

AGENDA

Wednesday, January 28th

9:00 am — Morning session begins

Session Chair: Filipp Fuche Presiding

9:00 to 9:40 — James Pankow; “Difficulties in Predicting Organic Particulate Matter (OPM) Levels in the Atmosphere: Will Predictions Even to Within a Factor of Two or Three Be Possible When OPM Levels Are Low?”

9:40 to 10:00 — Alla Zelenyuk, Dan Imre, Yong Yu, Michael Ezell, Stanley Johnson, Emily Bruns, Veronique Perraud, M. Lizabeth Alexander, Barbara Finlayson-Pitts; “Changes in Density and Composition of Individual Particles Formed During the Oxidation of Alpha-Pinene in the Presence of Sodium Nitrate Seed Particles”

10:00 to 10:15 — Adam Bateman, Sergey Nizkorodov, Alexander Laskin, Julia Laskin; “Evolution of Composition of Limonene SOA Probed with High Resolution Electrospray Ionization Mass Spectrometry”

10:15 to 10:30 — Prasad Pokkamuri, Paul Nissenson, Donald Dabdub, Barbara Finlayson-Pitts; “The Relative Importance of Interface Processes with Varying Particle Size”

10:30 – 11:00 — Break

Session Chair: Pavel Jungwirth Presiding

11:00 to 11:20 — Filipp Furche; “Photochemical Applications of Time-Dependent Density Functional Theory”

11:20 to 11:35 — Michael Kamboures, Sergey Nizkorodov, R. Benny Gerber; “Photochemical Reactions of Methylhydroperoxide on Icy Particles”

11:35 to 11:50 — Christopher Dilbeck, Federico Karagulian, Barbara Finlayson-Pitts; “Photooxidation of a Phospholipid Coating on Sea-Salt Aerosol from the Bottom Up”

11:50 to 12:10 — Leon Phillips and David L. Bones; “Photochemistry in Aqueous Aerosols: Quantum Yields of Fe(II) from Potassium Ferrioxalate and of OH from Nitrate Ions”

12:10 to 12:30 — Sotiris Xantheas; “Spectroscopic Signatures of Sulfuric Acid Dissociation in Water Clusters”

12:30 – 2:00 — Lunch on your own in Laguna Beach

Session Chair: Martina Roeselová Presiding

2:00 to 2:40 — Yinon Rudich; “Effects of HULIS on Aerosol Chemistry and Microphysical Properties”

2:40 to 2:55 — David Bones, Sergey Nizkorodov, Adam Bateman, Tran Nguyen, Xiang Pan, Dana Henriksen; “Effects of Dark Aging on Chemical and Physical Properties of Monoterpene-Derived SOA”

2:55 to 3:15 — Alexander Laskin, A.D. Abid, E.D. Tolmachoff, J.P. Cain, D.I. Phares, Y. Liu, H. Wang; “Size distribution and morphology of nascent soot particles in premixed ethylene flame”

3:15 to 3:30 — M. Lizabeth Alexander; “Chemical and Physical Processes in the Sampling and Detection of Organic Nitrate Particles in Thermal Vaporization Aerosol Mass Spectrometry”

3:30 – 4:00 — Break

Session Chair: Leon Phillips Presiding

4:00 to 4:20 — Emily Bruns, Veronique Perraud, Yong Yu, Michael Ezell, Stanley Johnson, Alla Zelenyuk, Lizabeth Alexander, Barbara Finlayson-Pitts; “Flow Tube Studies Characterizing the Formation of Atmospherically Relevant Particulate Organic Nitrates from Terpene Precursors”

4:20 to 4:40 — Jonathan Raff, Wayne Chang, Bosiljka Njegic, Mark Gordon, Donald Dabdub, R. Benny Gerber, Barbara Finlayson-Pitts; “NO_x Chemistry at Surfaces and Halogen Production in the Troposphere”

4:40 to 4:55 — Bosiljka Njegic, Jonathan Raff, M.S. Gordon, Barbara Finlayson-Pitts, R. Benny Gerber; “Theoretical Studies of Nitrogen Oxides Heterogeneous Chemistry”

6:00 pm — Dinner for AirUCI faculty, international and DOE collaborators, and invited guests at *Claes restaurant, Hotel Laguna*

AirUCI Annual Workshop

January 27-28, 2009
Hotel Laguna
Laguna Beach, California



AirUCI Institute

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AGENDA

Tuesday, January 27th

8:30 am — Opening session begins

Barbara Finlayson-Pitts, AirUCI Director

Welcome and Introduction

Session Chair: Donald Dabdub Presiding

8:45 to 9:25 — Peter Rossky; “Hydration Structure and Phase Behavior for Water in Confinement”

