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<tr>
<td>October 14, 2019</td>
<td>Prof. Jason Hicks (University of Notre Dame)</td>
<td>&quot;Plasma-Assisted Catalytic Activation of N2 for Ammonia Synthesis&quot;</td>
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<td>November 11, 2019</td>
<td>Prof. Ian Tonks (University of Minnesota)</td>
<td>&quot;Ti-Catalyzed Nitrene Transfer Reactions: Harnessing the TiII/TiIV Redox Couple for New Transformations&quot;</td>
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<td>December 9, 2019</td>
<td>Prof. Damien Guironnet (University of Illinois)</td>
<td>“Engineering the Shape of Macromolecules Through Catalytic Polymerizations and Reactor Engineering”</td>
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<tr>
<td>January 13, 2020</td>
<td>Meeting Cancelled</td>
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<tr>
<td>February 10, 2020</td>
<td>Prof. Elizabeth Biddinger (City College of New York)</td>
<td>“Electrosynthesis of Chemicals and Fuels: Electrochemistry at the Biorefinery”</td>
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<td>March 9, 2020</td>
<td>Prof. Abhaya K. Datye (University of New Mexico)</td>
<td>&quot;Atom Trapping: Key to the Design of Thermally Stable and Regenerable Single Atom Catalysts&quot;</td>
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<td>April 13, 2020</td>
<td>Professor Omar Farha (Northwestern University)</td>
<td>“Smart and Programmable Sponges”</td>
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<td>August 27, 2020</td>
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<td></td>
<td>2019 Pines Award Address – Dr. Christopher Nicholas (Honeywell UOP)</td>
<td>“Well-Defined Materials for Hydrocarbon Transformations: Zeolite Structure / Property Relationships for Catalysis”</td>
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<td>Keynote Speaker – Prof. Yogesh Surendranath (Massachusetts Institute of Technology)</td>
<td>“Bridging Molecular and Heterogeneous Electrocatalysis Through Graphite Conjugation”</td>
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<td>Keynote Address – Dr. Daniel Ruddy (National Renewable Energy Laboratory)</td>
<td>“Molybdenum carbide catalysts for biomass upgrading – from bulk to nanoscale”</td>
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<tr>
<td>October 8, 2018</td>
<td>Professor Ray Gorte (University of Pennsylvania)</td>
<td>&quot;Fabrication of Nano-Structured Catalyst Supports by ALD&quot;</td>
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<td>November 12, 2018</td>
<td>Professor Friederike Jentoff (University of Massachusetts Amherst)</td>
<td>&quot;Controlling Selectivity in Aldol Reactions by Tuning Catalyst Acid-Base Properties and Porosity&quot;</td>
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<td>December 10, 2018</td>
<td>Professor Bert Chandler (Trinity University)</td>
<td>&quot;Gold Catalysts for Hydrogen Purification: How Mechanistic Insights into CO and H2 Oxidation can Help Us Build Better Preferential Oxidation (PrOx) Catalysts&quot;</td>
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<td>January 14, 2019</td>
<td>Professor John Kitchin (Carnegie Mellon University)</td>
<td>&quot;Applications of Machine Learned Potentials in Surface Science, Catalysis and Materials&quot;</td>
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<td>February 11, 2019</td>
<td>Professor Josh Schaidle (National Renewable Energy Laboratory)</td>
<td>&quot;Resilient Technology Platforms for Carbon Management Enabled by Catalysis&quot;</td>
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<td>March 11, 2019</td>
<td>Dr. Bjorn Moden (PQ Corporation)</td>
<td>“Advanced Zeolite Catalysis Technologies for Emission Control Applications”</td>
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“Molecular Modeling of Heterogeneous catalysis: Insights on the nature of the active site and improved catalysts”  
Keynote Speaker - Dr. Zili Wu (Oak Ridge National Laboratory)  
“Catalysis over Metal Oxides: Shape and Composition Effects”  
Keynote Address - Prof. Karena Chapman (Stony Brook University)  
“Operando, multi-modal probes of catalytic systems” |
