

2014 AIChE Annual Meeting  
 Atlanta, GA  
 Rapid Fire Oral Presentations

Tuesday, November 18, 2014

Time	Stage 1	Stage 2	Stage 3	Stage 4
6:00pm	<p>414c: <b>Advances in Micro Gas Chromatography (GC) – Fast Analysis of C1 to C8 Hydrocarbons for Mud Logging Applications within 2 Minutes Using a Temperature Programmable Micro GC Fusion</b>            Debbie Hutt, INFICON</p>	<p>418aa: <b>Carbon Capture Using Carbonic Anhydrase-Displaying Escherichia coli in Biologically Active Foams</b>            Stuart Watson, University of Hawaii</p>	<p>420a: <b>Nanocrystals and Nanostructures for Study of Catalysis</b>            Yijin Kang,            Argonne National Laboratory</p>	<p>421m: <b>Packed Bed Packets, Effective Thermal Conductivity and Advantage of in-Situ W ALD</b>            Staci A. Van Norman,            University of Colorado at Boulder</p>
6:05pm	<p>418m: <b>Amplitude Metrics for Uncoupled Cellular Circadian Bioluminescence Reporters</b>            Peter St. John,            UC Santa Barbara</p>	<p>418ac: <b>Experimental and Mathematical Modelling of Breakthrough Curves of Fe (II) on Immobilized Biomass in a Packed Column</b>            Palesa Diale,            University of the Witwatersrand</p>	<p>420al: <b>Different Ways of Looking at the Force Between Nano Particles</b>            Alexander Lange,            University of Stuttgart</p>	<p>421p: <b>Impact of Surfactants, Soluble Polymers, and Colloidal Crosslinked Polymers on the Physical Stability of Wet Milled Drug Suspensions</b>            Meng Li, New Jersey Institute of Technology</p>
6:10pm	<p>414v: <b>Comparative Preparation of ZIF-7 and ZIF-8 Membranes Supported on Tezontle and <math>\alpha</math>- Alumina</b>            Fernando Romero-Romero,            Universidad Autónoma del Estado de México</p>	<p>418ad: <b>Effect of Humidity on Bulk Properties and Surface Energetics of Fine Powders</b>            Vikram Karde,            Indian Institute of Technology Gandhinagar</p>	<p>420b: <b>Synthesis FeCo Nanoparticles By NaBH4 Reduction in Oleylamine</b>            Xia Xu,            The University of Alabama</p>	<p>421q: <b>Examination of Mixing and Segregation Regions in Three Dimensional Granular Tumbler Flow Using Subsurface X-Ray Visualization</b>            Zafir Zaman,            Northwestern University</p>
6:15pm	<p>414w: <b>Computational Screening of Metal-Organic Frameworks for Energy Applications</b>            Ilknur Erucar,            Koc University</p>	<p>418an: <b>Controlled Crystallinity of Silicon Powders</b>            Brian S. Holsclaw,            Hemlock Semiconductor Corporation</p>	<p>420i: <b>Block Copolymer Templating of Hydrothermally-Grown ZnO Nanorod Arrays with Controlled Density for Photovoltaic Devices</b>            Candice Pelligra, Yale University</p>	<p>419aj: <b>Water Vapor Permeation through Amine-Containing CO<sub>2</sub>-Selective Facilitated Transport Membranes</b>            Varun Vakharia,            The Ohio State University</p>

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6:20pm	414y: <b>Hexane Isomer Permeation and Separation Properties of Silicalite-1 Membrane Under Pressurized Conditions</b> Motomu Sakai, Waseda University	418as: <b>A New Policy for the Use of Agricultural Residues in Tropical Countries Based on Biorefineries</b> Miguel Rojas, Universidad Nacional de Colombia	420j: <b>Designing Composite Polymer Electrolyte Interfaces for Stable Electrodes</b> Guang Yang, Florida State University	
6:25pm	415a: <b>Fixed-Bed Study of MG Adsorption on Chitosan Hydrogels</b> Kean Wang, Petroleum Institute	418at: <b>Gas Diffusion Electrodes for Valorization of CO<sub>2</sub> to Formate: Influence of Particle Size and Load</b> Andrés Del Castillo, Universidad de Cantabria	420m: <b>Triboelectric Nanogenerators from Carbon Nanotubes</b> Moses Oguntoye, Tulane University	419f: <b>A Combined Blocking Model for Cross Flow Membrane Filtration</b> Sourav Mondal, Indian Institute of Technology Kharagpur
6:30pm	415c: <b>Cell Separation Using Microfluidic Devices</b> Marisel De Jesus-Vega, University of Massachusetts	418ay: <b>High Heating Value (HHV) Estimation of Municipal Solid Wastes Using an Empirical Model</b> Honghong Shi, University of Calgary	420t: <b>Porous Carbon Microsphere-Encapsulated ZnO-CoO Nanoparticles Anode for High-Performance Lithium-Ion Batteries</b> Cunyu Zhao, University of Wisconsin-Milwaukee	419r: <b>Synthesis of Ion Exchange Membranes and Their Application to MCDI</b> Jiseon Kim, Hannam University
6:35pm	415e: <b>Combined Effect of Saline and Organic Modifiers on HIC and RPC Separation of Insulin Variants</b> Karolina Johansson, Lund University	418bc: <b>Compatibilized Polyethylene – Graphene Oxide Nanocomposites: Component Mapping &amp; Thermal, Rheological and Mechanical Performance</b> Vikas Mittal, The Petroleum Institute	418d: <b>Microdosing of Pharmaceutical Products into Capsules</b> Eva Faulhammer, Research Center Pharmaceutical Engineering GmbH	419t: <b>Facilitated Transport Separation of CO<sub>2</sub> Using Aminated Polysulfone Membranes</b> SeHwan Kwon, Hannam University
6:40pm	415h: <b>Understanding How Membrane Materials Influence Protein Adsorption and Membrane Fouling at the Single-Molecule Level</b> Blake B. Langdon, University of Colorado at Boulder	418bn: <b>Improving the Sustainability of Antioxidants Production through Biorefinery Concept. The Blackberry Case</b> Angela González, Universidad Nacional de Colombia sede Amazonía	418h: <b>Proteomics Analysis of Extracellular Matrix Derived from Pluripotent Stem Cell Aggregates</b> Chase Greist, FAMU-FSU College of Engineering	419u: <b>Mathematical Description of Water Vapor Influence on Gas Separation Performance in Hydrophobic Polyimides</b> Luca Ansaloni, Università di Bologna

