**Daniel A. Burgard**
Chemistry Department
University of Puget Sound
1500 N. Warner St. #1015
Tacoma, WA 98416
dburgard@pugetsound.edu,
253.879.1570

## I. Education

August 2006 — Doctor of Philosophy, Chemistry
University of Denver, Denver, CO
Thesis: *Remote Sensing of Ammonia, Sulfur Dioxide, and Nitrogen Dioxide Emissions from Cars and Trucks*

May 1996 — Bachelor of Arts, Chemistry
The Colorado College, Colorado Springs, CO

## II. Teaching Appointments

7/11 – present — **Associate Professor:** University of Puget Sound, Tacoma, WA
Instrumental Analysis 330
Chemical Analysis and Equilibrium 230

7/08 – 6/11 — **Assistant Professor**: University of Puget Sound, Tacoma, WA
Instrumental Analysis 330
Chemical Analysis and Equilibrium 230
Introductory Chemistry 110
Environmental Science 105

8/06 – 6/08 — **Visiting Assistant Professor**: University of Puget Sound, Tacoma, WA
Instrumental Analysis 330
Chemical Analysis and Equilibrium 230
Fundamental Chemistry 110

1/06 – 3/06 — **Adjunct Faculty**: University of Denver

9/02-12/04 — **Graduate Teaching Assistant**: University of Denver

06/00 – 08/00 — **General Chemistry Instructor**: University of Colorado at Denver

08/97 – 05/02 — **Chemistry Teacher**: Regis Jesuit High School, Aurora, CO

06/96 – 06/97 — **Chemistry Paraprofessional**: The Colorado College, Colorado Springs, CO

III. Manuscripts *denotes University of Puget Sound student co-author

(1) **Burgard, D.A**.; Fuller, R.; Becker, B.*; Ferrell, R.*; Dinglasan-Panlilio, M.J. Potential Trends in Attention Deficit Hyperactivity Disorder (ADHD) Drug Use on a College Campus: Wastewater Analysis of Amphetamine and Ritalinic Acid. *Sci Total Environ* **2013**, *450-451,* 242-249.

(2) **Burgard, D.A.**; Bria, C.R.M.*; Berenbeim, J.A.* Remote Sensing of Emissions from In-Use Small Engine Marine Vessels. *Environ. Sci. Technol*. **2011**, *45*, 2894-2901.

(3) **Burgard, D.A.**; Provinsal. M.* On-Road, In-Use Gaseous Emissions Measurements by Remote Sensing of School Buses Equipped with Diesel Oxidation Catalysts and Diesel Particulate Filters. *J. Air Waste Manage. Assoc.*, **2009**, *59*, 1468-1473.

(4) **Burgard, D.A.**; Bishop, G.A.; Stedman, D.H.; Gessner, V. H.; Daeschlein, C. Remote Sensing of in Use Heavy Duty Diesel Vehicles. *Environ. Sci. Technol.*, **2006**, *40*, 6938-6942.

(5) **Burgard, D.A.**; Bishop, G.A.; Stedman, D.H. Remote Sensing of Ammonia and Sulfur Dioxide from On-Road Light Duty Vehicles. *Environ. Sci. Technol.*, **2006**, *40*, 7018-7022.

(6) **Burgard, D.A**.; Bishop, G.A.; Stadtmuller, R.S.; Dalton, T.R.; Stedman, D.H. Spectroscopy Applied to Mobile Source Emissions. *Appl. Spectrosc.*, **2006**, *60*, 135A-148A.

(7) Bishop, G.A.; **Burgard, D.A.**; Dalton, T.R.; Stedman, D.H.; Ray, J.D. Winter Motor Vehicle Emissions in Yellowstone National Park. *Environ. Sci. Technol.*, **2006**, *40*, 2505-2510.

(8) **Burgard, D.A.**; Dalton, T.R.; Bishop, G.A.; Starkey, J.R.; Stedman, D.H. A Nitrogen Dioxide, Sulfur Dioxide, and Ammonia Detector for Remote Sensing of Vehicle Emissions. *Rev. Sci. Instrum.*, **2006**, *77*, 014101/1-014101/5.

(9) **Burgard, D.A.**; Abraham, J.; Allen, A.; Craft, J.; Foley, W.; Robinson, J.; Wells, B.; Xu, C.; Stedman, D.H. Chemiluminescent Reactions of Nickel, Iron, and Cobalt Carbonyls with Ozone. *Appl. Spectrosc.*, **2006,** *60*, 99-102.

