institute of Information Technology, Lahore, Pakistan
(2) KU Leuven, Leuven, Belgium

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Moises A. Carreon* (1), Maria Carreon (2), Shiguang Li (3)
(1) University of Louisville, Louisville, KY
(2) University of Louisville, Louisville
(3) Gas Technology Institute, Des Plaines, IL

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Matteo Minelli, Giulio C. Sarti*
Alma Mater Studiorum - Università di Bologna, Bologna, Italy

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Mohammad Askari* (1), You Chang Xiao (2), Tai Shung Chung (1)
(1) National University of Singapore, Singapore, Singapore
(2) Suzhou Faith and Hope Membrane Technology Co. Ltd., Jiangsu Province, China

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Lu Liu*
Georgia Institute of Technology, Atlanta, GA

(20) Wednesday, Jun 12, 8:00 AM

Membrane Fouling - II
Grove Hotel, Cedar

Uwe Beuscher, Chair
W.L. Gore & Associates
Hassan Arafat, Co-Chair
Masdar Institute of Science and Technology, Abu Dhabi, United Arab Emirates

* Denotes Speaker

Binding Polymer Particles With Encapsulated Antibacterial Compounds to Thin-Film Composite Membranes for Enhanced Biofouling Resistance 176
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*Katherine R. Zodrow**, *Marissa E. Tousley*, *Menachem Elimelech*
Yale University, New Haven, CT

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*Ryan C. Smith**, *Arup K. Sengupta*
Lehigh University, Bethlehem, PA

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*Aleksey Pisarenko** (1), *Pei Xu* (2), *Yue Wang* (1), *Kathleen Whysner* (3), *Benjamin Stanford* (4)
(1) *Southern Nevada Water Authority, Las Vegas, NV*
(2) *New Mexico State University, Las Cruces, NM*
(3) *Denver Water, Denver, CO*
(4) *Hazen and Sawyer, P.C., Raleigh, NC*

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*Yi-Ning Wang**, *Chuyang Y. Tang*
Nanyang Technological University, Singapore, Singapore

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*Andrea Radu**, *Mathijs van Steen*, *M.C.M. van Loosdrecht*, *Cristian Piciooreanu*
Delft University of Technology, Delft, Netherlands

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*Jochen Meier-Haack** (1), *Christian Langner* (1), *Mona Abdel Rehim* (2)
(1) *Leibniz-Institut fuer Polymerforschung Dresden e.V., Dresden, Germany*
(2) *National Research Center Cairo, Cairo, Egypt*

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*Sui Zhang** (1), *Tai-Shung Chung* (2)
(1) *National University of Singapore, Singapore, SC, Singapore*
(2) *National University of Singapore, Singapore, Singapore*

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*Xinglin Lu**, *Santiago Romero-Vargas Castrillon*, *Devin Shaffer*, *Menachem Elimelech*
Yale University, New Haven, CT

**(21) Wednesday, Jun 12, 8:00 AM
Membranes for CO₂ Capture - II**
Grove Hotel, Aspen
Xiaotong Wei, Chair
Membrane Technology and Research, Inc., Newark, CA
Ho Bum Park, Co-Chair
Hanyang University, Seoul, South Korea

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*Tyler T. Norton**, *Jerry Lin*
Arizona State University, Tempe, AZ

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*Kristofer L. Gleason**, *Zachary P. Smith*, *Qiang Liu*, *D. R. Paul*, *Benny D. Freeman*
The University of Texas at Austin, Austin, TX

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*Hee Wook Yoon**, *Hyo Won Kim*, *Jae Eun Shin*, *Byung Min Yoo*, *Ho Bum Park*
Hanyang University, Seoul, South Korea

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*Yuecun Lou**, *Glenn Lipscomb*
University of Toledo, Toledo, OH

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*Lin Hao**, *Pei Li*, *Tingxu Yang*, *Tai-Shung Chung*
National University of Singapore, Singapore, Singapore

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* Denotes Speaker

Guangxi Dong* (1), Charly Malassigne (2), Vicki Chen (1)
(1) The University of New South Wales, Sydney, Australia
(2) Universite de Nantes, Nantes, France

