Kelley C. Barsanti
Assistant Professor, Chemical & Environmental Engineering, UC Riverside

A. Education

Ph.D., Environmental Science & Engineering, Oregon Health & Science University, 2006
M.S., Environmental Science & Engineering, Oregon Health & Science University, 2001
B.A., Environmental Biology and Environmental Studies, CU Boulder, 1996

B. Academic Experience

2017-present	Assistant Professor IV, Chem. & Env. Engineering, UCR
2015-2017	Assistant Professor III, Chem. & Env. Engineering, UCR
2011-2015	Research Assistant Professor, Civil & Env. Engineering, Portland State University
2010-2011	Senior Research Associate, Civil & Env. Engineering, Portland State University
2008-2009	Research Assistant, Mechanical Engineering, UC Boulder
2008-2009	Visiting Scientist, National Center for Atmospheric Research
2006-2008	ASP Postdoctoral Fellow, National Center for Atmospheric Research

C. Service Activities

Department: Chair Air Faculty Search Committee (2017-2018), Member Water Faculty Search Committee (2017-2018), ABET and Undergraduate Curriculum Committee (2015-2017), Instructor Search Committee (2017); College: CE-CERT Representative IT Committee (2015-2017); Campus: Environmental Toxicology Search Committee (2017-2018), Undergraduate Research Proposal Review Committee (2016-), Fulbright Interview Committee (2016-); Community: American Association for Aerosol Research-Education Committee (2015-2018), Elected Board Member (2013-2015), Tutorial Program Co-Chair (2015), Young Investigators Committee (2011-2013), and Atmospheric Chemistry Working Group Chair (2008-2009);

Mentor for: BS/MS Program (1 student, 2017-208), Graduate Preparation Program (1 student, 2016-2017), Undergraduate Research Mentorship Program (2 students, 2014-2015), Honors Undergraduate Thesis Research (2 students, 2014-2015), NSF Research Experiences for Undergraduates (1 student, summer 2014), and Significant Opportunities in Atmospheric Research and Science (SOARS) at NCAR (summers 2007-2009);

PI on funded EPA People, Prosperity, and the Planet (P3) Phase I (2016) and Phase II (2018) Undergraduate Student Design Proposals;

Proposal reviewer for: European Science Foundation, DOE (2016 EMSL panel), EPA (2014, 2015, 2017 panels), NASA (2017 panel), NSF (2014 and 2015 panel), and NOAA.

E. Current Memberships in Professional Organizations

American Association for Aerosol Research (AAAR)
American Chemical Society (ACS)

F. Selected Professional Development Activities

Promoting Faculty Diversity, 2018
Junior Faculty Workshop, 2017
Teaching Excellence Seminar, 2015

G. Research Funding

Federally Funded Projects Since UCR Appointment (as PI or co-PI):

CAREER: Mechanistic Studies of Secondary Organic Aerosol Production from Biomass Burning Derived Precursors (**PI**). NSF Atmospheric Chemistry. Total Award: $572,581. Award Period March 1, 2018-February 28, 2023.

Collaborative Research: Applicability Limits of Aqueous pKa Values for Bulk and Surface Nanoparticle Processes (**PI**). NSF Environmental Chemical Sciences. Award to UCR: $310,847. Award Period July 1, 2017-June 30, 2020.

Building and Testing the Framework to Integrate Detailed Chemical Measurements and Predictive Biomass Burning Models (**co-PI**). NOAA Climate Program Office AC4. Award to UCR: $169,479. Award Period July 1, 2017-June 30, 2020.

Three-Phase Scrubbing System for Ammonia Reduction (**PI**). Phase II EPA People, Planet, Prosperity Student Design Project. Total Award: $40,240. Award Period February 1, 2017-October 31, 2019.

Investigating the Nighttime Chemistry of Biomass Burning Emissions (**PI**). NOAA Climate Program Office AC4. Total Award: $786,332. Award Period July 1, 2016-June 30, 2020.

Three-Phase Ammonia Air Scrubber Recycles Water (**PI**). Phase I EPA People, Planet, Prosperity Student Design Project. Total Award: $15,000. Award Period November 1, 2016-October 31, 2017.

Federally Funded Projects Prior UCR Appointment (as PI or co-PI):

Toxicant Production and Mitigation in the Electronic-Cigarette Reaction Vessel (**co-PI**). National Institutes of Health. Total Award: $3,600,000. Award period April 1, 2015- March 31, 2020.

