

Kathleen L. Purvis-Roberts, Ph.D.

Claremont McKenna, Pitzer,
& Scripps Colleges
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Education

Postdoctoral Fellow (July 2000-June 2001)
Advanced Study Program
National Center for Atmospheric Research
Boulder, CO

Ph.D. in Physical Chemistry (February 2000)
Princeton University, Princeton, NJ
Advisor: Professor Steven L. Bernasek

M.A. in Chemistry (January 1997)
Princeton University, Princeton, NJ

B.S. Chemistry, Cum Laude (May 1995)
Westmont College, Santa Barbara, CA
Advisor: Professor Allen Nishimura

Certificate in Science, Technology,
& Environmental Public Policy
Woodrow Wilson School of Public
& International Affairs
Princeton University, Princeton, NJ
Advisor: Professor Daniel Kammen
(January 1997- May 1999)

Work Experience

- August 2017- August 2019** Jefferson Science Fellow- off-site in Claremont, CA
August 2016- August 2017 Jefferson Science Fellow, United States Department of State,
Bureau of East Asian & Pacific Affairs, Office of Economic Policy, Washington,
D.C.
August 2015- June 2016 Assistant Vice President for Student Development, Pitzer
College
2014 - present Professor of Chemistry & Environmental Science, W.M. Keck
Science Department of Claremont McKenna, Pitzer, and Scripps Colleges,
Claremont, CA
June - August 2015 Interim Vice President for Academic Affairs & Dean of the
Faculty, Pitzer College
July 2013 - June 2015 Associate Dean of Faculty, Pitzer College
2007- 2014 Associate Professor of Chemistry & Environmental Science, W.M. Keck
Science Department of Claremont McKenna, Pitzer, and Scripps Colleges,
Claremont, CA
2001-2007 Assistant Professor of Chemistry, Joint Science Department of Claremont

Kathleen L. Purvis-Roberts

McKenna, Pitzer, and Scripps Colleges, Claremont, CA
1995- 2000 Graduate Research Assistant, Princeton University, Princeton, NJ
1995-1998 Graduate Teaching Assistant, Princeton University, Princeton NJ
1993-1994 Laboratory Technician, Santa Barbara Research Center, Goleta, CA
Summer 1991 & 1992 Laboratory Technician, Clorox Technical Center, Pleasanton, CA

Professional Activities

May – November 2018 Visiting Professor at the Solar Energy Research Institute at the Universiti Kebangsaan Malaysia.
June 2010- present Visiting Scientist at the College of Engineering Center for Environmental Research and Technology (CE-CERT) at University of California, Riverside.
July 2012- June 2016 Member Board of Directors for the Association for Environmental Studies and Sciences.
May 31 – June 12, 2015 Harvard School of Higher Education Management Development Program.
May 14-15, 2013 The Council of Independent Colleges Workshop for Department and Division Chairs.
May 2013 The Council for Independent Colleges- Department & Division Chair Workshop
July 2009 - 2013 Editorial board for the Journal for Environmental Studies and Sciences.
September 2008- 2012 Member of the American Chemical Society California State Government Affairs Committee which lobbies for stronger STEM education for K-12 in California.
2001, 2009 Visiting Scientist at the National Center for Atmospheric Research, Boulder, CO.

Awards

Jefferson Science Fellowship, National Academy of Science, Engineering, and Medicine 2016-2017
Meritorious Honor Award from the United States Department of State for Outstanding Efforts to Secure Global Participation and Significant New Ocean Conservation Commitments from Countries Around the World for the 2016 Our Ocean Conference, December 2016
Henry Dreyfus Teacher-Scholar Award 2013
American Chemical Society, Younger Chemists Committee Leadership Development Award January 2008
Teresa Heinz Scholar for Environmental Research 1999-2000
Heuser Graduate Fellowship in Chemistry 1998-1999
Pickering Teaching Award October 1998
Princeton Environmental Institute- Science, Technology, and Public Policy (PEI-STEP) Fellowship 1997-1999
American Physical Society Laser Science Topical Group Summer Fellowship 1994

Presidential Leadership Scholarship 1994-1995
Stolfer Scholarship 1993-1994

Research Grants

Co-PI on NSF Proposal (SES Research Coordination Networks-2016067, submitted December 2019) **RCN: IRIS: Increasing Relevance and Impact of STEM fields through Collaboration, Training, and Scholarly Engagement in Science Policy** in collaboration with Professor Karen Lips, University of Maryland College Park; Dr. Frances Colon, Jasperi Consulting; Professor Meredith Gore, Michigan State University; and Professor Kathleen Vogel, University of Maryland College Park (\$499,997).

PI on Asia-Pacific Economic Cooperation (APEC) Grant (August 2019-January 2022) **APEC Workshop on University Collaboration to Support Data Gathering and Analysis in Energy Efficiency and Renewable Energy** in collaboration with the APEC Energy Working Group/Expert Group on New and Renewable Energy Technologies/Expert Group on Clean Fossil Energy (\$100,000).

PI on Asia Pacific Economic Cooperation (APEC) Grant (May 2017-January 2018) **Making the Case for Clean Energy Investments with Life-Cycle Impact Assessments** in collaboration with the APEC Energy Working Group/Expert Group on New and Renewable Energy Technologies/Expert Group on Clean Fossil Energy (\$75,565).

Co-PI on NSF Proposal (GEO/ATM-1347071 June 2014-July 2019) **RUI: Collaborative Research: Aerosol Formation From Agricultural Volatile Organic Compounds** in collaboration with Professor David Cocker, University of California Riverside, Dr. Phil Silva, U.S. Department of Agriculture, Dr. Matthew Nee and Dr. Rezaul Mahmood, Western Kentucky University, (\$699,985).