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<td>Professor Josephine M Hill (University of Calgary)</td>
<td>&quot;Catalyst Development from Sustainable Materials&quot;</td>
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<td>November 6, 2017</td>
<td>Professor Jingguang G. Chen (Columbia University)</td>
<td>&quot;Converting CO\textsubscript{2} via Thermocatalysis and Electrocatalysis&quot;</td>
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<td>December 11, 2017</td>
<td>Dr. Ahmad Moini (BASF)</td>
<td>&quot;Novel Zeolite Catalysts for Diesel Emission Applications&quot;</td>
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<td>January 8, 2018</td>
<td>Professor George Huber (University of Wisconsin)</td>
<td>&quot;Commodity Chemicals from Biomass: Catalytic Conversion of Biomass into α,ω-diols&quot;</td>
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<td>February 12, 2018</td>
<td>Professor T. Brent Gunnoe (University of Virginia)</td>
<td>&quot;Transition Metal Catalyzed Hydroarylation of Olefins: New Catalysts for Alkyl and Alkenyl Arenes &quot;</td>
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<td>Professor Phillip Christopher (UC Santa Barbara)</td>
<td>&quot;Structural and Dynamic Characteristics of Supported Metal Catalysts at the Atomic Scale &quot;</td>
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<td>April 9, 2018</td>
<td>Dr. Michael Reynolds (Shell Corporation)</td>
<td>&quot;Opportunities for Catalysis in Recycling Produced Water from Shale Gas and Tight Oil Recovery Operations &quot;</td>
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<td>Guest Speaker - Prof. Clark Landis (University of Wisconsin)</td>
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<td>Guest Speaker - Dr. Neil Schweitzer (Northwestern University)</td>
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<td>October 10, 2016</td>
<td>Dr. Igor Slowing (US DOE Ames Laboratory/Iowa State University)</td>
<td>&quot;Quantitative Control of Polarity at Interfaces: Pseudo-Solvent Effects in Interfacial Catalysis&quot;</td>
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<td>November 14, 2016</td>
<td>Professor Paul Chirik (Princeton University)</td>
<td>&quot;Catalysis with Earth Abundant Metals&quot;</td>
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<td>December 5, 2016</td>
<td>Professor Justin Notestein (Northwestern University)</td>
<td>&quot;Oxide nanostructures: novel supports, active sites, and tandem catalysts&quot;</td>
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<td>Professor Warren Piers (University of Calgary)</td>
<td>&quot;First Row Transition Metal Complexes of a Dianionic Tetrapodal Pentadentate Ligand Framework&quot;</td>
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<td>February 13, 2017</td>
<td>Professor Rajamani Gounder (Purdue University)</td>
<td>&quot;Controlling the Spatial Density of Framework Aluminum and Extraframework Metal Sites in Zeolites and Consequences for Acid and Redox Catalysis&quot;</td>
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<td>March 13, 2017</td>
<td>Professor Karen I. Goldberg (University of Washington)</td>
<td>&quot;Catalysis, Mechanistic Understanding and Collaboration as Tools to Sustainable Production of Chemicals and Fuels&quot;</td>
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<td>&quot;Upgrading Light Hydrocarbons via Organometallic Chemistry&quot;</td>
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<td>Guest Speaker - Prof. Wenbin Lin (U of Chicago)</td>
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<td>Guest Speaker - Prof. Alan Goldberg (Rutgers University)</td>
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<tr>
<td>October 24 2015</td>
<td>Professor Joachim Sauer (Humboldt University)</td>
<td>Different C-H Bond Activation Mechanisms on Solid Oxide Catalysts</td>
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<td>November 2, 2015</td>
<td>Prof. Paul Dauenhauer (Univ. of Minnesota)</td>
<td>New Techniques to Address Complexity in Catalysis: Towards a Molecular Description of Renewable Energy Systems</td>
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<td>December 7, 2015</td>
