

PAUL T. BUCKLEY

Curriculum Vitae

EDUCATION

- Ph.D.** Analytical and Environmental Chemistry. University of Colorado, Boulder.
- B.S.** Chemistry. Northern Arizona University, Flagstaff, Arizona.
- B.S.** Forestry. Northern Arizona University, Flagstaff, Arizona.

ACADEMIC EXPERIENCE

Clinical Associate Professor of Chemistry, Washington State University
(Since Fall 2015)

Professor of Chemistry, Lewis-Clark State College, Lewiston, ID. (Since Fall 2011)

Associate Professor, Lewis-Clark State College, Lewiston, ID. (2005-11)

Summer Faculty, Washington State University (Since 2007)

- Teach Chem 101 and Chem 102. Also taught Chem 101 Spring 2005

Grants Submitted while at LCSC:

- Idaho State Board of Education ITIG Grant for acquisition of Atomic Absorption Spectrophotometer and UV-Vis Spectrophotometer. Funded for \$72,300.
- National Science Foundation, Division of Undergraduate Education, for scholarship funding for STEM students. \$600,000. Not Funded.
- Idaho INBRE Grant: The Mobility of Metals in Lake Coeur d'Alene: Creating an Experimental Model. Supported three student researchers. Student poster presented at Idaho INBRE conference. \$1500 and course release.
- Idaho INBRE Grant: The Influence of pH on the Mobility of Sediment-Bound Heavy Metals in Lake Coeur d'Alene, Idaho. Student poster presented at Idaho INBRE conference. \$1500.
- Faculty Development Grant, \$1000 for travel to PNW SETAC conference.
- Idaho INBRE Grant "EDTA: Its Influence on the Bioavailability of Metals in the Environment". \$1500 and course release
- Idaho INBRE Grant for development of Chemistry Outreach Program to L-C Valley schools. Funded for \$1500.
- Faculty Development Grant: "Measuring Isoprene Emissions from Trees: Development of a Novel Analytical Chemistry Laboratory Experiment". Awarded \$1500.

Past Teaching Positions:

2004-5: Adjunct Faculty, Lewis-Clark State College, Lewiston, ID

2003- 2005: Assistant Research Professor, Nuclear Radiation Center, Washington State University, Pullman, WA

- Taught courses to college professors and high school teachers on the fundamentals and applications of radiochemistry.

2001: Adjunct General Chemistry Faculty, The College of New Jersey, Ewing, NJ

1995-2000: Assistant Professor of Chemistry, Hartwick College, Oneonta, NY

- Taught General, Analytical, and Environmental Chemistry courses.
- **Grant award** \$30,000 from NASA Jove program. Summer research at NASA Kennedy Space Center. Developed method for measurement of isoprene emissions from scrub oak under various CO₂ regimes, field measurement campaign.

1989-1993: Teaching Assistant, Department of Chemistry, University of Colorado.

Other past research:

1993-95: Postdoctoral Research, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO

- Demonstrated the feasibility of supercritical fluid extraction as a strategy for removing organic contaminants from low-level mixed radioactive wastes stored at the former Rocky Flats nuclear weapons production facility.

1989-93: Doctoral Research with Professor John W. Birks

- Photochemistry and kinetics of visible light photolytic reactions of ozone-water complexes as a source of atmospheric hydroxyl radical and hydrogen peroxide.
- Field measurements of bromoform emission to the Arctic atmosphere by sea ice algae at Resolute Bay, Northwest Territories, Canada. Demonstrated that unusually high concentrations of organobromine compounds in the Arctic troposphere are biogenic.

GOVERNMENT EXPERIENCE

2001- 03: Research Scientist, New Jersey Department of Environmental Protection (DEP), Office of Quality Assurance, Trenton, NJ

- Conducted audits of state accredited analytical chemistry laboratories to ensure the integrity and quality of analytical data used by the DEP for regulatory decision making on drinking water, wastewater, soil, and Superfund issues.
- Developed accreditation program for laboratories conducting analysis of stack emissions and ambient air in New Jersey. Wrote state accreditation requirements adopted into the New Jersey Administrative Code.

1982-86: U.S. Forest Service, Apache National Forest, AZ: Timber Marker/Fire Fighter.

INDUSTRIAL EXPERIENCE

2000-2001: Research Chemist, Prisco, Inc., Newark, NJ

Methods development for HPLC and GC analysis of printing solutions for the graphic arts industry, competitive products analysis, and quality control.

1989: American Chemical Society Summer Intern in Analytical Chemistry, Phillips Petroleum, Bartlesville, OK. Developed ten automated titration methods for gas and oil sample analyses. Wrote analytical procedures manual for technicians using the instrument.

OTHER AWARDS/GRANTS

National Science Foundation CCLI Program, "Development of RadVision Educational Software for Radiochemistry." Submitted July, 2004, \$75,000. Not Funded

National Collegiate Inventors and Innovators Alliance, "Development of RadVision Educational Software for Radiochemistry." Submitted December 2003, \$20,000. Not Funded

University of Colorado General Chemistry Excellence in Teaching Award, 1993.

University of Colorado Dean's Small Grant Award, 1992, \$1,000.

American Chemical Society Summer Internship in Analytical Chemistry, at Phillips Petroleum, Bartlesville, OK 1989.

PUBLICATIONS

"Radioisotopes in Medicine: Preparing a Technetium-99m Generator and Determining its Efficiency." Buckley, P.T, Filby, R.H., Dugan, D.L., Elliston, J.T., Lessman, J., and Paulenova, A. *Journal of Chemical Education*, Vol. 83, p. 625, 2006.

"Preparation of Buffers and Determination of Buffer Capacity: An Experiment for the Quantitative Analysis Laboratory." Buckley, P.T. *Journal of Chemical Education*, Vol. 78, p.1384, 2001.

"Isoprene Emission from Ambient and Elevated CO₂ Grown Florida Scrub Oak." Buckley, P.T. *Atmospheric Environment*, Vol. 35, pp.641, 2001.

"Understanding the Greenhouse Effect: Is Global Warming Real?" Dunnivant, F., Moore, A., Alfano, M., Brzenek, R., Buckley, P.T., and Newman, M. *Journal of Chemical Education*, Vol. 77, p.1602, 2000.

"Vertical Profiles of Bromoform in Snow, Sea Ice, and Seawater in the Canadian Arctic." Sturges, W.T., Cota, G.F., and Buckley, P.T. *Journal of Geophysical Research*, Vol. 102, pp. 25073-25083, 1997.

"Evaluation of Visible-Light Photolysis of Ozone-Water Cluster Molecules as a Source of Atmospheric Hydroxyl Radical and Hydrogen Peroxide." Buckley, P.T., and Birks, J.W. *Atmospheric Environment*, Vol. 29, pp. 2409-2415, 1995.

"Bromoform Emission from Arctic Ice Algae." Sturges, W.T., Cota, G.F., and Buckley, P.T. *Nature*, Vol. 358, pp. 660-662, 1992.