

AVS Prairie Chapter 2013  
Reactions at Surfaces  
Wednesday, September 4, 2013

- 8:15 Registration and Continental Breakfast. UIC Forum Lobby
- 8:55 Welcoming remarks: Mike Trenary, University of Illinois at Chicago  
*Session 1. Moderator: Luke Hanley, University of Illinois at Chicago*
- 9:00 **Steven M. George**, University of Colorado, Boulder  
**Invited Talk:** *Growth and Properties of Hybrid Organic-Inorganic Films Using Molecular Layer Deposition Techniques.*
- 9:40 **Sathees Kannan Selvaraj**, University of Illinois at Chicago  
*Atomic Layer Deposition of Zirconium Oxide Using Ethanol as Oxygen Source*
- 10:00 **Nathaniel S. Safron**, University of Wisconsin at Madison  
*Measuring and Understanding the Critical Methane Concentration in Graphene Chemical Vapor Deposition on Cu*
- 10:20 Coffee break, Exhibitor Displays  
*Session 2. Moderator: Christos Takoudis, University of Illinois at Chicago*
- 10:50 **John Abelson**, University of Illinois at Urbana-Champaign  
**Invited Talk:** *Controlling Surface Reaction Rates in CVD to Afford Ultra-smooth, Deeply Conformal or Bottom-up Film Growth*
- 11:30 **Daniel Velázquez**, Illinois Institute of Technology  
*Synthesis of Multilayered MgO/Ag/MgO on Si(111) by Pulsed Laser Deposition*
- 11:50 **Poh-Keong Ng**, University of Illinois at Chicago  
*A STM Study of a Self Assembled Cu-Si Nanoisland on Si(111)*
- 12:10 Lunch, Exhibitor Displays, Chapter business meeting (open to all)  
*Session 3. Moderator: Daniel Killelea, Loyola University Chicago*
- 1:30 **Saw Wai Hla**, Argonne National Laboratory  
**Invited Talk:** *Frontier of STM Manipulations: Imaging Atomic Spin to Operating Nanomachines*
- 2:10 **John D. Kestell**, University of Wisconsin at Milwaukee  
*Self Assembly and Surface Chemistry of Aromatic Diisocyanides and Dithiols on Gold*

- 2:30 **Jacob Ciszek**, Loyola University Chicago  
*Surface Chemistry on Organic Semiconductor Crystals – the Diels-Alder Reaction*
- 2:50 Coffee break, Poster Presentations, and Exhibitor Displays  
*Session 4. Moderator: Richard A. Rosenberg, Argonne National Laboratory*
- 3:40 **Franklin Tao**, Notre Dame University  
*Catalysis and In-Situ Studies of Isolated Metal Sites*
- 4:20 **Sergey V. Baryshev**, Argonne National Laboratory  
*Enthalpy of Formation of  $Cu_2ZnSnS_4$*
- 4:40 **Michael Majeski**, University of Illinois at Chicago  
*Generation of  $Cu_2S$  Nanoparticles via Cluster Beam Deposition for Bulk Heterojunction Photovoltaics*
- 5:00 Concluding remarks, Mike Trenary, University of Illinois at Chicago
- 5:10 Reception and Student Poster Award Presentation

## Poster Presentations

**Jon Bender**, Loyola University Chicago

*A Look at Heterogeneous Catalysis with the Aid of UHV-STM*

**Christopher J. Camarata**, Loyola University of Chicago

*Study of Diels Alder Kinetics via Quartz Crystal Microbalance*

**Yang Cui**, University of Illinois at Chicago

*Detection of Small Molecules on Intact Microbial Biofilms Using Femtosecond Laser Desorption Postionization Mass Spectrometry*

**Jonathan Derouin**, Loyola University Chicago

*UHV-STM Study of Surface/Subsurface Systems*

**Thomas G. Erickson**, University of Illinois at Urbana-Champaign

*Doping of Chalcopyrites with Plasma Activated Nitrogen*

**Wei Han**, University of Wisconsin at Milwaukee

*Surface X-ray Diffraction Study on MgO(111)  $\sqrt{3}\times\sqrt{3}$  R 30° Surface/Interface*

**Zachary M. Hund**, University of Chicago

*Interfacial Dynamics of a Hybrid Organic-Semiconductor Using Inelastic Helium Atom Scattering & Density Functional Perturbation Theory*

**Panchatapa Jash**, University of Illinois at Chicago

*Spectroscopic Studies of the Dehydrogenation of Sodium and Potassium Borohydrides*

**Grant Langlois**, University of Chicago

*Mechanistic Study of the Reaction of O(<sup>3</sup>P) with Molecular Wire SAMs on Au(111)*

**Wenxin Li**, University of Chicago

*Modification of Alkanethiolate Monolayers by O(<sup>3</sup>P) Atomic Oxygen: Effect of Chain Length and Surface Temperature*

**Zhu Liang**, University of Illinois at Chicago

*Surface Morphology of Chemisorbed N on Pt(111)*

**Eric C. Mattson**, University of Wisconsin at Milwaukee

*Probing Adsorption and Reactivity of Small Molecules on Reduced Graphene Oxide*

**Julian J. McMorro**w, Northwestern University  
*Solution-Processed Self-Assembled Nanodielectrics on Template-Stripped Metal Substrates*

**Britt**ni A. Qualizza, Loyola University Chicago  
*Functionalization of Organic Semiconductor Crystals via the Diels-Alder Reaction*

**Yuan Ren**, University of Illinois at Chicago  
*Surface Chemistry of Methylamine on Ru(0001)*

**Jorge I. Rossero**, University of Illinois at Chicago  
*Atomic Layer Deposition of Ytria Doped Cerium Oxide using CP-type Precursors*

**Hyung Ju Ryu**, University of Chicago  
*Time-resolved Analysis of Grain Coarsening in Cylinder-Forming Block Copolymers on Nanopatterned Substrates*

**Esin Soy**, University of Illinois at Chicago  
*Formation of Metal Nanoclusters on a Graphene Moire Pattern on Cu(111)*