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EDUCATION

University of California, Berkeley, California
Ph.D. January 2003 *"Structural studies of volatile liquid surfaces using x-ray absorption spectroscopy"*
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St. John's College, Santa Fe, New Mexico
M.A. Humanities May 1996
Thesis: *"Metaphysics in Husserl's Phenomenology"*

Willamette University, Salem, Oregon
May 1993, B.A. Chemistry

RELEVANT EXPERIENCE

2011–present **Lawrence Berkeley National Laboratory**
Deputy Director for Science, Chemical Sciences Division

2006–present **Lawrence Berkeley National Laboratory**
Staff Scientist, Chemical Sciences Division

2004–2006 **Lawrence Berkeley National Laboratory**
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2003–2004 **Los Alamos National Laboratory, Chemistry Division**
Fredrick Reines Distinguished Postdoctoral Fellow

2002–2003 **University of California, Berkeley, Dept. of Chemistry**
Advanced Light Source Doctoral Fellow,

1997–2002 *Graduate Researcher*, Advisor Prof. R.J. Saykally

1994–1997 **Los Alamos National Laboratory, Los Alamos, New Mexico**
Researcher, Supervisor Dr. Jeanne Robinson

AWARDS

U. S. Department of Energy Early Career Award (2012)

Fredrick Reines Distinguished Postdoctoral Fellowship (Feb. 2003-present)

ALS Doctoral Fellowship in Residence (Jan. 2002- Jan. 2003)

REFEREED PUBLICATIONS:

104. N. K. Richards-Henderson, A. H. Goldstein, and K. R. Wilson, "Sulfur Dioxide Accelerates the Heterogeneous Oxidation Rate of Organic Aerosol by Hydroxyl Radicals," Environ. Sci. Technol., DOI: 10.1021/acs.est.5b05369 (2016, accepted)

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100. K. R. Kolesar, Z. Li, K. R. Wilson, C. D. Cappa, "Heating-Induced Evaporation of Nine Different Secondary Organic Aerosol Types," Environ. Sci. Technol., **49**, 12242, DOI: 10.1021/acs.est.5b03038 (2015)

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PATENTS:

"Electrokinetic Hydrogen Generation in Liquid Microjet Arrays" (filed to office of technology transfer 9/28/04) Kevin R. Wilson, Bruce S. Rude, Richard J. Saykally

PRESENTATIONS:

Contributed Talk: Kevin R. Wilson and R. J. Saykally et al., The 48th Western Spectroscopy Association Conference, "X-ray spectroscopy of the Liquid Water Surface," 2000

Invited Talk: Kevin R. Wilson and R. J. Saykally: ALS Users' meeting Workshop on Atoms and Aerosols "Exploring the structure of liquid surfaces using microjets," 2002

Contributed Talk: ACCESS VII Colloquium: Gordon Research Conference: Atmospheric Chemistry, "The structure of volatile liquid surfaces, deduced from x-ray absorption spectroscopy: implications for atmospheric chemistry," 2003

Invited Talk: American Association for Aerosol Research (AAAR), "Aerosol Photoemission," Symposium entitled, "Non-invasive methods for probing nanoparticles," 2006

Poster: Atmospheric Chemistry Gordon Conference, 2007

Poster: American Association for Aerosol Research (AAAR) meeting, 2007

Contributed Talk: Advanced Light Source, Lawrence Berkeley National Laboratory, Workshop on Atmospheric Aerosols, 2007

Invited Talk: American Chemical Society in the "Physical chemistry of environmental interfaces," symposium, 2008

Invited Departmental Seminar: Department of Chemical Engineering, Louisiana State University, "Heterogeneous Chemistry of Organic Aerosols," 2008

Contributed Talk: Advanced Light Source, Lawrence Berkeley National Laboratory, Workshop on Energy Frontier Research Centers, 2008

Invited Seminar: U.C. Berkeley in the Berkeley Atmospheric Science Center, "Understanding the role of secondary chemistry, functionalization and chemical erosion in the heterogeneous oxidation of organic aerosols," 2009

Invited Seminar: University of British Columbia Department of Chemistry Seminar, "Heterogeneous Reaction Trajectories: Understanding the Competition between Functionalization and Volatilization Reactions in Chemically Reduced and Oxidized Organic Aerosols," 2010

Contributed Talk: 240th ACS, "Heterogeneous Reaction Trajectories: Understanding the Competition between Functionalization and Volatilization Reactions in Chemically Reduced and Oxidized Organic Aerosols," 2010

Contributed Talk: Pacifichem 2010 Congress, "Heterogeneous Oxidation Trajectories," 2010

Invited Talk: 5th Workshop on Titan Chemistry, "Laboratory Studies of Low Temperature Gas phase Chemistry and Aerosol Formation in Titan's Atmosphere," 2011

Invited Talk: International Conference on Chemical Kinetics, "Free Radical Heterogeneous Oxidation Trajectories and Low Temperature Gas Phase Reactions for Planetary Atmospheres," 2011