Improving Predictions of Secondary Organic Aerosols from Wildfires. (**PI**) Joint Fire Science Program. Total Award: $418,147. Award Period October 1, 2014-September 30, 2017.

H. Publications (Google h-index 18, i10-index 26)

Publications Since UCR Appointment (underline indicates primary advisee)

Rao, U., Posmanik, R., Hatch, L. E., Tester, J. W., Walker, S. L., **Barsanti, K. C.**, Jassby, D. Coupling Hydrothermal Liquefaction and Membrane Distillation to treat Anaerobic Digestate from Food and Dairy Farm Waste. *Bioresource Technology*, 2018.

Chen, H., Chee, S., Lawler, M. J., **Barsanti, K. C.**, Wong, B. M., Smith, J. N. Size Resolved Chemical Composition of Nanoparticles from Reactions of Sulfuric Acid with Ammonia and Dimethylamine. *Aerosol Science & Technology*, 2018.

Jiang, Y., Yang, J., Gagne, S., Chan, T. W., Thomson, K., Fofie, E., Cary, R. A., Rutherford, D., Comer, B., … Johnson, K. C. Sources of Variance in BC Mass Measurement from a Small Marine Engine: Influence of the Instruments, Fuels and Loads. *Atmospheric Environment*, 2018.

Jen, C. N., Liang, L., Hatch, L., Kreisberg, N. M., Stamatis, C., Kristensen, K., Battles, J. J., Stephens, S., York, R. A., **Barsanti, K. C.**, Goldstein, A. H. High Hydroquinone Emission from Burning Manzanita. *Environmental Science & Technology*, 2018.

Korzun, T.,Lazurko, M., Munhenzva, I., **Barsanti, K. C**., Huang, Y., Jensen, R. P., Escobedo, J. O., Luo, W., Peyton, D. H., Strongin, R. M. E-Cigarette Airflow Rate Modulates Toxicant Profiles and Can Lead to Concerning Levels of Solvent Consumption, *ACS Omega*, 2018.

Maclean, A. M., Butenhoff, C. L., Grayson, J. W., **Barsanti, K.**, Jimenez, J. L, Bertram, A. K. Mixing Times of Organic Molecules within Secondary Organic Aerosol Particles: A Global Planetary Boundary Layer Perspective. *Atmospheric Chemistry & Physics*, 2017.

Bian, Q., Shantanu, J. H., Kodros, J. K., **Barsanti, K. C.,** Hatch, L. E., May, A. A., Kreidenweis, S. M., Pierce, J. R. Secondary Organic Aerosol Formation in Biomass-Burning Plumes: Theoretical Analysis of Lab Studies and Ambient Plumes. *Atmospheric Chemistry & Physics*, 2017.

Barsanti, K. C., J. H. Kroll, J. A. Thornton. Formation of Low-Volatility Organic Compounds in the Atmosphere: Recent Advancements and Insights. *Journal of Physical Chemistry Letters*, 2017. (invited Perspective)

Hatch L. E., Yokelson R. J., Stockwell C. E., Veres, P. R., Simpson, I. J., Blake, D. R., Orlando, J. J., **Barsanti K. C**. Multi-Instrument Comparison and Compilation of Non-Methane Gas Emissions from Biomass Burning and Implications for Smoke-Derived Secondary Organic Aerosol Precursors. *Atmospheric Chemistry & Physics*, 2017.

Jathar, S. H., Mahmud, A., **Barsanti, K. C**., Asher, W. E., Panow, J. F., Kleeman, M. J. Water Uptake by Organic Aerosol and Its Influence on Gas/Particle Partitioning of Secondary Organic Aerosol in the United States. *Atmospheric Environment*, 2016.

Hodshire, A. L., Lawler, M. J., Zhao, J. Ortega, J., Jen, C., Yli-Juuti, T., Brewer, J. F., Kodros, J. K., **Barsanti, K. C.**, Hanson, D. R., McMurry, P. H., Smith, J. N., Pierce, J. R., Multiple New-Particle Growth Pathways Observed at the US DOE Southern Great Plains Field Site. *Atmospheric Chemistry & Physics*, 2016.

Pankow, J. F., Marks, M. C., Barsanti, K. C., Mahmud, M., Asher, W. E., Li, J. Y., Ying, Q., Jathar, S. H., Kleeman, M. J. Molecular View Modeling of Atmospheric Organic Particulate Matter: Incorporating Molecular Structure and co-Condensation of Water. *Atmospheric Environment*, 2015.