PI on Henry Dreyfus Teacher-Scholar Award, **Chemical Mechanism for Particulate Matter Formation from Amines Utilized in Carbon Sequestration Technologies**, August 2013-December 2019 (\$60,000).

Co-PI on NSF Proposal (GEO/ATM-0849243) **Collaborative Research: Reactions and Fate of Amines in the Atmosphere Emitted from Animal Feeding Operations** in Collaboration with Dr. Phil Silva, U.S. Department of Agriculture, and Professor David Cocker, University of California Riverside, July 2009–July 2011 (\$460,101).

Co-PI on Large Keck Grant through the Joint Science Department Endowed Funds **Genomic Profiling of Genes Involved in the Cellular Response Pathways to Environmental Pollution in Yeasts** in collaboration with Professors Irene Tang and Gretchen Edwalds-Gilbert, January 2008–January 2011(\$30,000).

PI on Special American Business Internship Training (SABIT) grant from the Department of Commerce, June–July 2006 (\$5,655).

Co-PI on Grant for student/faculty research collaborations through Scripps College Andrew W. Mellon Grant, **Ambient Air Pollution: Concentration, Composition and the Link between Exposure and Socioeconomic Status**, October 2005–May 2006 (\$4,304).

Kathleen L. Purvis-Roberts

Co-PI on National Science Foundation Grant (BCS-0214406) **Collaborative Proposal: Perceptions of Risk From Nuclear Testing in Kazakhstan: A Comparative Study of Kazakh Villagers, Health Care Workers & Research Scientists** in collaboration with Professor Cynthia Werner, Texas A&M University, and Nurlan Ibraev, M.D., Director of “Densaullyq” State Agency for Health Care in East-Kazakhstan Oblast, July 2002–July 2005 (**\$144,400**).

Co-PI on National Council for Eurasian and East European Research Grant **Perceptions of Risk from Nuclear Testing in Kazakhstan: A Comparative Study of Kazakh Villagers, Health Care Workers, and Research Scientists** in collaboration with Cynthia Werner and Nurlan Ibraev, January 2002–July 2005 (**\$30,000**).

American Academy for the Advancement of Science, Women’s International Science Collaboration **Perceptions of Risk From Nuclear Testing in Kazakstan: A Comparative Study of Russian Villagers, Kazak Villagers and Kazakstani Scientists** in collaboration with Cynthia Werner and Nurlan Ibraev, May–June 2001 (**\$8,000**).

Pedagogical Grants

Co-PI on National Science Foundation (DUE 2030991- submitted April 2020) **Collaborative Proposal: Design and Development- Broadening Participation at Keck Science through CHANNELS: Changing Norms Needed for Emerging Leaders in Science (CHANNELS)** in collaboration with Professors Marion Preest (PI) and Pete Chandransu (**\$3,995,243**).

PI on Project Kaleidoscope/Association of American Colleges and Universities Grant (Awarded Honorable Mention) **Increasing Underrepresented Student Participation in Computer Science & Related STEM Disciplines Using Community-Based Pedagogy in the Introductory Computer Science Curriculum** in Collaboration with Professors Mike Erlinger, Zach Dodds, Brinda Sarathy, Norma Rodriguez, Bryan Thines, and Omar Safie (**\$34,278**).

PI on National Science Foundation Grant (DUE 1356684- awarded April 2014) **Pitzer College Mentors Enable, Connect, Help, Advocate, Nurture, Intervene, Sustain, and Motivate (MECHANISM) for SUCCESS in the Molecular Sciences** in collaboration with Professors Tom Poon, Roberta Espinoza, and Dean of Faculty Muriel Poston (**\$602,422**).

Co-PI on National Science Foundation Grant (DUE-0525574) **Increasing Science Graduates Through Interdisciplinary Teaching and Research** in collaboration with Professors Newton H. Copp, Gretchen Edwalds-Gilbert, Kersey A. Black, and Scot A. Gould, Joint Science Department, September 2005–August 2011 (**\$498,700**).

Andrew W. Mellon Foundation **Enhancement of Environmental Science at the Joint Science Department** in collaboration with Professors Gretchen Edwalds-Gilbert and James Higdon, Joint Science Department; and Dean Jerome Garris, Claremont McKenna College, 2005–2008 (**\$285,000**).

Books

Purvis-Roberts, K.L., Spiro, T.G., Bouvier-Brown, N., Fry, J., Gao, S., Mury, M. **Environmental Science Problems**, 1st Edition. Herndon, VA: University Science Books, Expected January 2021.

Fahlman, B.D., Purvis-Roberts, K.L., Kirk, J.S., Daubenmire, P.L., Kelly, R., **Chemistry in Context: Applying Chemistry to Society**, 10th Edition. New York, NY: McGraw-Hill, February 2020.

Fahlman, B.D., Purvis-Roberts, K.L., Kirk, J.S., Bentley, A.K., Daubenmire, P.L., Ellis, J.P., and Mury, M.T. **Chemistry in Context: Applying Chemistry to Society**, 9th Edition. New York, NY: McGraw-Hill, February 2017.

Middlecamp, C.H., Anderson, K.L., Bentley, A.K., Cann, M.C., Ellis, J.P. and Purvis-Roberts, K.L. **Chemistry in Context: Applying Chemistry to Society**, 8th Edition. New York, NY: McGraw-Hill, January 2014.