<td>Professor Randall Q. Snurr (Northwestern Univ.)</td>
<td>Combined Modeling and Experimental Studies of Oxidation Catalysis in MOFs and Zeolites</td>
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<tr>
<td>January 11, 2016</td>
<td>Dr. Christopher Nicholas (UOP)</td>
<td>Single Atom Catalysis for Hydrocarbon Transformations: Supported Organometallic Reagents for Olefin Metathesis and Arene Hydrogenation</td>
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<td>February 8, 2016</td>
<td>Professor Eranda Nikolla (Wayne State University)</td>
<td>Molecular approaches toward the development of efficient catalysts for electrochemical energy conversion</td>
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<td>March 7, 2016</td>
<td>Prof. Götz Veser (Univ. of Pittsburg)</td>
<td>Chemical Looping: Process Intensification for Natural Gas Conversion</td>
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<td>April 11, 2016</td>
<td>Dr. Wayne Schammel (Siluria Technologies)</td>
<td>OCM at Siluria Technologies – Building the Future with Natural Gas</td>
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"UOP Zeolitic Material (UZM) in Aromatic Alkylation "

Keynote Speaker - Prof. Raul Lobo, University of Delaware
"Biomass and Natural Gas Valorization by Zeolite Catalysis "

Invited Speaker - Prof. Kendall Thompson – Purdue University
"A Lesson in Dirty Chemistry: Computational Model for Light Olefin Epoxidation by Au-Metal Clusters on the External Surface of TS-1"
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<tr>
<td>October 20 2014</td>
<td>Prof. Emiel Hensen (Eindhoven University of Technology)</td>
<td>&quot;Can we design the optimal heterogeneous catalyst?&quot;</td>
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<tr>
<td>November 10, 2014</td>
<td>Dr. Eric Stach (Brookhaven National Labortaory)</td>
<td>&quot;Characterization of working catalysts with advanced electron microscopy methods&quot;</td>
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<td>December 9, 2014</td>
<td>Prof. Yuriy Roman (MIT)</td>
<td>&quot;A Molecular Approach to the Design of Earth-Abundant Hydrodeoxygenation Catalysts&quot;</td>
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<td>January 12, 2015</td>
<td>Prof. Susannah Scott (UC Santa Barbara)</td>
<td>&quot;Non-isothermal reaction kinetics and operando spectroscopies reveal the inherently dynamic behavior of catalysts&quot;</td>
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<td>February 9, 2015</td>
<td>Dr. Paul T. Barger (UOP LLC)</td>
<td>&quot;UOP Advanced MTO Technology – A New Route for the Production of Light Olefins&quot;</td>
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<tr>
<td>March 9, 2015</td>
<td>Prof. Alexander Katz (UC Berkeley)</td>
<td>&quot;The Homogenization of Heterogeneous Catalysis: Reactivity of Single Sites on Surfaces That Have No Parallel in Solution&quot;</td>
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<td>April 6, 2015</td>
<td>Prof. Roy Periana (Scripps Institute)</td>
<td>&quot;Designing Catalysts for CH Functionalization Based on the CH Activation Reaction&quot;</td>
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<td></td>
<td>Pines Award Lecture - Prof. Fabio Ribeiro (Purdue University)</td>
<td>&quot;Insights into Heterogeneous Catalysis with Help from Kinetics, Spectroscopy, Theory and Designed Materials: Looking for the Active Site&quot;</td>
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<td>&quot;Insights into Active Sites and Catalytic Kinetics over Supported Metals at Reaction Conditions&quot;</td>
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<td></td>
<td>Invited Speaker - Prof. David Flaherty University of Illinois)</td>
<td>&quot;Direct Synthesis of H2O2 on Metal Clusters: Active Species and the Influence of Cluster Size and Composition&quot;</td>
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<td></td>
<td>Invited Speaker - Prof. Rajamani Gounder (Purdue University)</td>
<td>&quot;Zeolites Containing Isolated Metal Cations for the Catalysis of Hydrocarbon Conversion and Pollution Abatement&quot;</td>
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<tr>
<td>October 14, 2013</td>