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Vajiheh Nafisi*, Maria Teresa Guzman Gutierrez, May-Britt Hägg
NTNU, Trondheim, Norway

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Yifan Li, Zhizhang Tian, Hong Wu, Ye Liu, Shaofei Wang, Shixin Huang, Fusheng Pan, Zhongyi Jiang*
Tianjin University, Tianjin, China

(22) Wednesday, Jun 12, 8:00 AM

Pressure Retarded Osmosis
Grove Hotel, Riverfork

Tzahi Cath, Chair

Colorado School of Mines,
Golden, CO

William Phillip, Co-Chair

University of Notre Dame, Notre Dame, IN

Modeling the Relationship Between Power Density and Energy Recovery in Large – Scale Application of Salinity Gradient Energy Technologies 197

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Benjamin J. Feinberg* (1), Guy Z. Ramon (2), Eric M.V. Hoek (1)
(1) UCLA, Los Angeles, CA
(2) Princeton University, Princeton, NJ

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Ngoc Bui*, Jeffrey R. McCutcheon
University of Connecticut,
Storrs, CT

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Gang Han Sr.* (1), Xue Li (2), Sui Zhang (3), Tai-Shung Chung (2)
(1) National University of Singapore, Singapore, Singapore
(2) National University of Singapore, Singapore, Singapore
(3) National University of Singapore, Singapore, SC, Singapore

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Nathan Hancock*, Marek Nowosielski, Eric Maxwell, Megan Slonski
Oasys Water, Boston, MA

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Yunxia Hu* (1), Ngai Yin Yip (2), Menachem Elimelech (2)
(1) Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, Yantai, China
(2) Yale University, New Haven, CT

Influence of Reverse Solute Diffusion On the Performance of Pressure Retarded Osmosis 203

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Qianhong She*, Xue Jin, Dianxun Hou, Chuyang Y. Tang
Nanyang Technological University, Singapore, Singapore

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Rong Wang* (1), Shuren Chou (2), Anthony G. Fane (1)
(1) Nanyang Technological University, Singapore, Singapore
(2) Singapore Membrane Technology Centre, Nanyang Technological University, Singapore

A Novel Characterization Method for Determination of Transport and Structural Parameters of Forward Osmosis Membranes 205

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Yale University, New Haven, CT

(23) Wednesday, Jun 12, 2:00 PM

Membrane Formation
Grove Hotel, Aspen

Benny Freeman, Chair

University of Texas at Austin
Edgar S. Sanders, Co-Chair
MEDAL - Air Liquide, Newport, DE

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Arizona State University, Tempe, AZ

Development of Lotus-Root-Like Multi-Bore Hollow Fiber for Direct Contact Membrane Distillation and Vacuum Membrane Distillation 207

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Peng Wang* (1), Tai-Shung Chung (2)
(1) National University of Singapore, Singapore, Singapore,

* Denotes Speaker

Singapore

(2) National University of Singapore, Singapore, Singapore

Forever Young: Ending Aging in a Super-Glassy Polymer Membrane 208

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Richard Noble* (1), Phuc Tien Nguyen (1), Matthew R. Hill (2), Kristina Konstas (2), Cara M. Doherty (3), Cher Hon Lau (4), Laure Bourgeois (5), Timothy J. Bastow (6), Anita J. Hill (7), Douglas Gin (1)

(1) University of Colorado, Boulder, CO

(2) CSIRO, Melbourne, Australia

(3) CSIRO Manufacturing Science and Technology, Clayton, Australia

(4) National University of Singapore, Singapore, Singapore

(5) Monash University, Clayton Victoria, Australia

(6) CSIRO Manufacturing Science and Technology, Australia

(7) CSIRO Manufacturing Science and Technology, Clayton, VIC, Australia

PDMS Mixed Matrix Membranes With Molecular Interaction-Driven Tunable Free Volumes: Breaking the Trade-Off Between Permeability and Selectivity for Pervaporation 210

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Gongping Liu* (1), Wanqin Jin (1), Kueir-Rarn Lee (2), Juin-Yih Lai (2)