Spiro, T.G., Purvis-Roberts, K. L. and Stigliani, W. M. **Chemistry of the Environment**, 3rd Edition. Herndon, VA: University Science Books, August 2011.

Werner, C.A. and Purvis-Roberts, K.L. **Fallout in Kazakhstan: The Politics of Risk in the Aftermath of Nuclear Testing** (in preparation).

Chemistry Publications (Student co-authors underlined in bold)

“**Impact of the COVID-19 Pandemic on air pollution in urban and rural areas of the United States**,” Cress, T., Fu, F., Purvis-Roberts, K.L. (in preparation for submission to *Science of the Total Environment*).

“**Characterization of Water-soluble Ions and Particle Growth from Secondary Fine Particulate Matter Measured at a Broiler Farm**,” Cress, T., Drover, R., Michaels, C., Docekal, G., Larkin, P., Godoy, A., Caverio, D., Sin, C., Waites, J., Fu, F., Mahmood, R., Silva, P., Purvis-Roberts, K.L. (in preparation for the *Journal of Air & Waste Management*).

“**Comparison of Water-Soluble Particulate Matter Emissions From Dairy, Poultry, and Piggery Facilities**,” Drover, R., Michaels, C., Cress, T., Praske, E., Lee, S.A., Ramsay, K., Waites, J., Franck Fu, David Cocker, Matthew Nee, Phil Silva, Kathleen L. Purvis-Roberts (in preparation for the *Journal of Air & Waste Management*).

“**Oxidation of Reduced Sulfur Compounds Under Humid Conditions: Characterization of Secondary Product Formation**,” Van Rooy, P., Drover, R., Cress, T., Purvis-Roberts, K.L., Silva, P.A., Cocker III, D.R. (in preparation for *Atmospheric Environment*).

“**Characterization of Secondary Products Formed Through Oxidation of Reduced Sulfur Compounds**,” Van Rooy, P., Purvis-Roberts, K.L., Silva, P.A., Nee, M.J., Cocker III, D.R. *Atmospheric Environment* (submitted May 2020).

“Impact of Covid-19 pandemic lockdown on PM, Ozone, SO₂, NO₂ and CO in 20 major cities around the world,” Fu, F., Purvis-Roberts, K.L., Williams, B. *Atmosphere* **2020**, *11*, 1189.

“Comparative Genomic Analysis in Two Yeasts Reveals Conserved Pathways in the Response Network to Phenol Stress,” Alhoch, B., Chan, E., Chen, A., Elkabti, A., Farina, S., Gilbet, C., Kang, J., King, B., Leung, K., Levy, K., Martin, E., Mazer, B., McKinney, S., Moyzis, A., Nurimba, M., Ozaki, M., Raju, S., Rothman, J., Ticus, J., Edwalds-Gilbert, G., Negritto, M.C., Purvis-Roberts, K.L., Wang, R., Tang, Z. *G3: Genes|Genomes|Genetics*, **2019**, *9*, 639-650.

“Secondary Organic Aerosol Formation from the Reaction of Secondary Aliphatic Amines with Hydroxyl and Nitrate Radicals and the Impacts of Humidity,” Price, D.J., Purvis-Roberts, K.L., Silva, P.J., Cocker III, D.R. *Atmospheric Environment* (submitted September 2017).

“Effects of Temperature on the Formation of Secondary Organic Aerosol from Amine Precursors,” Price, D.J., Kacarab, M.E., Cocker III, D.R., Purvis-Roberts, K.L., Silva, P.J. *Aerosol Science & Technology* **2016**, *50* (11), 1216-1226.

“Proposed chemical mechanisms leading to secondary organic aerosol in the reactions of aliphatic amines with hydroxyl and nitrate radicals,” Price, D.J., Clark, C.H., Tang, X., Purvis-Roberts, K.L., Silva, P.J., Cocker III, D.R., *Atmospheric Environment* **2014**, *96*, 135-144 (DOI 10.1016/j.atmosenv.2014.07.035).

“Cloud Condensation Nuclei (CCN) Activity of Aliphatic Amine Secondary Aerosol,” Tang, X., Price, D., Praske, E., Vu, D., Purvis-Roberts, K.L., Silva, P., Cocker III, D.R., and Asa-Awuku, A. *Atmospheric Chemistry & Physics* **2014**, *14*, 5959-5967.

“NO₃ radical, OH radical and O₃- initiated Secondary Aerosol Formation from Aliphatic Amines–Salt Formation and the Effect of Water Vapor,” Tang, X., Price, D.J., Praske, E., Lee, S.A., Shattuck, M.A., Purvis-Roberts, K.L., Silva, P., Asa-Awuku, A., Cocker III, D.R. *Atmospheric Environment* **2013**, *72*, 105-112.

“Determination of Methylamines and Trimethylamine-*N*-oxide in Particulate Matter by Non-suppressed Ion Chromatography,” Erupe, M.E., Lieberman-Martin, A., Silva, P.J., Malloy, Q.G.J. Yonis, N., Cocker III, D.R. Purvis-Roberts, K.L. *Journal of Chromatography A* **2010**, *1217*, 2070–2073.

“Atmospheric Formation of 9,10-phenanthroquinone in the Los Angeles Air Basin,” Eiguren-Fernandez, A., Miguel, A.H., Lu, R., Purvis, K., Grant, B., Mayo, P., Di Stefano, E., Cho, A., and Froines, J. *Atmospheric Environment* **2008**, *42*, 2312–2319.