**Tuesday, November 18, 2014**

<b>Time</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Stage 4</b>
<b>6:45pm</b>	<p><b>417a: Isotheric Heats of Adsorption on Mesoporous Amine Adsorbents at Low Pressures Relevant to Post-Combustion CO<sub>2</sub> Capture and Direct Air Capture</b> Mustafa A. Alkhabbaz, Georgia Institute of Technology</p>	<p><b>418bp: Webff: A Smart Force-Field Repository for Polymers and Soft Materials</b> Frederick R. Phelan, NIST</p>	<p><b>418i: Mathematical Modeling of the Physicochemical Evolution of Biomass Particles during Pyrolysis and Gasification</b> Lijun Wang, North Carolina Agricultural and Technical State University</p>	<p><b>419w: Separation Characteristics Using Multi-Layer Hollow Fiber Nanofiltration Membranes for Ultra-Low Pressure</b> Su Yeon Kang, Hannam University</p>
<b>6:50pm</b>		<p><b>418bq: Low Cost High Temperature UV-Fused Silica Heated Spectroscopic Cell for Solar Applications</b> Moises Romero, Deutsches Zentrum für Luft und Raumfahrt</p>	<p><b>418k: Analysis of the pH and Thermo-Responsive Behavior of a Series of Amino (Meth)Acrylate Polymer Brushes on Silicon Substrates By in-Situ Ellipsometry and AFM Measurements</b> Erick S. Vasquez, Mississippi State University</p>	<p><b>419x: Gas Separation of Pebax Blended Membranes with Poly (ethylene glycol) and Glutaraldehyde</b> Kayoung Kim, Hannam University</p>
<b>6:55pm</b>	<p><b>417ai: A New Commercial Instrument for Gas Sorption Measurements Under Extreme Conditions</b> Darren P. Broom, Hiden Isochema Ltd</p>	<p><b>418br: Influence of the Selection of Non-Conventional Operations on Biorefineries Performance</b> Carlos A. Cardona, Universidad Nacional de Colombia</p>		<p><b>419z: CO<sub>2</sub>-Selective Membranes Containing Amino or Ethylene Oxide Groups Potentially for Carbon Capture from Flue Gas</b> Yuanxin Chen, The Ohio State University</p>
<b>7:00pm</b>		<p><b>418bt: Processing Tissue Engineering Matrix Materials with Supercritical CO<sub>2</sub></b> Dominic M. Casali, University of South Carolina</p>	<p><b>418o: CFD Modeling of Commercial Scale Thawing Time from Small Scale Bags</b> Wei Chen, Bristol-Myers Squibb</p>	<p><b>419aj: Water Vapor Permeation through Amine-Containing CO<sub>2</sub>-Selective Facilitated Transport Membranes</b> Varun Vakharia, The Ohio State University</p>
<b>7:05pm</b>	<p><b>417w: Development of a High Throughput Ion Exchange Resin Characterization Workflow</b> Chun Liu, Dow Chemical Company</p>	<p><b>417aj: Study on Sludge Volume Reduction and Activated Carbon Regeneration Using Liquefied Dimethyl Ether Gas</b> Tadashi Sano, Hitachi, Ltd.,</p>	<p><b>418u: Bioelectrical Impedance Measurements to Detect Changes in Tight Junction Expression at Cell Interfaces</b> Ramsey Kraya, Johns Hopkins University</p>	
<b>7:10pm</b>			<p><b>418v: Facile Analysis of Transient Diffusion and Heat Conduction</b> Jerry H. Meldon, Tufts University</p>	