<td>Professor Carsten Sievers (Georgia Institute of Technology)</td>
<td>&quot;Spectroscopic Studies on the Surface Chemistry of Biomass-Derived Oxygenates&quot;</td>
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<td>November 11, 2013</td>
<td>Professor Robert J. Davis (University of Virginia)</td>
<td>&quot;Transformations of Alcohols over Solid Catalysts&quot;</td>
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<td>December 9, 2013</td>
<td>Professor Will Medlin (University of Colorado)</td>
<td>&quot;Selective Catalysis Through Control of the Near-Surface Environment&quot;</td>
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<td>January 13, 2014</td>
<td>Professor Randall Meyer (University of Illinois (Chicago))</td>
<td>&quot;Geometric vs. Electronic Effects in Metal Nanoparticle Catalysts: Can We Exploit Both?&quot;</td>
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<td>February 11, 2014</td>
<td>Dr. Randall E. Winans (Argonne National Laboratory)</td>
<td>&quot;In Situ X-ray Scattering Studies of Catalytic Transformations&quot;</td>
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<td>March 10, 2014</td>
<td>Professor Ivo Hermans (University of Wisconsin)</td>
<td>&quot;Catalysis Research at the Interface of Chemistry and Chemical Engineering&quot;</td>
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<td>April 7, 2014</td>
<td>Professor Robert Rioux (The Pennsylvania State University)</td>
<td>&quot;Ni-Based Intermetallic Catalysts for Chemoselective Hydrogenation: Comparison Between Bulk and Nanoscale Materials&quot;</td>
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2014 Pines Award Lecture- Dr. Hai-Ying Chen (Johnson Matthey) "Challenges and Solutions in Developing Zeolite Supported Transition Metal Catalysts for Lean-Burn NOx Emission Control"

Invited Lecturer- Prof. Adam Hock (IIT/Argonne) "Chemistry at the Interfaces for Energy Conservation, Conversion, and Production"

Invited Lecturer- Prof. Jason Hicks (U of Notre Dame) "Parameters Controlling the Hydrodeoxygenation Selectivities of Bimetallic FeMoP Catalysts"
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<td>Prof. Daniel E. Resasco (U of Oklahoma)</td>
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<td>November 6, 2012</td>
<td>Dr. James C. Stevens (Dow Chemical Company)</td>
<td>&quot;Polyethylene by Molecular Design: How Catalyst Research Enables Innovation in Large-Scale Polymers&quot;</td>
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<td>January 7, 2013</td>
<td>Prof. Michael Tsapatsis (University of Minnesota)</td>
<td>&quot;Hierarchically Porous Zeolites made by Repetitive Branching&quot;</td>
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<td>Prof. Bert Weckhuysen (Utrecht University)</td>
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<td>Prof. Beatriz Roldán (University of Central Florida)</td>
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<td>April 8, 2013</td>
<td>Prof. Rongchao Jin (Carnegie Mellon University)</td>
<td>&quot;Atomically Precisely Gold Nanoclusters as New Model Catalysts&quot;</td>
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</table>
| May 7, 2013 | Spring Symposium | Keynote Speaker - Prof. Johannes A. Lercher (TU München) "From Understanding Elementary Steps to Designing Multifunctional Catalysts Integrated Strategies to Convert Biomass  
Keynote Speaker - Prof. Chris Jones (Georgia Institute of Technology) "Mixed Oxide Supports Reduce Methanol Selectivity in the Catalytic Synthesis of Higher Alcohols from Syngas over Potassium-Promoted Molybdenum Sulfide Catalysts"  
2013 Herman Pines Award Lecture - Prof. W. Nicholas Delgass (Purdue University)"Catalytic Sites and Kinetics for Gas Phase Epoxidation of Propylene Over Au/TS-1" |
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<td>Professor SonBinh Nguyen (Northwestern University)</td>
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<td>November 14, 2011</td>
<td>Professor Christophe Copéret (ETH Zurich)</td>
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<td>Professor Suljo Linic (University of Michigan)</td>