(1) Nanjing University of Technology, Nanjing, China

(2) Chung Yuan University, Chung-Li, Taiwan

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Ioannis A. Mergos*, Matthew T. Snider, Hendrik Verweij
The Ohio State University, Columbus, OH

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Suwan Meng* (1), Jaleh Mansouri (2), Yun Ye (1), Vicki Chen (1)

(1) The University of New South Wales, Sydney, Australia

(2) Cooperative Research Centre for Polymers, Notting Hill, Australia

(24) Wednesday, Jun 12, 2:00 PM

Membranes for Hydrogen Separation

Grove Hotel, Cedar

Eric S. Peterson, Chair

Idaho National Laboratory, Idaho Falls, ID

Ramesh Bhave, Co-Chair

Oak Ridge National Laboratory, Oak Ridge, TN

Identification of Novel Thermally Stable Pd-Alloy Composite Membranes for High-Temperature Applications 215

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Hani Abu El Hawa* (1), Stephen N. Paglieri (2), Aadesh X. Harale (3), J. Douglas Way (1)

(1) Colorado School of Mines, Golden, CO

(2) TDA Research, Inc., Wheat Ridge, CO

(3) Saudi Arabian Oil Company, Dhahran, Saudi Arabia

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Nicla Vicinanza* (1), Live Nova Næss (1), Ingeborg-Helene Svenum (1), Thijs Peters (2), Rune Bredesen (2), Anne Borg (1), Hilde J. Venvik (1)

(1) Norwegian University of Science and Technology, Trondheim, Norway

(2) SINTEF, Oslo, Norway

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The University of Texas at Austin, Austin, TX

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Xingming Jie, John Chau*, Gordana Obuskovic, Kamallesh K. Sirkar

New Jersey Institute of Technology, Newark, NJ

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Daejin Kim, Ping Tzeng, Kevin J. Barnett, You-Hao Yang, Jaime C. Grunlan, Benjamin A. Wilhite*

Texas A&M University, College Station, TX

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Doug Parsley (1), Richard J. Ciora (1), Paul K.T. Liu (1), Jiang Yu (2), Muhammad Sahimi (2), Theodore T. Tsotsis* (2)

(1) Media and Process Technology Inc, Pittsburgh, PA
(2) University of Southern California, Los Angeles, CA

* Denotes Speaker

(25) Wednesday, Jun 12, 2:00 PM

Responsive Membranes and Biomembranes

Grove Hotel, Riverfork

Mihai Barboiu, Chair

Institut Européen des Membranes, Montpellier, France

Joao Crespo, Co-Chair

UNL

Temperature Responsive Membranes for Separations and Water Detoxification 229

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*Li Xiao**, *Krysta Waldrop*, *Austin Isner*, *Dibakar Bhattacharyya*
University of Kentucky,
Lexington, KY

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*Yves-Marie Legrand** (1), *Mihai Barboiu* (1), *Arnaud Gilles* (1), *Mathieu Michau* (2), *Yann Le Duc* (1), *Tom Fyles* (3), *Benoit Coasne* (4), *Pierre-André Cazade* (4), *Joshua Post* (3), *Arie van der Lee* (1)
(1) *Institut Européen des Membranes, Montpellier, France*
(2) *IFP, Lyon, France*
(3) *University of Victoria, Victoria, BC, Canada*
(4) *CNRS/ENSCM/UM II, Montpellier, France*

Responsive Ultrafiltration Cellulose Acetate Membranes Containing N-Isopropylacrylamide (NIPAAm) and Superparamagnetic Iron Oxide (SPIO) Nanoparticles 234

3:00 PM, Paper 25c

*Sneha Chede** (1), *Geoffrey Bothun* (2), *Isabel C. Escobar* (3)
(1) *The University of Toledo, Toledo, OH*
(2) *University of Rhode Island, Kingston, RI*
(3) *University of Toledo, Toledo, OH*