Bilde, M., **Barsanti, K.,** Booth, M., Cappa, C., Donahue, N., Emmanuelsson, E., Mc. Figgans, G., Krieger, U., Marcolli, C., …, Riipinen, I. Saturation Vapor Pressures and Enthalpies of Low-Volatility of Organic Molecules of Atmospheric Relevance: From Dicarboxylic Acids to Complex Mixtures. *Chemical Reviews*, 2015.

Porter, W. C., Rosenstiel, T. N., Guenther, A., Lamarque, J. F., **Barsanti, K. C.** Reducing the Negative Human-Health Impacts of Bioenergy Crop Emissions through Region-Specific Crop Selection. *Environmental Research Letters*, 2015.

Li, J. Y., Cleveland, M., Ziemba, L. D., Griffin, R. J., **Barsanti, K. C.**, Pankow, J. F., Ying, Q. Modeling Regional Secondary Organic Aerosol Using the Master Chemical Mechanism. *Atmospheric Environment*, 2015.

Hatch L. E., Luo W., Pankow J. F., Yokelson R. J., Stockwell C. E., **Barsanti K. C**. Identification and Quantification of Gaseous organic compounds emitted from biomass burning using two-dimensional gas chromatography/time-of-flight mass spectrometry. *Atmospheric Chemistry & Physics*, 2015.

Book Chapter

Carlton, A., **Barsanti, K**., Wiedinmyer, C., Afreh, I. Detailed Characterization of Organic Carbon from Fire: Capitalizing on Analytical Advances to Improve Atmospheric Models. In: Multiphase Environmental Chemistry in the Atmosphere, A. Laskin ed., ACS Books, in press.

Publications Prior to UCR Appointment

Li, J., Cleveland, M., Ziemba, L. D., Griffin, R. J., **Barsanti, K. C.**, Pankow, J. F., Ying, Q. Modeling Regional Secondary Organic Aerosol using the Master Chemical Mechanism, *Atmospheric Environment,* 2015

Fry, J. L., Draper, D. C., **Barsanti, K. C.**, Ortega, J., Brown, S. S., Edwards, P., Cohen, R. C., Winker, P., Smith, J. N. Secondary Organic Aerosol Formation and Organic Nitrate Yield from NO_3 Oxidation of Biogenic Hydrocarbons, *Environmental Science & Technology*, 2014, 48:11944-11953.

Xie, M., Hannigan, M., **Barsanti, K.** Gas/Particle Partitioning of n-alkanes, PAHs and oxygenated PAHs in urban Denver, *Atmospheric Environment*, 95: 355-362.

Xie, M., Hannigan, M., **Barsanti, K.** Impact of Gas/Particle Partitioning of Semi-Volatile Organic Compounds on Source Apportionment with Positive Matrix Factorization, *Environmental Science & Technology*, 2014, 48: 9053-9060.

Xie, M., Hannigan, M., **Barsanti, K.** Gas/Particle Partitioning of 2-Methyltetrols and Levoglucosan at an Urban Site in Denver, *Environmental Science & Technology*, 2014, 48: 2835-2842.

Yli-Juuti, T., **Barsanti, K.**, Ruiz, L., Kulmala, M., Riipinen, I. Model for Acid-Base Chemistry in Nanoparticle Growth. *Atmospheric Chemistry and Physics*, 2013, 13: 12507-12524.

Barsanti, K. C., Carlton, A. G., Chung, S. H. Analyzing Experimental Data and Model Parameters: Implications for Predictions of SOA in Chemical Transport Models. *Atmospheric Chemistry and Physics*, 2013, 13: 12073-12088.

Xie, M., **Barsanti, K. C.**, Hannigan, M. P. , Dutton, S. J., Vedal, S. Positive Matrix Factorization of $PM_{2.5}$-Eliminating the Effects of Gas/Particle Partitioning of Semivolatile Organic Compounds. *Atmospheric Chemistry and Physics*, 2013, 13: 7381-7393.

Mahmud, A., **Barsanti, K. C.**, Improving the Representation of Secondary Organic Aerosol in the MOZART-4 Global Chemical Transport Model. *Geophysical Model Development*, 2013, 6: 961-980.