“Worker Exposure and Health Risks from Volatile Organic Compounds Utilized in the Paint Manufacturing Industry of Kenya,” Purvis, K.L., Jumba, I.O., Wandiga, S., Zhang, J., Kammen, D.M. *Applied Occup. Environ. Hyg.* **2001**, *16*, 1035–1042.

“Organometallic Chemistry at the Interface with Materials Science,” Schwartz, J., Gawalt, E.S., Lu, G., Milliron, D.J., Purvis, K.L., Woodson, S.J., Bernasek, S.L., Bocarsly, A.B., VanderKam, S.K. *Polyhedron* **2000**, *19*, 505–507.

“Surface Characterization and Modification of Indium Tin Oxide in Ultrahigh Vacuum,” Purvis, K.L., Lu, G., Schwartz, J., Bernasek, S.L. *J. Am. Chem. Soc.* **2000**, *122*, 1808–1809.

“The Reaction of Tetra(*tert*-butoxy)tin or Zirconium with Hydroxylated Titanium Metal in Ultrahigh Vacuum: Contrasting Reactivity with an Hydroxylated Aluminum Substrate”, Purvis, K.L., Lu, G., Schwartz, J., Bernasek, S.L. *Langmuir*, **1999**, *15*, 7092–7096.

“Synthesis and Ligand Methathetical Reactions of Supported Transesterification Catalyst Models”, Schwartz, J., Bernasek, S.L., Lu, G., Keegan, J.P., Purvis, K.L., VanderKam, S.K. *J. Mol. Catal. A: Chemical* , **1999**, *146*, 45–50.

“Synthesis and Ligand Methathetical Reactions of Surface-Bound Organometallic Interfaces”, Bernasek, S.L., Schwartz, J., Bocarsly, A.B., Lu, G., Purvis, K.L., VanderKam, S. 7th International Symposium on Chemically Modified Surfaces, Evanston, Illinois, **1998**.

“Ligand Metathesis in Surface-Bound Alkoxyzirconium Complexes. 2. Preparation of Alkanecarboxylate Complexes in Ultrahigh Vacuum”, Purvis, K.L., Lu, G., Schwartz, J., Bernasek, S.L. *Langmuir*, **1998**, *14*, 3720–3722.

“Surface Hydroxyl Content Controls the Thermolysis Stoichiometry of a Surface Bound Organometallic Complex”, Lu, G., Purvis, K.L., Schwartz, J.S., Bernasek, S.L. *Langmuir*, **1997**, *13*, 5791–5793.

“Spin-echo in the Phosphorescent Triplet State of Crystalline 2-Indanone”, Purvis, K.L., Wiemelt, S.P., Maras, T., Blue, M., Melkonian, V., Ashby, P.D., Riley, S.A., Fifield, L.S., Martin, K.A., Nishimura, A.M. *J. of Luminescence*, **1997**, *71*, 199–205.

Pedagogical Publications

“Collaborative Environmental Science Courses: Energy Focused Comparisons between Malaysia and the United States,” (Accepted by Asia Network Exchange: A Journal for Asian Studies in the Liberal Arts April 2020) Purvis-Roberts, K.L.

“Collaborative Environmental Chemistry Projects: Universiti Kebangsaan Malaysia and the Claremont Colleges,” Purvis-Roberts, K.L. *EnviroLab Asia*: **2019**, Vol. 2: Iss. 4, Article 1. Available at: <https://scholarship.claremont.edu/envirolabasia/vol2/iss4/1>

“Equity through Access to Computer Science Learning at a Small Liberal Arts College,” Purvis-Roberts, K.L. & Poon, T. **Culturally Responsive Strategies for Reforming STEM Higher Education: Turning the TIDES on Inequity**, January 2019, Emerald Publishing Limited, 173-186.

“Accelerated Integrated Science Sequence (AISS): An Introductory Biology, Chemistry and Physics Course for College Students,” Purvis-Roberts, K.L., Edwalds-Gilbert, G., Landsberg, A.S., Copp, N., Ulsh, L., Drew, D. *Journal of Chemical Education*, **2009**, *86* (11), 1295–1299.

“Geographical Information Systems (GIS) Mapping of Environmental Samples Across a College Campus,” Purvis-Roberts, K.L., Moeur, H.P., Zanella, A. *Journal of Chemical Education*, **2007**, *82* (10), 1691–1692.

Environmental Policy Publications

“Environmental benefits for blending ethanol into gasoline for Kuala Lumpur, Malaysia and Los Angeles, United States,” (submitted to *Journal of Biomass & Bioenergy*, August 2020) Ahmad Ludin, N., Drover, R., Mitchell, B., Derome, M.D., Sudta, S., Affandi, N.F.A., Purvis-Roberts, K.L.

“A Systematic Review of Holistic Sustainable Approaches Towards a Net Zero Energy Building,” (submitted to the *Journal of Sustainable Cities and Society*, August 2020) Ahmad Ludin, N., Ahmad Affandi, N.A., Lim, C.H., Zaharim, A., Ibrahim, M.A., Sopian, K., Teridi, M.A.M., Sepeai, S., Su’ait, M.S., Purvis-Roberts, K.L., Lojuntin, S.A.

“Cold War Memories and Post-Cold War Realities: Narratives of the State in the Everyday Life of Kazakhstan’s Radiation Victims,” Werner, C. and Purvis-Roberts, K.L. in *Ethnographies of State in Central Asia: Performing Politics*. Edited by Madeleine Reeves, Johan Rasanayagam, and Judith Beyer. Indiana University Press, **January 2014**.