<td>&quot;Designing Alloy Catalysts Based on Molecular Insights: Alloys for Hydrocarbon Reforming, Direct Electrochemical Oxidation of Hydrocarbons at Solid Oxide Fuel Cells, and Oxygen Reduction Reaction&quot;</td>
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<td>&quot;Single-Nanoparticle Catalysis at Single-Turnover and Nanometer Resolution&quot;</td>
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<td>March 12, 2012</td>
<td>Dr. Alak Bhattacharyya (UOP/Honeywell)</td>
<td>&quot;From Black Oil to Silver Fuel: Nano-Catalysts for Slurry Hydrocracking of Heavy Oil&quot;</td>
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<td>&quot;Improving Raney® Catalysts through Surface Chemistry&quot;</td>
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<td>November 8, 2010</td>
<td>Professor Melanie Sanford (University of Michigan)</td>
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<td>&quot;Viewing Solid-Liquid Catalytic Interfaces with Attenuated Total Reflection Infrared Spectroscopy&quot;</td>
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<td>&quot;Determination of CO, H₂ and H₂O Coverage by XANES on Pt and Au During Water Gas Shift Reaction: Experiment and DFT Modeling&quot;</td>
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<td>&quot;Catalysis in a Pocket: Catalytic Consequences of Spatial Constraints in Acidic Zeolites&quot;</td>
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<td>Professor Dionisios G. Vlachos (University of Delaware)</td>
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<td>Professor Manos Mavrikakis (University of Wisconsin – Madison)</td>
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<td>Professor Eduardo Wolf (University of Notre Dame)</td>
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<td>&quot;Oxychlorination of Ethane over LaOCl/LaCl₃ Catalysts: Chlorination without a Reducible Metal Center&quot;</td>
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<td>&quot;Pyrolysis Based Technologies for the Conversion of Lignocellulosic Biomass into Fuels and Chemicals&quot;</td>
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<td>Professor Richard Adams (University of South Carolina)</td>
<td>&quot;Bimetallic Clusters for Facile Activation of Hydrogen and Catalytic Hydrogenations&quot;</td>
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<td>November 10, 2007</td>
<td>Professor Robert J. Davis (University of Virginia)</td>
<td>&quot;Conversion of Biorenewable Molecules to Fuels and Chemicals&quot;</td>
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<td>December 1, 2007</td>
<td>Professor Charles Campbell (University of Washington)</td>
<td>&quot;Thermodynamics and Kinetics of Surface Chemical Reactions in Catalysis&quot;</td>
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<td>Professor Fabio H. Ribeiro (Purdue University)</td>
<td>&quot;Catalysis on a Crowded Surface: The Role of Surface Oxygen on NO Oxidation over Pt&quot;</td>
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<td>Professor Clark Landis (University of Wisconsin)</td>
<td>&quot;Enantioselective Hydroformylation: Converting a Commodity Scale Process to the Production of Chiral Synthons&quot;</td>
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<td>Dr. Mark Jones (Dow Chemical Company)</td>
<td>&quot;Chemical Industry Needs: Where does Alkane Activation Fit?&quot;</td>
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<td>April 13, 2008</td>
<td>Dr. Yong Wang (Pacific Northwest National Laboratory)</td>
<td>&quot;Catalytic Conversion of Biomass to Fuels and Chemicals&quot;</td>
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<tr>
<td>October 8, 2007</td>
<td>Professor Michael T. Klein</td>
<td>&quot;Molecule-Based Modeling of Heavy Hydrocarbon Structure and Reactions: Discrete and Statistical Approaches&quot;</td>
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<td>November 12, 2007</td>
<td>Professor Steven Suib</td>
<td>&quot;Selectivity in Catalysis: Catalyst Design, Unique Activation, and Kinetic Studies&quot;</td>
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<td>December 10, 2007</td>
<td>Dr. Charles H. F. Peden</td>
<td>&quot;Novel Nano-Dispersed Early Transition Oxide Catalysts on Mesoporous Silica&quot;</td>