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Carla Daniel (1), *Esther Santos* (2), *Jonathan Albo* (2), *Carlos A. M. Afonso* (3), *Fabián Vaca Chávez* (4), *Pedro José Sebastião* (5), *Angel Irabien* (6), *Carla A. M. Portugal** (1), *João G. Crespo* (1)
(1) *REQUIMTE/CQFB, Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, Caparica, Portugal*
(2) *Universidad de Cantabria, Santander, Spain*
(3) *iMed.UL, Faculdade de Farmácia, Universidade de Lisboa, Lisboa, Portugal*
(4) *Condensed Matter Physics Centre, University of Lisbon, Lisboa, Portugal*
(5) *Instituto Superior Técnico, Technical University of Lisbon, Lisboa, Portugal*
(6) *Cantabria University, Santander, Spain*

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*Zhiqiang Chen**, *Bruce J. Hinds III*
University of Kentucky,
Lexington, KY

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*Lidietta Giorno**, *Emma Piacentini*, *Alessandra Imbrogno*
Institute on Membrane Technology, National Research Council of Italy, ITM-CNR, Rende (CS), Italy

(26) Wednesday, Jun 12, 2:00 PM

Advances in Reverse Osmosis/Nanofiltration - II

Grove Hotel, Evergreen

Jamie A. Hestekin, Chair

University of Arkansas,
Fayetteville, AR

Isabel C. Escobar, Co-Chair

University of Toledo, *Toledo, OH*

Andrew G. Livingston, Co-Chair

Imperial College London,
London, United Kingdom

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Jeong Kim, *Gyorgy Szekely*, *Irina Valtcheva*, *Ana Freitas da Silva*, *Andrew G. Livingston**
Imperial College London,
London, United Kingdom

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*Lin Zhao**, *W. S. Winston Ho*
The Ohio State University,
Columbus, OH

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*Sunitha Asapu** (1), *Melissa Seedorf* (2), *Isabel C. Escobar* (2)
(1) *University of Toledo, Toledo, OH*
(2) *The University of Toledo, Toledo, OH*

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*Andrea Radu**, *M.C.M. van Loosdrecht*, *Cristian Picioreanu*
Delft University of Technology,
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Seoul National University, Seoul, South Korea

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Mary Laura Lind, Chair
Arizona State University, Tempe, AZ

Dongmei Li, Co-Chair
University of Wyoming, Laramie, WY

Lauren F. Greenlee, Co-Chair
National Institute of Standards & Technology, Boulder, CO

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* Denotes Speaker

Lape (1)
(1) *Harvey Mudd College, Claremont, CA*
(2) *California Institute of Technology, Pasadena, CA*

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(1) *Department of Civil and Environmental Engineering, A. James Clark School of Engineering, University of Maryland, College Park, MD*
(2) *University of Maryland, College Park, MD*

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(1) *Pennsylvania State University, University Park, PA*
(2) *2Institut Europeen des Membranes, Montpellier, France*
(3) *Institut Européen des Membranes, Montpellier, France*
(4) *The Pennsylvania State University, University Park, PA*

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(3) *The Pennsylvania State University, University Park, PA*

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(1) *Pennsylvania State University, University Park, PA*
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(3) *The Pennsylvania State University, University Park, PA*

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(1) *COMSATS Institute of Information Technology, Lahore, Pakistan*
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(1) Samsung Advanced Institute of Technology, Suwon, South Korea

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(2) Colorado State University, Fort Collins, CO

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(1) Chung Yuan Christian University, Chungli, Taiwan

(2) Chung Yuan Christian University, Chungli, 32023, Taiwan (R.O.C.).

(3) National Tsing-Hua University, Hsin-Chu, NV, Taiwan

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(2) The University of Texas at Austin, Austin, TX

(3) University of Texas at Austin, Austin, TX

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(1) Dpoint Technologies, Vancouver, BC, Canada

(2) University of British Columbia

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(1) Nanjing University of Technology, Nanjing University of Technology, China

(2) Nanjing University of Technology, Nanjing, China

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Catholic University of Leuven, Leuven, Belgium

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(1) Airrane Co., Ltd., Daejeon, South Korea

(2) Airrane, Daejeon, South Korea

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Lukai Yang*, Stephen M. Ritchie
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Tuscaloosa, AL