“Perceived Risks from Nuclear Testing Near Semipalatinsk, Kazakhstan: A Comparison Between Laypeople, Doctors, and Scientists,” Purvis-Roberts, K.L., Werner, C.A., and Frank, I. *Risk Analysis*, **2007**, 27, 291–302.

“Unraveling the Secrets of the Past: Contested Versions of Nuclear Testing in the Soviet Republic of Kazakhstan,” Werner, C., Purvis-Roberts, K.L. In *Half-Lives and Half-Truths: Confronting the Radioactive Legacies of the Cold War*. Edited by Barbara Rose Johnston. School of American Research, **2007**.

“After the Cold War: International Politics, Domestic Policy, and the Nuclear Legacy in Kazakhstan,” Werner, C.A., Purvis-Roberts, K.L. *Central Asian Survey*, **2006**, 25, 461–480.

“Designing a Geospatial Information Infrastructure for the Mitigation of Natural Hazards in Urban Areas,” Wilhelmi, O.V., Purvis, K.L., Harriss, R. *Natural Hazards Review*, **2004**, 5, 147–158.

“Comparative Perceptions of Risk From Nuclear Testing in Kazakhstan: Preliminary Results and Proposed Research,” Werner, C., Purvis, K.L., Ibraev, N. *Central Eurasian Studies Review*, **2003**, 2 (2), 11–13.

“Radionuclide Contamination at Kazakstan’s Semipalatinsk Test Site: Implications on Human and Ecological Health,” Carlsen, T.M., Peterson, L.E., Ulsh, B.A., Werner, C.A., Purvis, K.L., Sharber, A.C. *Human and Ecological Risk Assessment* **2001**, 7, 943–955.

Student Publications

“Daily Patterns in Water Soluble Inorganic PM_{2.5} Concentrations in Claremont, California,” Wagner, W., Elkabti, A., Elkabti, F., Braun, A.P., Davis Z., Zeitler, B.L., Purvis-Roberts, K.L., *Journal of Young Investigators*, **2007**, 17 (2).

“The Effects of Particulate Matter on the Lung Function of Collegiate Athletes,” Neff, D., Garcia, D., and Purvis-Roberts, K. *The Journal of Undergraduate Chemistry Research*, **2006**, 4, 169.

Presentations/Invited Talks

“Solar Photovoltaics in the United States and California,” (Invited) Asia Pacific Economic Cooperation (APEC) Workshop on the Economic and Life Cycle Analysis of Solar Photovoltaic Systems in the APEC Region Towards a Low-Carbon Society (Kuala Lumpur, Malaysia), October 16, 2018.

“Science Diplomacy in the Asia Pacific: International Environmental Chemistry,” (Invited) Globalizing the Liberal Arts Conference at Soka University of the Americas (Aliso Viejo, CA), June 5, 2018.

“Environmental Chemistry Collaboration with the National University of Malaysia,” Ryan Drover, Lude Rong, Emma Stacey, Emma Su, Chanchanok Sudta, and Katie Purvis-Roberts, Luce Initiative on Asian Studies and the Environment Regional Conference (Whittier, CA), April 13, 2018.

“Science Diplomacy in the Asia-Pacific: Jefferson Science Fellowship at the United States Department of State,” (Invited) Science Policy Student Group, California Institute of Technology (Pasadena, CA), January 26, 2018.

“Science Diplomacy in the Asia-Pacific: Jefferson Science Fellowship at the United States Department of State,” (Invited) Chemistry Seminar Series, Claremont Colleges (Claremont, CA), January 23, 2018.

“Science Diplomacy in the Asia-Pacific: Jefferson Science Fellowship at the United States Department of State,” (Invited) Chemistry Seminar Series, Loyola Marymount University (Los Angeles, CA), September 8, 2017.

“Particles, Particles Everywhere: What is in the Air we Breathe?” (Invited) Jefferson Science Fellows Distinguished Lecture Series, National Academies of Sciences, Engineering, and Medicine (Washington, D.C.), June 20, 2017.

“Aliphatic Amines as a Component of Particulate Matter Air Pollution,” (Invited) Steven Bernasek Retirement Symposium, Princeton University, Department of Chemistry (Princeton, NJ), June 15, 2015.

“Aliphatic Amines as a Component of Particulate Matter Air Pollution,” Fresno State University, Department of Chemistry (Fresno, CA), February 7, 2014.

“Analysis of Heavy Metal Contamination in Urban Gardens,” Association for Environmental Studies and Sciences Conference, Pittsburg, PA, June 21, 2013.

“Aliphatic Amines as a Component of Particulate Matter Air Pollution,” Reed College, Department of Chemistry (Portland, OR), October 11, 2012.

“Aliphatic Amines as a Component of Particulate Matter Air Pollution,” Loyola Marymount University, Department of Chemistry (Los Angeles, CA), September 7, 2012.

“Aliphatic Amines as a Component of Particulate Matter Air Pollution,” Princeton University, Department of Chemistry (Princeton, NJ), August 16, 2012.

“Particle Into Liquid Sampler- Ion Chromatography (PILS-IC) for Fine Particulate Analysis in Urban and Rural Areas,” Peking University (Beijing, China), July 22, 2010.

“Differences in perceived risk from nuclear testing near Semipalatinsk, Kazakhstan,” Association for Environmental Studies and Sciences Conference, June 19, 2010.

“Nuclear Testing Near Semipalatinsk, Kazakhstan: An Environmental Catastrophe,” Cornell University, Department of Engineering, Bovay Program in the History of Ethics of Engineering, October, 29, 2008.