Winkler, P. M., Ortega, J., Karl, T., Cappelin, L., Friedli, H. R., **Barsanti, K. C.**, McMurry, P. H., Smith, J. N. Identification of the Biogenic Compounds Responsible for Size-Dependent Nanoparticle Growth. *Geophysical Research Letters*, 2012, DOI: 10.1029/2012GL053253.

Porter ,W. C., **Barsanti K. C.**, Baughman E. C., Rosenstiel T.N. Considering the Air Quality Impacts of Bioenergy Crop Production: A Case Study Involving *Arundo donax*. *Environmental Science & Technology*, 2012, 46: 9777-9784.

Pankow, J. F., Luo, W., Melnychenko, A. N., **Barsanti, K. C.**, Isabelle, L. M., Chen, C., Guenther, A. B, Rosenstiel, T. N. Volatilizable Biogenic Organic Compounds (VBOCs) with Two Dimensional Gas Chromatography-Time of Flight Mass Spectrometry (GC×GC-TOFMS): Sampling Methods, VBOC Complexity, and Chromatographic Retention Data. *Atmospheric Measurement Technology*, 2012, 5: 345-361.

Barsanti, K. C., Smith, J. N., Pankow, J. F. Application of the *n*p + *m*P Modeling Approach for Simulating Secondary Organic Particulate Matter Formation from α-Pinene Oxidation. *Atmospheric Environment*, 2011, 40: 6676-6686.

Smith, J. N., **Barsanti, K. C.**, Friedli, H. R., Ehn, M., Kulmala, M., Collins, D. R., Scheckman, J. H., Williams, B. J., McMurry, P. H. Observations of Aminium Salts in Atmospheric Nanoparticles and Possible Climatic Implications. *Proceedings of the National Academy of Sciences*, 2010, DOI: 10.1073/pnas.0912127107.

Pankow, J. F., **Barsanti, K.** Framework for Managing the Complexity of Compounds Involved in Organic Particulate Matter Formation in the Atmosphere: The Carbon Number-Polarity Grid. *Atmospheric Environment*, 2009, 43: 2829-2835.

Barsanti, K., McMurry, P., Smith, J. The Potential Contribution of Organic Salts to New Particle Formation. *Atmospheric Chemistry and Physics*, 2009, 8: 2949-2957.

Boy M., Karl T., Turnipseed A., Mauldin L., Kosciuch E., Greenberg J., Rathbone J., Smith J., Held A., **Barsanti K**., Wehner B., Bauer S., Widensohler A., Bonn B., Kulmala M., Guenther A. New Particle Formation at the Front Range of the Colorado Rocky Mountains. *Atmospheric Chemistry and Physics*, 2008, 8:1577-1590.

Barsanti, K. C., Luo, W., Isabelle, L. M., Pankow, J. F., Peyton, D. H. Tobacco smoke particulate matter chemistry by NMR. *Magnetic Resonance in Chemistry*, 2007, 45: 167-170.

Barsanti, K. C., Pankow, J. F. Thermodynamics of the Formation of Atmospheric Organic Particulate Matter by Accretion Reactions. 3. Carboxylic and Dicarboxylic Acids. *Atmospheric Environment*, 2006, 40: 6676-6686.

Barsanti, K. C., Pankow, J. F. Thermodynamics of the Formation of Atmospheric Organic Particulate Matter by Accretion Reactions. 2. Dialdehydes, Methylglyoxal, and Diketones. *Atmospheric Environment*, 2005, 39: 6597-6607.

Barsanti, K. C., Pankow, J. F. Thermodynamics of the Formation of Atmospheric Organic Particulate Matter by Accretion Reactions. 1. Aldehydes and Ketones. *Atmospheric Environment*, 2004, 38: 4371-4382.

Pankow, J. F., **Barsanti, K. C.**, Peyton, D. H. Fraction of Free-Base Nicotine in Fresh Smoke Particulate Matter from the Eclipse "Cigarette" by H-1 NMR Spectroscopy. *Chemical Research in Toxicology*, 2003, 16: 23-27.

Other Publications

Heald, C. et al. Biogenic Secondary Organic Aerosols: From Observations to Global Modeling. Workshop Summary, US/Nordic Workshop Series, *EOS* 89, 2008.

Fry, J. et al. Global Environmental Solutions Require Global Funding. An open letter from the next generation of atmospheric scientists to worldwide science funding agencies and the public, *EOS* 89, 2008.