(10) **Burgard, D.A.** An Introduction to the General Chemistry Laboratory that Makes a Lasting Impression Concerning Laboratory Safety. *Chem. Educator*, **2005**, *10*, 427-429.

IV. Conference Presentations

(1) Breuer, Matt*; **Burgard, D.A.** "Remote Sensing Measurements of In-Use Locomotive $NO_X$ Emissions" presented at the 23rd CRC On-Road Vehicle Emissions Workshop. San Diego, CA, April 8-10, 2013.

(2) Ferrell, Rebecca*; **Burgard, D.A.** "Determination of Stimulant Use by Commercial Truck Drivers" poster presented at the 245th ACS National Meeting. New Orleans, LA, April 7-11, 2013.

(3) **Burgard, D.A.**; Fuller, Rick; Becker, Brian*; Ferrell, Rebecca*; Dinglasan-Panlilio, M.J. "Trends in attention deficit hyperactivity disorder (ADHD) drug use on a college campus as evidenced through wastewater analysis" Paper ID: 18937 presented at the 245th ACS National Meeting. New Orleans, LA, April 7-11, 2013.

(4) Breuer, M.*; **Burgard, D.A**. "On-Road Measurements of Transit Bus Emissions" presented at the 2012 Air & Waste Management Association Pacific Northwest International Section Conference. Portland, OR, Nov 3-6, 2012. ***Won 2nd Place for student presenters***

(5) Breuer, Matt*; **Burgard, D.A.** "On-Road Measurements of Transit Bus Emissions" presented at the 22nd CRC On-Road Vehicle Emissions Workshop. San Diego, CA, March 26-28, 2012.

(6) **Burgard, D.A.**; Horsley, Drew* "Effects of New Heavy-Duty Diesel Truck Standards on Gaseous Emissions Measured On-Road Via Remote Sensing" presented at the 2011 ACS Northwest Regional Meeting. Portland, OR June 26-29, 2011.

(7) Horsley, Drew*; **Burgard, D.A.** "On-road Measurement of the Effects of New Heavy-Duty Diesel Truck Emission Standards" poster presented at the 241st ACS National Meeting. Anaheim, CA, March 27-31, 2011.

(8) Bria, C.*; **Burgard, D.A.** "Remote Sensing Measurements of Gaseous Emissions from Ocean-Going Vessels: Lions Gate Bridge in Vancouver, BC" poster presented at the 2010 Summer Meeting of the Pacific Northwest Regional Section of AOAC International. Tacoma, WA, June, 2010. ***Won 1st place in poster contest***

(9) Bria, C.*; **Burgard, D.A.** "Remote Sensing Measurements of Gaseous Emissions from Ocean-Going Vessels: Lions Gate Bridge in Vancouver, BC" poster presented at the 20th CRC On-Road Vehicle Emissions Workshop. San Diego, CA, March 22-24, 2010.

(10) Bria, C.*; **Burgard, D.A**. "Remote Sensing Measurements of Gaseous Emissions From Marine Vessels" presented at the 2009 Air & Waste Management Association Pacific Northwest International Section Conference. Cle Elum (Suncadia Resort), WA Nov 3-6, 2009.

(11) **Burgard, D.A**.; Bria, C.* "Remote Sensing Measurements of Gaseous Emissions from Ocean-Going Vessels: Lions Gate Bridge in Vancouver, BC" presented at the 2009 Air & Waste Management Association Pacific Northwest International Section Conference. Cle Elum (Suncadia Resort), WA Nov 3-6, 2009.

(12) **Burgard, D.A**.; Berenbeim J.* "Remote Sensing Measurements of Gaseous Emissions From Marine Vessels" presented at the 2009 ACS Northwest Regional Meeting. Tacoma, WA June 28-July 1, 2009.

(13) **Burgard, D.A**.; Provinsal, M.* "On-Road, in-Use Gaseous Emission Measurements by Remote Sensing of School Buses Equipped with Diesel Oxidation Catalysts and Diesel Particulate Filters" presented at the 2009 ACS Northwest Regional Meeting. Tacoma, WA June 28-July 1, 2009.

(14) Berenbeim. J.*; **Burgard, D.A.** "Remote Sensing Measurements of Gaseous Emissions from Marine Vessels" presented at the 2009 ACS Puget Sound Section Undergraduate Research Symposium. Tacoma, WA, May 2, 2009.

(15) Guyer, K.*; **Burgard, D.A.** "Solid Phase Microextraction Used to Quantitate BPA Leaching from Plastic Bottles" poster presented at the 2009 ACS Puget Sound Section Undergraduate Research Symposium. Tacoma, WA, May 2, 2009.