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<td>Professor Umit S. Ozkan</td>
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<td>Dr. Peter Nickias</td>
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<td>Professor Brent H. Shanks (Iowa State University)</td>
<td>&quot;Heterogeneous Catalyst Design for Biorenewable Conversions&quot;</td>
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<td>Professor Susannah Scott (University of California/Santa Barbara)</td>
<td>&quot;Redesigning Heterogeneous Catalysts for the Metathesis of Alkenes and Alkanes, with Insight from Organometallic Chemistry&quot;</td>
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<td>Professor Matthew Neurock (University of Virginia)</td>
<td>&quot;First Principles Elucidation and Design of Electrocatalytic Materials&quot;</td>
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<td>January 8, 2007</td>
<td>Dr. J. W. Adriaan Sachtler (UOP LLC)</td>
<td>&quot;Application of Combinatorial Methods to Heterogeneous Catalysis&quot;</td>
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<td>February 12, 2007</td>
<td>Dr. Stu Soled (ExxonMobil Research and Engineering Co.)</td>
<td>&quot;Recent Advances in the Synthesis of Catalytic Materials&quot;</td>
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<td>Dr. Leo E. Manzer (Catalytic Insights Inc)</td>
<td>&quot;Toward a Sustainable Economy: Conversion of Biomass to Chemicals and Fuels&quot;</td>
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<td>Keynote Speaker - Dr. Galen Fisher (Delphi Corporation)</td>
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<td>October 10, 2005</td>
<td>Professor Wolfgang Hoelderich (University of Technology)</td>
<td>&quot;The Use of Heterogeneous Catalysts in the Synthesis of Pharmaceuticals&quot;</td>
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<td>Professor Bert Weckhuysen (University of Utrecht)</td>
<td>&quot;Snapshots of Catalysts at Work: Probing Heterogeneous Catalysts with Spectroscopy and Microscopy&quot;</td>
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<td>Dr. Michael F. Carolan (Air Products and Chemicals, Inc.)</td>
<td>&quot;ITM Syngas: Ceramic Membrane Technology for Lower Cost Conversion of Natural Gas&quot;</td>
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<td>Professor Vadim V. Guliants (University of Cincinnati)</td>
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<td>October 4, 2004</td>
<td>Professor Daniel E. Resasco (University of Oklahoma)</td>
<td>&quot;Combined Deep Hydrogenation and Ring Opening of Poly-aromatic Hydrocarbons for Diesel Quality Improvement&quot;</td>
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<td>Dr. Paul Fenter (Argonne National Laboratory)</td>
<td>&quot;Observations of the Mineral-water Interface with High-Resolution X-ray Scattering Techniques: Interfacial Water and Adsorbed Ions&quot;</td>
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<td>Dr. Russell W. Johnson (Honeywell Corporation)</td>
<td>&quot;The Use of Catalysts for Environmentally Sound Conversion of Explosives and Propellants&quot;</td>
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<td>Professor Roel Prins (ETH Zurich)</td>
<td>&quot;A Multinuclear MAS NMR Study of the Flexibility of the Al Coordination and of Dealumination and Realumination of Zeolites&quot;</td>
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<td>November 10, 2003</td>
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<td>December 8, 2003</td>
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<td>January 12, 2004</td>
<td>Dr. Aleksey Yezerets (Cummins Inc.)</td>
<td>&quot;Understanding Oxidation Kinetics of Diesel Particulate Matter&quot;</td>
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<td>October 8, 2001</td>
<td>Professor Chunshan Song (Pennsylvania State University)</td>
<td>&quot;Catalytic Fuel Processing for High- and Low-Temperature Fuel Cells. Challenges and Opportunities&quot;</td>
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|                   |                                 | Professor Richard Gonzalez (Tulane University)  
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