Barsanti, K. et al. Feasibility of Using Quantitative Structure Activity Relationships (QSARS) for Predicting Persistence and Toxicity Data. *USGS Progress Report*, 2006.

H. Invited Talks

Invited Talks Since UCR Appointment

Atmospheric Chemical Mechanisms Conference. Title: *TBD*, Davis, CA, December 2018

Society of Environmental Toxicology and Chemistry (SETAC) Annual Speaker, Baylor University Student Chapter. Title: *Embracing Chemical Complexity in Predictive Models of Secondary Organic Particulate Matter from Biomass Burning*. Baylor, TX, April 2018

Informal Symposium on Kinetics and Photochemical Processes in the Atmosphere. Title: *Managing Chemical Complexity in Predictive Models of Secondary Organic Aerosol*. Pasadena, CA, March 2018

Living the Promise UCR Development Campaign Chancellor's Alumni Event. Title: *Transformational Changes in Air Quality Science and Engineering Research*, San Francisco, CA, March 2018

Mountain Studies Institute. Title: *Smoky Air: Should We Care?* Pagosa Springs, CO, March 2018 (presentation and panel discussion); Durango, CO, March 2018 (presentation)

UCR Board of Trustees. Title: *Understanding Impacts of Wildfires and Vehicles to our Environment and Health*, Riverside, CA, February 2018

Horiba CONCEPT Meeting. Title: *Developing New Resources to Meet Future Air Quality Management Challenges and Requirements*. Riverside, CA, February 2018

International Aerosol Modeling Algorithms Conference. Title: *Integrating Biomass Burning Emissions Measurements and Predictive Models of Secondary Organic Aerosol Formation*, Davis, CA, December 2017

Berkeley Atmospheric Science Center Seminar. Title: Embracing Chemical Complexity in Biomass Burning Emissions and Mechanistic Models. Berkeley, CA, February 2017

Living the Promise UCR Development Campaign Emerging Technologies Event. Title: *Emerging Technologies in Environmental Engineering*. Riverside, CA, February 2017

Gordon Research Conference-Biogenic Hydrocarbons and the Atmosphere. Title: *Partitioning of Speciated Organics from Breathing to Burning*. Girona, Spain, July 2016

Department of Atmospheric Sciences Seminar, Colorado State University. Title: *Exploring Chemical Complexity in Biomass Burning Emissions and Air Quality Models*. Fort Collins, CO, March 2016

American Geophysical Union Annual Conference. Title: *Incorporating Detailed Chemical Characterization of Biomass Burning into Air Quality Models*. San Francisco, CA, December 2016

Invited Talks Prior UCR Appointment

American Chemical Society, Title: *The Effects of Water on Secondary Organic Aerosol*, San Francisco CA, August 2014

Telluride Science Meeting on Organic Particles in the Atmosphere. Title: *Secondary Organic Aerosols and the Elements: Fire and Water*. Telluride, CO, July 2014

Department of Energy, Environmental and Chemical Engineering, Washington University St. Louis. Title: *Strategically Moving Beyond Overly Simplistic Organic Aerosol Models to Improve Air Quality and Climate Projections.* St. Louis, MO, January 2014

International Aerosol Modeling Algorithms. Title: *Simple Modification of Equilibrium Models to Allow Consideration of MW Effects on OPM Formation*, Davis, CA, December 2013

Department of Civil & Environmental Engineering, Portland State University. Title: *Suspensions in the Sky: Aerosol-Cloud-Climate Interactions*. Portland, OR, October 2013

Workshop on Atmospheric Aerosol Formation and Early Growth. Title: *Organonitrates and Growth Rates in Biogenic Hydrocarbon+NO_3 Chamber Studies*. Hyytiälä, Finland, August 2012

Telluride Science Meeting on Organic Particles in the Atmosphere. Title: *Mechanistic Models, GC×GC Data, and the Carbon Number Polarity Grid.* Telluride, CO, July/August 2012

Northwest Association of Environmental Professionals, Seminar Series. Title: *Air Quality Compliance*. Presented in collaboration with Oregon Department of Environmental Quality. Portland, OR, June 2012

Department of Physics, Portland State University. Title: *Air Quality-Climate Interactions: The Aerosol Link*. Portland, OR, May 2011

Workshop on Vapor Pressures of Atmospherically Relevant Compounds. Title: *Partitioning Theory: Looking Backward and Looking Forward*. Copenhagen, Denmark, September 2010