“Particle into liquid sampler (PILS) for Southern California PM-2.5 analysis,” Princeton University, Department of Chemistry, August 22, 2008.

“Integration of environmental chemistry experiments into the introductory chemistry curriculum through Geographic Information System (GIS) mapping and water characterization,” (Invited) American Chemical Society National Meeting, Philadelphia, PA, August 17, 2008.

“Particle into liquid sampler (PILS) for Southern California PM-2.5 analysis,” University of San Diego, Chemistry Seminar, March 1, 2007.

“Risk Perception of Radiation Exposure of Villagers Living Near the Semipalatinsk Nuclear Test Site,” American Geophysical Union Fall Meeting, San Francisco, CA, December 12, 2006.

“Particle into liquid sampler (PILS) for Southern California PM-2.5 analysis,” (Invited) K.L. Purvis-Roberts, Z.H. Davis, A. Braun, E.L. Zeitler, B. Brayton, J. Gordon, J. Wiggins-Camacho, J. Chapman. American Chemical Society National Meeting, Atlanta, GA, March 30, 2006.

“Gender and Ethnic Differences in Perceived Risk from Nuclear Testing Near Semipalatinsk, Kazakhstan,” K.L. Purvis-Roberts, C.A. Werner, N. Ibraev. Society for Risk Analysis 2005 Meeting, Orlando, FL, December 5, 2005.

“Particle Into Liquid Sampler (PILS) for Claremont PM-2.5 Analysis,” University of California, Los Angeles, Southern California Particle Center and Supersite Seminar, May 10, 2005.

“Particle Into Liquid Sampler (PILS) for Claremont PM-2.5 Analysis,” Southern California Air Quality Management District, May 5, 2005.

“Perceptions of Risk From Nuclear Testing in Kazakhstan,” K.L. Purvis, I.E. Frank, C.A. Werner, N. Ibraev. Society for Risk Analysis 2004 Annual Meeting, Palm Springs, CA, December 8, 2004.

“When Science Fails the Public: Conflicting Perceptions of Risk After Decades of Nuclear Testing In Kazakhstan,” Pitzer College, Marching and Chowder, November 12, 2004.

“Nuclear Testing in Semipalatinsk, Kazakhstan: An Environmental Catastrophe,” Azusa Pacific University, Biology-Chemistry Seminar, February 26, 2004.

“Nuclear Testing in Semipalatinsk, Kazakhstan: An Environmental Catastrophe,” Scripps College, Tuesday Noon Academy, February 24, 2004.

“Nuclear Testing in Semipalatinsk, Kazakhstan: An Environmental Catastrophe,” Macalester College, Environmental Studies/Chemistry Enviro-Friday talk, February 20, 2004.

“Research on the Long-term Effects of Radioactive Fallout in Kazakhstan,” Marian Miner Cook Athenaeum, Claremont McKenna College, October 15, 2003.

“Perceptions of Risk from Nuclear Testing in Semipalatinsk, Kazakhstan” University of California, Berkeley, Energy Resources Group Weekly Seminar Series April 9, 2003.

“Perceptions of Risk from Nuclear Testing in Semipalatinsk, Kazakhstan,” Science, Technology, and Society Colloquium at Pomona College March 11, 2003.

“Particulate Matter from New York City to Kazakhstan,” University of California at Irvine Earth Systems Department Seminar, November 6, 2002.

Honors Seminar on the Nevada Test Site **“The Polygon in Semipalatinsk, Kazakhstan”**
Environmental Studies Seminar **“Perceptions of Risk from Nuclear Testing in Kazakhstan”**
University of Nevada, Las Vegas, October 31, 2002.

“What are they breathing: Fine Particulate Matter Concentrations in NYC Traffic”
Westmont College Natural Science Seminar, October 25, 2002.

“Urban Air Pollution: Issues of Science and Policy,” Claremont Colleges Sigma Xi Banquet, Key Note Speaker, April 10, 2002.

“Thermolysis Stoichiometries of Surface-Bound Organometallic Complexes on Indium-tin Oxide Substrates,” K.L. Purvis, G. Lu, J. Schwartz, S.L. Bernasek, The 218th American Chemical Society National Meeting, New Orleans, LA, August 1999.

“Environmental Health Considerations for Workers Exposed to Solvents in the Paint Manufacturing Industry of Nairobi, Kenya,” K.L. Purvis, I.O. Jumba, S. Wandiga, J. Zhang, D. Kammen, Science, Technology, and Public Policy Lunch Seminar Series at the Woodrow Wilson School for Public and International Affairs, March 1998.

Posters

“Particulate Matter Formation from Alcohol Amines Used in Carbon Sequestration Technologies,” K. Purvis-Roberts, **R. Jauregui, J. Dulla**, D. Price, D. Cocker III, Research Frontiers in the Chemical Sciences: A Dreyfus Foundation Teacher-Scholar Symposium, New York, NY, October 24, 2014.

“Characterization of major water soluble inorganic water soluble ions in the eastern Los Angeles basin,” K. Purvis-Roberts, **E. Zeitler, A. Braun, Z. Davis, W. Wagner, A. Elktabi, F. Elktabi**, NCAR Early Career Scientists Assembly Junior Faculty Forum on Future Scientific Directions, Boulder, CO, August 1-3, 2006.

“Ambient Fine Particulate Matter Concentrations in New York City Traffic,” (poster) Asher M. Ghertner, **Dorothy Beals, Joshua Spiegel, Kathleen L. Purvis**, Robert C. Harriss, Manjula

Canagaratna, John T. Jayne, Scott Herdon, Charles Kolb, Douglas R. Worsnop. American Association for Aerosol Research Conference, Pittsburgh, PA March 31- April 4th, 2003.