Invited Talk: Aerodyne Research Inc., "Statistical Oxidation and the multi-generational aging of organic aerosols," 2011

Invited Talk: American Chemical Society (ACS) "Statistical Distributions and the Chemical Evolution of Organic," ACS Symposium entitled "Atmospheric Aerosols: Chemistry, Clouds and Climate," 2011

Contributed Talk: American Geophysical Union, "Statistical Distributions and the Multi-Generational Aging of Organic Aerosol," 2011

Invited Talk: 2012 America Association for Aerosol Research (AAAR), "Aerosol Photoemission," in symposium entitled, "Nanoscale Aerosol Physics with New Light Sources," 2012

Invited Talk: 2012 Berkeley Atmospheric Science Center Symposium (BASC) "New Insights into the Photochemical Transformation of Organic Aerosols," 2012

Invited Talk: 2012 Telluride Workshop on Organic Particles in the Atmosphere: Formation, Properties, Processing and Impact, "Understanding How Statistical Distributions of Reaction Products Control the Photochemical Evolution of Organic Aerosol," July 30th, 2012

Invited Talk: Symposium, Kinetics and Mechanism in the Atmosphere, 244th ACS National Meeting, "Statistical distributions and the chemical evolution of organic aerosol," Philadelphia, PA, Aug. 23rd, 2012

Invited Talk: Workshop on This Physical Chemistry of Aerosols, "Statistical representations of organic aerosol oxidation," University of British Columbia, Vancouver, Aug. 27th, 2012

Invited Seminar: Chemical Sciences and Engineering (CSE) Division Colloquium, Argonne National Laboratory, "Statistical Distribution and the Multi-generational Oxidation of Organic Aerosols." Chemical Sciences and Engineering (CSE) Division Colloquium, Argonne National Laboratory, Jan. 8th, 2013

Invited Talk: International Workshop on Photon Tools for Combustion and Energy Conversion, Argonne National Laboratory, "New Approaches for Studying the Chemical Transformations of Organic Particles," March 3rd, 2013

Invited Seminar: Department of Chemistry, University of California, Berkeley, "Heterogeneous Oxidation Trajectories: Developing Reduced Variable Representations of Complex Organic Aerosol Chemistry," April 16th, 2013

Invited Departmental Seminar: University of the Pacific, "Reaction Trajectories: Developing Reduced Variable Representations of Complex Organic Aerosol Chemistry," Feb. 2014

Invited Talk: 2014 Telluride Research Conference on Organic Particles in the Atmosphere: Formation, Properties, Processing, and Impact, "Experiments and Simulations of Multiphase Reactive Uptake and the Role of Water and Phase in Controlling Organic Aerosol Transformations," Telluride, Colorado, July 28th - August 1st, 2014

Invited Talk: "Aerosol Chemistry", Lorentz Center Workshop, "Gas/Plasma Liquid Interface: Transport, Chemistry and Fundamental Data", Leiden, Netherlands, Aug. 4-8th, 2014

Invited Talk: 248th National Meeting of the American Chemical Society, Symposium on Fundamental Processes of Atmospheric Chemistry, "Multiphase Chemistry of Organic Aerosols," San Francisco, CA., Aug. 10th -14th, 2014

Invited Talk: Towards a molecular-level understanding of atmospheric aerosols Conference, “Reactive uptake of hydroxyl radicals and the role of water and phase in controlling organic aerosol transformations”, Centro Stefano Franscini (CSF), Monte Verità, Ascona, Switzerland, Aug. 31st – Sept. 5th, 2014

Invited Talk: Photon Tools for Physical Chemistry 2014, “Probing Molecular Weight Growth and Decomposition of Organic Particles in Planetary Atmospheres Using Vacuum Ultraviolet Photoionization Mass Spectrometry”, Beatenberg, Switzerland, Sept. 28th - Oct. 2nd, 2014

Keynote Speaker: 25th Australian and New Zealand Society for Mass Spectrometry (ANZSMS), "Aerosol Mass Spectrometry and Heterogeneous Chemistry," Brisbane, Australia, July 18th – July 24th, 2015

Invited Talk: 33rd International Symposium on Free Radicals, "Heterogeneous Reaction of Hydroxyl Radicals at Organic Aerosol Surfaces", Squaw Valley, CA, August 2nd - 6th, 2015

Invited Talk: 250th ACS National Meeting, Symposium on Chemical Processes of Atmospherically Relevant Trace Gases, Aerosols and Clouds, "Role of water, viscosity, and molecular structure on the chemistry and cloud condensation (CCN) properties of organic aerosols", Boston, MA, August 16th - 20th, 2015

Invited Talk: Pacifichem 2015, Symposium on Reactive Intermediates in Combustion and Atmospheric Chemistry, “Free radical multiphase chemistry of organic aerosols”, Honolulu, HI, December 15th – 20th, 2015

Invited Seminar: Department of Biochemistry and Chemistry, University of Colorado, Boulder, CO, “The Interfacial Chemistry of Organic Aerosols”, February 6th, 2016