Electric Power Research Institute. Title: *Air Quality Implications for Nanoparticle Growth by Amines*. Palo Alto, CA, May 2010

Pacific Northwest National Laboratory. Title: *Representing Organic Aerosols for Predictions of Air Quality-Climate Interactions*. Richland, WA, April 2010

Boulder County Air Quality and Business Sustainability Retreat. Title: *Air Quality Overview*. Boulder, CO, November 2009

Department of Atmospheric Sciences, Colorado State University. Title: *Representing Organic Aerosols: From New Particle Formation to Absorptive Partitioning*. Fort Collins, CO, April 2008

Amazonian Aerosols Workshop. Title: *What Do We Know About the Compounds that Contribute to New Particle Formation?* Manaus, Brazil, February 2008

Department of Civil & Environmental Engineering, Washington State University. Title: *The Formation of High-Molecular Weight/Low-Volatility Compounds "Oligomers" and Their Contribution to Atmospheric Organic Particulate Matter*. Pullman, WA, January 2006

National Center for Atmospheric Research. Title: *Oligomerization and the Formation of Highly Condensable Compounds: A Route to Persistent Compounds in the Atmosphere?* Boulder, CO, March 2005

Department of Chemistry and Biochemistry, University of Colorado. Title: *Thermodynamic Considerations of Oligomerization and the Formation of Highly Condensable Compounds.* Boulder, CO, March 2005

I. Selected Conference Presentations (T = talk, P = poster)
Since UCR Appointment (underline indicates primary advisee)

Afreh, I., Aumont, B., Camredon, M., Valorso, R., Barsanti, K. *Developing Model Surrogates for Monoterpenes to Improve Predictions of Secondary Organic Aerosol*. 10th International Aerosol Conference, St. Louis, MO, September, 2018 (T)

Jiang, J., Carter, W.P., Cocker III, D.R., Hatch, L., Barsanti, K. *Developing the SAPRC Gas-Phase Chemical Mechanism and Chamber-Based SOA Parameterizations for Evaluating Biomass-Burning Derived SOA from Furan and Furan Derivatives*. 10th International Aerosol Conference, St. Louis, MO, September, 2018 (P)

Stamatis, C., Hatch, L., Lichtenberg, W., Karavalakis, G., Roth, P., Yang, J, Barsanti, K. *Application of Fisher Ratio and Principal Component Analysis for Identification of Unique Features in Complex Combustion-Emission Samples.* 10th International Aerosol Conference, Saint Louis, MO, September, 2018 (P)

Afreh, I., Aumont, B., Camredon, M., Valorso, R., Barsanti, K. *Development of Model Surrogates for Monoterpenes to Improve Predictions of Secondary Organic Aerosol.* Gordon Research Conference (GRC), Les Diablerets, Switzerland, June 2018 (P)

Afreh, I., Aumont, B., Camredon, M., Valorso, R., Barsanti, K. *Development of Model Surrogates for Monoterpenes to Improve Predictions of Secondary Organic Aerosol.* Gordon Research Seminar (GRS), Les Diablerets, Switzerland, June 2018 (T)

Hatch, L., Liu, Y., Rivas Ubach, A., Shaw, J., Lipton, M., Barsanti, K. *Advanced Characterization of Semi-Volatile Compounds Emitted from Biomass Burning.* American Geophysical Union Fall Meeting, New Orleans, LA, December, 2017 (T)

Barsanti, K., Hatch, L., Lee, Y., Chung, S., Lamb, B. K., Wiedinmyer, C., Yokelson, R. *How Does Chemical Complexity in Biomass Burning Emissions Influence Air Quality*? International Smoke Symposium, Long Beach, CA, November, 2016 (T)

Barsanti, K., Hatch, L., Lamb, B. K., Wiedinmyer, C., Yokelson, R., Chung, S. H. *How the Characterization and Model Representation of Biomass Burning Emissions Affect SOA Predictions*. Association for Aerosol Research (AAAR), Portland, OR, October, 2016 (T)

Prior to UCR Appointment

Barsanti, K., Orlando, J., Hatch, L., Stockwell, C., Veres, P., Yokelson, R., Emmons, L., Wiedinmyer, C. *Evaluating Complexity in Fire Emissions Modeling-Is More Better?.* EPA Emissions Inventory Conference, San Diego, CA, March 2015 (T)