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(1) The University of Toledo, Toledo, OH
(2) University of Rhode Island, Kingston, RI

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(1) Korea Research Institute of Chemical Technology, Taejon, South Korea
(2) University of Waterloo, Ontario, Canada

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(1) University of Connecticut, Storrs, CT
(2) 3M Purification INC., Meriden, CT

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(1) Istanbul University, Istanbul, Turkey
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R. Paul (1), Benny D. Freeman
(1)
(1) The University of Texas at
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(2) The University of Notre
Dame, Notre Dame, IN
(3) Virginia Tech, Blacksburg,
VA

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(1) Lawrence Livermore
National Laboratory, Livermore,
CA
(2) University of California,
Berkeley, Berkeley, CA
(3) Porifera, Hayward, CA

**(28) Monday, Jun 10, 8:00 PM
Poster Session: Membrane
Properties**

Grove Hotel, Ballroom

Mary Laura Lind, Chair

Arizona State University,
Tempe, AZ

Dongmei Li, Co-Chair

University of Wyoming, Laramie,
WY

Lauren F. Greenlee, Co-Chair

National Institute of Standards &
Technology, Boulder, CO

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(2)
(1) University of Toledo, Toledo,
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(2) The University of Toledo,
Toledo, OH

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(1) University of Colorado at
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(2) University of Colorado
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(1)
(1) The University of Toledo,
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(2) University of Toledo, Toledo,
OH

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(1), Danny Pattyn (2), Angels
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(1) Flemish Institute for
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Mol, Belgium
(2) POROMETER n.v., Eke,
Belgium

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Italy

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(1) Airrane Co., Ltd., Daejeon,
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(2) Airrane, Daejeon, South
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(1) UNESCO Centre for
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(2) The University of New South
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(1) University of California, Los
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(2) University of Twente,
Enschede, Netherlands

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(2) Virginia Tech, Blacksburg,
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(3) University of Colorado,
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(1) Princeton University, Princeton, NJ
(2) University of Cambridge, Cambridge, United Kingdom

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(1) Stanford University, Stanford, CA
(2) Shell International Exploration and Production Inc, Houston, TX

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(1) Arizona State University, TEMPE, AZ
(2) Arizona State University, Tempe, AZ

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Grove Hotel, Ballroom

Mary Laura Lind, Chair

Arizona State University, Tempe, AZ

Dongmei Li, Co-Chair

University of Wyoming, Laramie, WY

Lauren F. Greenlee, Co-Chair

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(1) COMSATS Institute of Information Technology, Lahore, Pakistan
(2) Dalian Institute of Chemical Physics, Dalian, China
(3) KU Leuven, Leuven, Belgium

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(2) Kanto Gakuin University, Yokohama, Japan

(3) University of California, Riverside, Riverside, CA

(4) Ben Gurion University, Sde boker, Israel

(5) Technion - Israel Institute of Technology, Haifa, Israel

(6) Ben Gurion University, Midreshet Ben Gurion, Israel

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(1) National University of Singapore, Singapore, Singapore
(2) The University of Texas at Austin, Austin, TX

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Nanyang technological university, Singapore, Singapore

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(1) U.S. EPA, Cincinnati, OH
(2) USEPA, National Homeland Security Research Center, Cincinnati, OH
(3) CB&I Federal Services, LLC,

* Denotes Speaker

Cincinnati, OH
(4) *Aqua Treatment Service ,*
Mechanicsburg, PA
(5) *Waterline Technology,*
Mansfield, OH

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(1) *Princeton University,*
Princeton, NJ
(2) *University of California, Los*
Angeles, Los Angeles, CA
(3) *UCLA, Los Angeles, CA*

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Singapore Membrane
Technology Center, Singapore,
Singapore

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(3), Benjamin C. Nielsen (4)
(1) *National Energy Technology*
Laboratory, Pittsburgh, PA
(2) *U.S. Department of Energy,*
National Energy Technology
Laboratory, Pittsburgh, PA
(3) *U.S. Department of Energy,*
National Energy Technology
Laboratory, Albany, OR
(4) *URS Corp., Albany, OR*

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