Student Talks/Poster Presentations

“Environmental benefits for blending ethanol into gasoline for Malaysia and the United States,” R. Drover, B. Mitchell, M.D. bin Derome, S. Sudta, N.A. Affandi, K.L. Purvis-Roberts & N. Ahmad Ludin, ASIANetwork Annual Conference, University of San Diego, San Diego, April 13-14, 2019.

“Particle Formation in an Environmental Chamber: Trimethylamine, dimethyl sulfide and oxidants in a dry environment,” T. Cress, R. Drover, C. Michael, P. van Rooy, D.R. Cocker III, P.J. Silva, A. Foote, K. L. Purvis-Roberts, American Chemical Society National Meeting in Orlando, FL, April 1, 2019.

“Particle formation in an environmental chamber: Reactions of trimethylamine, reduced sulfur compounds, and hydroxyl radical,” C. Michael, R. Drover, T. Cress, P. van Rooy, D.R. Cocker III, P.J. Silva, A. Foote, K. L. Purvis-Roberts, American Chemical Society National Meeting in Orlando, FL, April 1, 2019.

“Nitrogen-Containing Compounds and Salts Emitted in Poultry Farming,” R. Drover, C. Michael, T. Cress, P.J. Silva, A. Foote, P. van Rooy, D.R. Cocker III, , K. L. Purvis-Roberts, American Chemical Society National Meeting in Orlando, FL, April 1-2, 2019.

“Energy, Economics, and Environment for Industrial Revolution 4.0,” Will Cullen & Lude Rong, Solar Energy Research Institute Symposium, Universiti Kebangsaan Malaysia, Selangor, Malaysia, May 15-16, 2018.

“Environmental Benefits for Blending Ethanol into Gasoline: Comparing Kuala Lumpur, Malaysia and Los Angeles, United States,” Ryan Drover, Solar Energy Research Institute Symposium, Universiti Kebangsaan Malaysia, Selangor, Malaysia, May 15-16, 2018.

“Environmental Impacts from Renewable Energy Technology Systems,” Emma Stacy & Emma Su, Solar Energy Research Institute Symposium, Universiti Kebangsaan Malaysia, Selangor, Malaysia, May 15-16, 2018.

“Analyzing reactions of MAE and atmospheric oxidants,” A. Godoy, J. Dulla, T. Zunguze, D. Pierce, L. Connor, R. Jauregui, P. Van Rooy, D. Price, D.R. Cocker III, K. L. Purvis-Roberts, American Chemical Society National Meeting in San Diego, CA, March 14, 2016.

“Particulate matter formation in response to reduced sulfur-alkyl amine reactions,” L. Connor, J. Dulla, T. Zunguze, D. Pierce, A. Godoy, P. Van Rooy, D.R. Cocker III, K. L. Purvis-Roberts, American Chemical Society National Meeting in San Diego, CA, March 14, 2016.

“Analyzing reactions of MEA and DMA and atmospheric oxidants,” T. Zunguze, D. Pierce, J. Dulla, A. Godoy, L. Connor, R. Jauregui, P. Van Rooy, D. Price, D.R. Cocker III, K. L. Purvis-Roberts, American Chemical Society National Meeting in San Diego, CA, March 14, 2016.

“Running & Analyzing Reactions of Alcohol Amines with Atmospheric Pollutants,” J. Dulla, A. Godoy T. Zunguze, D. Price, P. Van Rooy, D.R. Cocker III, K. L. Purvis-Roberts, Southern California Council on Undergraduate Research, Harvey Mudd College, Claremont, CA, November 21, 2015.

“Reactions of alcohol amines with atmospheric oxidants NO_x, H₂O₂ and O₃ analyzed through a Particle-into-Liquid Sampler coupled to dual ion chromatographs,” R. Jauregui, J. Dulla, D.J. Price, D.R. Cocker III, K. L. Purvis-Roberts; Council on Undergraduate Research Posters on the Hill, April 23, 2015.

“Studying the reactions of alcohol amines with atmospheric oxidants,” J. Dulla, R. Jauregui, D.J. Price, D.R. Cocker III, K. L. Purvis-Roberts; American Chemical Society National Meeting, Denver, CO, March 23, 2015.

“Reactions of alcohol amines with atmospheric oxidants NO_x, H₂O₂ and O₃ analyzed through a Particle-into-Liquid Sampler coupled to dual ion chromatographs,” R. Jauregui, J. Dulla, D.J. Price, D.R. Cocker III, K. L. Purvis-Roberts; American Chemical Society National Meeting, Denver, CO, March 23, 2015.

“Reactions of alcohol amines with atmospheric oxidants NO_x, H₂O₂ and O₃ analyzed through a Particle-into-Liquid Sampler coupled to dual ion chromatographs,” R. Jauregui, K. L. Purvis-Roberts, J. Dulla, D.J. Price, D.R. Cocker III; SACNAS National Meeting, Los Angeles, CA, October 18, 2014.

“Correlation Between Formation of Alkylammonium Salts in Particulate Matter on Dairies,” S.A. Lee, K. Ramsay, D.R. Cocker III, P.J. Silva, A.S. Hasson, S. Ashkan, K.L. Purvis-Roberts, American Chemical Society Southern California Undergraduate Research Conference, Claremont, CA, April 27, 2013.