Roskamp, M., Brown, J., Hatch, L., Luo, W., Pankow, J., Barsanti, K. *Investigating Chemical Reaction Pathways Using Comprehensive Gas Chromatography with Mass Spectrometry.* Association for Aerosol Research (AAAR), Orlando, FL, October, 2014 (P)

Hatch, L. E., Luo, W., Pankow, J. F., Barsanti, K. C. *Secondary Organic Aerosol Precursors in Biomass Burning Smoke.* Association for Aerosol Research (AAAR), Portland, OR, October, 2013 (T)

Chung, S., Lee-Taylor, J., Asher, W., Hodzic, A., Madronich, S., Aumont, B., Pankow, J., Barsanti, K. *Development of a Carbon Number Polarity Grid SOA Model with the use of the Generator of Explicit Chemistry and Kinetics of Organics in the Atmosphere.* American Geophysical Union, San Francisco, CA, December 2012 (P)

Porter, W., Rosenstiel, T., Guenther, A., Lamarque, J.-F., Barsanti, K. *Potential Air Quality Impacts of Global Bioenergy Crop Cultivation.* American Geophysical Union, San Francisco, CA, December 2012 (P)

Roskamp, M., Isabelle, L., Luo, W., Pankow, J., Barsanti, K. *Characterization of Secondary Organic Aerosol Precursors Using Two-Dimensional Gas Chromatography.* American Geophysical Union, San Francisco, CA, December 2012 (P)

Barsanti, K. *Secondary Organic Aerosol Modeling. A Case Study: Contribution to Klamath Falls $PM_{2.5}$ State Implementation Plan.* Pacific Northwest Section of the Air & Waste Management Association, Portland, OR, November 2012 (T)

Barsanti, K., Fry, J., Draper, D., Ortega, J., Brown, S., Edwards, P., Lawler, M., Winkler, P., McMurry, P., Smith, J. *Modeling Nanoparticle Growth in Biogenic VOC+Nitrate Radical Chamber Studies.* AAAR, Minneapolis, MN, October 2012 (T)

Porter, W., Barsanti, K., Baughman, E., Rosenstiel, T. *SOA Impacts of Isoprene Emitting*

Bioenergy Crops. Telluride Science Meeting: Organic Particles in the Atmosphere, Telluride, CO, July 2012 (T)

Porter, W., Barsanti, K., Baughman, E., Rosenstiel, T. *Regional Impacts of Increased Bioenergy Crop Cultivation.* Gordon Research Conference: Biogenic Hydrocarbons & the Atmosphere, Lewiston, ME, June 2012 (T)

Porter, W., Barsanti, K., Baughman, E., Rosenstiel, T. *Land-use and Climate Driven Changes in BVOC Emissions and Their Impacts on Atmospheric Chemistry*. AGU, San Francisco, CA, December 2011 (T)

Barsanti, K., Carlton, A., Chung, S. *Development and Application of Two-Product Secondary Organic Aerosol Model Parameters Based on Volatility Basis Set Fits.* European Aerosol Conference, Manchester, England, September 2011 (T)

Porter, W., Barsanti, K., Baughman, E., Rosenstiel, T. *It's Not Easy Being Green: Exploring the Linkages Between Biomass Crops, Biogenic Emissions, and Regional Air Quality in the Pacific Northwest.* American Chemical Society, Denver, CO, August 2011 (P)

Barsanti, K., Asher, W., Pankow, J. *Using the Carbon Number-Polarity Grid Framework for Modeling Organic Particulate Matter as a Lumping and Mapping Tool*. AAAR, Portland, OR, October 2010 (T)

Barsanti, K., Carlton, A., Chung, S. *Connecting Experimental Data and Model Parameters through Partitioning Theory (poster)*. AAAR, Portland, OR, October 2010 (P)

Barsanti, K., Smith, J., Sheckman, J., Williams, B., McMurry, P. *The Potential Role for Organic Salt Formation in the Growth of Newly Formed Particles*. AAAR, Minneapolis, MN, October 2009 (T)

Barsanti, K., Pankow, J. *Simulations of Organic Particulate Matter by Alpha-Pinene Ozonolysis Using the np+mP Model Approach*. AAAR, Orlando, FL, October 2008 (T)

Barsanti, K. *Do Current SOA Models Include the Right Precursors?* Amazonian Aerosols Workshop, Manaus, Brazil, February 2008 (T)

Barsanti, K., Guenther, A., Smith, J., Pankow, J. *A New Framework for Modeling Secondary Organic Aerosol Formation and Aging.* Amazonian Aerosols Workshop, Manaus, Brazil, February 2008 (P)