(16) Berenbeim. J.*; **Burgard, D.A**. "Remote Sensing Measurements of Gaseous Emissions from Marine Vessels" poster presented at the 19$^{th}$ CRC On-Road Vehicle Emissions Workshop. San Diego, CA, March 23-25, 2009.

(17) Virginia, J.*; **Burgard, D.A**. "Analysis of Red Dye in Unburned and Combusted Diesel Fuel" poster presented at the 235$^{th}$ ACS National Meeting. New Orleans, LA, April 6-10, 2008.

(18) Provinsal, M.*; **Burgard, D.A.** "Examining Gaseous Emissions from School Buses in Washington State" presented at the 18$^{th}$ CRC On-Road Vehicle Emissions Workshop. San Diego, March 31-April 2, 2008.

(19) **Burgard, D.A.** "Car, Truck, and Snowmobile Emissions as Measured by Remote Sensing", presented at the Summer Meeting of the Pacific Northwest Regional Section of AOAC International. Tacoma, WA, June 22-23, 2007.

(20) **Burgard, D.A.**; Gessner, V. H.; Daeschlein, C.; Bishop, G.A.; Stedman, D.H. "NO, $NO_2$ and $SO_2$ RSD Measurements from In-Use HDDV", presented at the 16$^{th}$ CRC On-Road Vehicle Emissions Workshop. San Diego, March 28-30, 2006.

(21) **Burgard, D.A.**; Bishop, G.A.; Dalton, T. R.; Stedman, D.H. "Ammonia and Sulfur Dioxide Measurements from Light Duty Vehicles in Denver, CO and Tulsa, OK ",

presented at the 16th CRC On-Road Vehicle Emissions Workshop. San Diego, March 28-30, 2006.

(22) **Burgard, D.A.**; Starkey, J.R.; Bishop, G.A.; Stedman, D.H. "Vehicle Remote Sensing of Sulfur Dioxide and Ammonia", poster presented at 15th CRC On-Road Vehicle Emissions Workshop. San Diego, April 4-6, 2005.

(23) **Burgard, D.A.**; Bishop, G.A.; Stedman, D.H. "Vehicle Remote Sensing of Sulfur Dioxide", poster presented at 14th CRC On-Road Vehicle Emissions Workshop. San Diego, March 29-31 2004.

(24) Stedman, D.H.; Bishop, G.A.; Williams, M.J.; Williams, C.P.; **Burgard, D.A.**; Agee, L.D. "A New, On-Road, Continuously Operating, Emissions Remote Sensor", Air and Waste Management Association Meeting. San Diego, June 23-25 2003.

(25) **Burgard, D.A.**; Weaver, G.C. "The E-2020 Program: Learning How to Involve Students in Scientific Inquiry", 16th Biennial Conference on Chemical Education. Ann Arbor, July 30-August 2 2000.

V. Peer-Reviewed Reports

(1) Bishop, G.A.; **Burgard, D.A**.; Dalton, T.R.; Stedman, D.H. *In-Use Emission Measurements of Snowmobile and Snowcoaches in Yellowstone National Park*, Final Report prepared for the National Park Service, January 2006

(2) Bishop, G.A.; **Burgard, D.A**.; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the Chicago Area: Year 6, September 2004*, Final Report prepared for CRC, May, 2006.

(3) Bishop, G.A.; **Burgard, D.A.**; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the Phoenix Area: Year 5, November 2004*, Final Report prepared for CRC, May, 2006.

(4) Bishop, G.A.; **Burgard, D.A.**; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the La Brea Area: Year 3, October 2003*, Final Report prepared for CRC, May, 2004.

(5) Bishop, G.A.; **Burgard, D.A.**; Williams, M.J.; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the Phoenix Area: Year 4, November 2002*, Final Report prepared for CRC, November, 2003.

(6) Bishop, G.A.; Williams, M.J.; **Burgard, D.A.**; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the Chicago Area: Year 5, September 2002*, Final Report prepared for CRC, September, 2003.

(7) **Burgard, D.A.;** Bishop, G.A.; Stedman, D.H. *On-Road Remote Sensing of Automobile Emissions in the Denver Area: Year 4*, *January 2003,* Final Report prepared for CRC, July, 2003.

VI. Professional Organizations

2003 – Present American Chemical Society
2009 – Present Air & Waste Management Association
-Board of Directors, Puget Sound Chapter, 2010-2013.