“Amine Incorporation into Particulate Matter at a California Dairy,” K. Ramsay, S.A. Lee, D.R. Cocker III, P.J. Silva, A.S. Hasson, S. Ashkan, K.L. Purvis-Roberts, American Chemical Society Southern California Undergraduate Research Conference, Claremont, CA, April 27, 2013.

“The establishment and calibration of a method to analyze heavy metals in the air using Wavelength-Dispersive X-Ray Fluorescent Spectrometry,” J. Ritchie, K.L. Purvis-Roberts, American Chemical Society Southern California Undergraduate Research Conference, Claremont, CA, April 27, 2013.

“Formation of Alkylammonium Salts in Particulate Matter,” E. Praske, S. A. Lee, X. Tang, D.R. Cocker III, P.J. Silva, R. Brown, K.L. Purvis-Roberts, American Chemical Society Southern California Undergraduate Research Conference, Claremont, CA, April 27, 2013.

“Correlation Between Formation of Alkylammonium Salts in Particulate Matter on Dairies,” S.A. Lee, K. Ramsay, D.R. Cocker III, P.J. Silva, A.S. Hasson, S. Ashkan, K.L. Purvis-Roberts, American Chemical Society, New Orleans, April 8, 2013.

“Amine Incorporation into Particulate Matter at a California Dairy,” K. Ramsay, S.A. Lee, D.R. Cocker III, P.J. Silva, A.S. Hasson, S. Ashkan, K.L. Purvis-Roberts, American Chemical Society, New Orleans, April 8, 2013.

“Formation of Alkylammonium Salts in Particulate Matter,” E. Praske, S. A. Lee, X. Tang, D.R. Crocker III, P.J. Silva, R. Brown, K.L. Purvis-Roberts, European Geophysical Union, Vienna, Austria, April 23, 2012.

“Formation of Alkylammonium Salts in Particulate Matter,” S.A. Lee, E. Praske, X. Tang, D.R. Cocker III, P.J. Silva, R. Brown, K.L. Purvis-Roberts, American Chemical Society, San Diego, March 28, 2012.

“Determination of Methylamine, Ethylamine and Triethylamine N-oxide Salts in Particulate Matter by Non-Suppressed Ion Chromatography,” E. Pearlstone, E. Praske, M. Shattuck, K.L. Purvis-Roberts, P.J. Silva, B. Brown, D.R. Cocker III, American Chemical Society Southern California Undergraduate Research Conference, University of California Santa Barbara, April 23, 2011.

“Concentration of ethylamine and methylamine salts measured by a particle-into-liquid sampler (PILS) and ion chromatography,” M.A. Shattuck, E. Praske, K.L. Purvis-Roberts, X. Tang, D.R. Cocker III, P.J. Silva, American Chemical Society National Meeting, Anaheim, California, March 28 & 30, 2011.

“Heavy metal contamination at the Pomona College Organic Farm,” T.C. Mortvedt, K. Murphy, K.J. Park, K.L. Purvis-Roberts, C.J. Taylor, American Chemical Society National Meeting, Anaheim, California, March 28, 2011.

“Quantitative Characterization of Particulate Matter in Claremont, CA by Particle Into Liquid Sampler with Ion Chromatography,” A.L. Liberman-Martin, N. Yonis, K.L. Purvis-Roberts, American Chemical Society National Meeting, Salt Lake City, Utah, March 23, 2009.

“Quantitative Characterization of Particulate Matter in Claremont, CA by PILS-IC (Particle-into-Liquid Sampler Ion Chromatography),” A. Liberman-Martin, K.L. Purvis-Roberts, Southern California Conference for Undergraduate Research, Cal Poly Pomona, Pomona, CA, November 22, 2008.

“Investing Trends in Inorganic Aerosols Composition and Concentration Due to Heterogeneous Reactions in Claremont, CA,” A.B. Elkabti, F.B. Elkabti, W. Wagner, K.L. Purvis-Roberts, Southern California Conference for Undergraduate Research, Occidental College, Eagle Rock, CA, November 18, 2006.

“Investigation of Ionic Composition and Concentration of Atmospheric Fine Particulate Matter in Claremont, CA Using a PILS-IC System,” F.B. Elkabti, A.B. Elkabti, W. Wagner, K.L. Purvis-Roberts, Southern California Conference for Undergraduate Research, Occidental College, Eagle Rock, CA, November 18, 2006.

“Daily Patterns in PM 2.5 Ion Concentrations in Claremont, California,” W. Wagner, A.B. Elkabti, F.B. Elkabti, K.L. Purvis-Roberts, Southern California Conference for Undergraduate Research, Occidental College, Eagle Rock, CA, November 18, 2006.

“PM_{2.5} in Claremont, CA sampled using a Particle-Into-Liquid Sampler,” Z.H. Davis, A. Braun, E.L. Zeitler, K.L. Purvis-Roberts, Southern California American Chemical Society Undergraduate Research Symposium, Santa Barbara, CA, April 22, 2006.

“Analysis of fine particulate matter and heavy metal emissions through use of the dual Particle-Into-Liquid Sampler (PILS) and TEOM system,” A. Braun, E.L. Zeitler, Z.H. Davis, K.L. Purvis-Roberts. American Chemical Society National Meeting, Atlanta, GA, March 30, 2006.

“Organic and inorganic PM_{2.5} in Claremont, CA sampled using a particle-into-liquid sampler,” E.L. Zeitler, A. Braun, Z.H. Davis, K.L. Purvis-Roberts. American Chemical Society National Meeting, Atlanta, GA, March 30, 2006.