Barsanti, K., Pankow, J., Smith, J. *Incorporating Information on Compositional Complexity and Aging in Models of Secondary Organic Aerosols Formation*. AAAR, Reno, NV, October 2007 (T)

Barsanti, K., Pankow, J., Smith, J. *Considering Compositional Complexity and Atmospheric Processing in Secondary Organic Aerosol Models.* Atmospheric Chemistry Gordon Conference, Big Sky, MT, August 2007 (P)

Barsanti, K., Guenther, A., Matsunaga, S., Smith, J. *Secondary Organic Aerosol Formation by Molecular-Weight Building Reactions of Biogenic Oxidation Products.* AGU, San Francisco, CA, December 2006 (T)

Barsanti, K., Pankow, J. *Contribution of Carboxylic Acids to Atmospheric Organic Particulate Matter via Ester and Amide Formation*. AAAR, St. Paul, MN, October 2006 (P)

Barsanti, K., Pankow, J. *Using Fundamental Thermodynamics to Evaluate the Formation of Particulate Matter by Accretion Reaction*s. AAAR, Austin, TX, October 2005 (T)

Barsanti, K., Pankow, J. *The Role of Accretion Reactions in the Formation of*

Oligomeric/Polymeric Particulate Matter. AAAR, Atlanta, GA, October 2004 (T)

Barsanti, K., Pankow, J. *A Thermodynamic Approach to Identifying Accretion Reactions Relevant to the Formation of Oligomeric/Polymeric Particulate Matter*. International Conference on Carbonaceous Particles in the Atmosphere, Vienna, AU, August 2004 (T)

Barsanti, K., Pankow, J. *Thermodynamics of the Formation of Organic Particulate Matter by Addition Reactions*. AAAR, Anaheim, CA, October 2003 (T)

Barsanti, K., Pankow, J. *Consideration of the Apparent Contribution of Relatively Volatile Compounds to Secondary Organic Aerosol*. AAAR, Charlotte, NC, October 2001 (T)

J. Honors and Awards

NSF CAREER Award, 2018
Invited Presenter, Biomass Burning Workshop, Boulder, CO 2017
Invited Paper, *Journal of Physical Chemistry Letters* Perspective, 2015
Invited Participant/Section Leader, Workshop on Vapor Pressures of Atmospherically Relevant Compounds, Copenhagen, Denmark, 2011
Invited Participant/Presenter, Atmospheric Science Collaboration and Enriching NeTworks, Steamboat Springs, CO, 2010
Funded Participant, Amazonian Aerosols Workshop, Manaus, Brazil, 2008
Funded Participant, Biogenic Secondary Organic Aerosols Workshop for US and Nordic Early Career Scientists, Tovetorp, Sweden, 2008
Funded Participant, Biogenic Secondary Organic Aerosols Workshop for US and Nordic Early Career Scientists, Hyytiälä, Finland, 2007
Invited Participant, Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS), Big Sky, MT, 2007
Advanced Study Program Postdoctoral Fellow, National Center for Atmospheric Research, Boulder, CO, 2006

K. Current and Former Advisees (Primary Advisees Only)

Current

Lindsay Hatch (project scientist)
Avi Lavi (postdoc)
Isaac Afreh, Christos Stamatis, Jia Jiang (PhD Students)

Former-UCR (degree, year, current position)

Bill Lichtenberg (MS, 2018, Tetra Tech Environmental Consulting)

Former-PSU (degree, current position)

Brooke Harmon, PE (MS, Maul Foster Environmental Consulting)
Melissa Johns (MS, AMEC Environmental Consulting)
Will Porter (PhD co-advisor, Assistant Professor Environmental Sciences UCR)
Abdullah Mahmud (postdoc, California Air Resources Board)

L. Undergraduate Courses

UC Riverside

2017/2018	Technology of Air Pollution Control (ENVE 135)
2017/2018	Fate and Transport of Environmental Contaminants (ENVE 134)
2015/2016/2017	Engineering Modeling and Analysis (ENGR 118)
2016/2017	Analytical Chemistry for Engineers (CEE 125)

Portland State University

2014	Introduction to Environmental Engineering (CE 371)
2014	Undergraduate Research: Ambient Organics (CE 405)
2013	Air Quality (CE 460/560)
2010	Urban Air Pollution (SCI 331U)