9:25 to 9:45 — Martina Roeselová; “Microscopic Wetting of Mixed Self-Assembled Monolayers as Proxies for Atmospheric Organic Surfaces”

9:45 to 10:05 — Ronald Grimm, Nicole Barrentine, John Hemminger; “Water Interactions with Hydrophobic/ Hydrophilic Organic Surfaces Via TPD and MD Simulations”

10:05 to 10:25 — Lai-Sheng Wang; “Microsolvation of Complex Anions: The Temperature Effects”

10:25 to 10:55 — Break

Session Chair: John Hemminger Presiding

10:55 to 11:35 — Lynn Russell; “Water Uptake on Atmospheric Particles”

11:35 to 11:55 — Julia Laskin, Jeffrey Smith, Alexander Laskin; “Molecular Characterization of Biomass Burning Aerosols Using High Resolution Mass Spectrometry”

11:55 to 12:10 — Christopher Harmon, Sergey Nizkorodov, Mark Peterson, Douglas Tobias, R. Benny Gerber, Bosiljka Njeglic; “Hygroscopic Growth of NaCl Nanoparticles Containing Surfactant SDS”

12:10 to 1:30 — Catered lunch in the Rose Garden

Session Chair: Sergey Nizkorodov Presiding

1:30 to 2:10 — Michael Hoffmann; “Interfacial Partitioning and Chemical Reactions on Water Droplet Surfaces”

2:10 to 2:30 — Nicole Richards, Karen Callahan, Lisa Wingen, John Promlap, Douglas Tobias, Barbara Finlayson-Pitts; “Bromide Ion Enhancement of Nitrate Ion Photolysis: Experiments and Theory”

2:30 to 2:45 — Tanza Lewis, Ronald Grimm, Matthew Brown, Bernd Winter, Manfred Fauble, John Hemminger; “Liquid Jet XPS Experiments: Where is Nitrate With and Without Salts?”

2:45 to 3:05 — Allie Margarella, Ming Cheng, Hendrik Bluhm, John Hemminger; “Ambient Pressure XPS Studies of RbCl Aqueous Solutions: Does the Cation Size Make a Difference?”

3:05 to 3:45 — Break and group photo

Session Chair: Doug Tobias Presiding

3:45 to 4:05 — Hendrik Bluhm; “Investigation of Vapor/Solid and Vapor/Liquid Interfaces Using Ambient Pressure Photoemission Spectroscopy”

4:05 to 4:25 — Christopher Mundy; “Density Functional Theory Investigations of Structure and Reactivity of Aqueous Interfacial Systems”

4:25 to 4:45 — Pavel Jungwirth; “Ice Nucleation in Pure, Salty, and Dirty Water”

4:45 to 5:00 — Paul Nissenon, Daniel Packwood, Barbara Finlayson-Pitts, Sherri Hunt, Donald Dabdub; “Understanding the Important Mechanisms of Br₂ Production from NaBr Aerosols”

6:00 pm — Dinner for invited speakers, AirUCI faculty, advisory committee, international and DOE lab collaborators, and invited guests at Las Brisas

AFFILIATIONS OF AIRUCI COLLABORATORS AND GUEST SPEAKERS

- ❖ **M. Elizabeth Alexander: Pacific Northwest National Lab**
- ❖ **Hendrik Bluhm: Lawrence Berkeley National Lab**
- ❖ **Kathy Covert: National Science Foundation**
- ❖ **Bruce Garrett: Pacific Northwest National Lab**
- ❖ **Michael Hoffmann: California Institute of Technology**
- ❖ **Pavel Jungwirth: Academy of Sciences, Czech Republic**
- ❖ **Alexander Laskin: Pacific Northwest National Lab**
- ❖ **Julia Laskin: Pacific Northwest National Lab**
- ❖ **Christopher Mundy: Pacific Northwest National Lab**
- ❖ **James Pankow: Portland State University, Oregon**
- ❖ **Leon Phillips: University of Canterbury, New Zealand**
- ❖ **Martina Roeselová: Academy of Sciences, Czech Republic**
- ❖ **Peter Rossky: University of Texas**
- ❖ **Yinon Rudich: Weizmann Institute, Israel**
- ❖ **Lynn Russell: Scripps Institute**
- ❖ **Lai-Sheng Wang: Pacific Northwest National Lab and Washington State University**
- ❖ **Sotiris Xantheas: Pacific Northwest National Lab**
- ❖ **Alla Zelenyuk: Pacific Northwest National Lab**