

Paul T. Buckley

Curriculum Vitae- Updated February, 2024

Academic Experience

- Professor of Chemistry, Career-Track, Washington State University, 2022- present.
- Associate Professor of Chemistry, Career-Track, Washington State University, 2015-2022.
- Professor of Chemistry, Lewis-Clark State College, 2011-15.
- Associate Professor of Chemistry, Lewis-Clark State College, 2005-11.
- Summer Teaching, Washington State University, 2007-15
- Assistant Research Professor, WSU Nuclear Science Center 2003-05
- Assistant Professor of Chemistry, Hartwick College, 1995-2000

Education

- **Ph.D.** Analytical and Environmental Chemistry. University of Colorado, Boulder, 1993, with Professor John W. Birks. "Photochemistry and kinetics of photolytic reactions of ozone-water complexes as a source of atmospheric hydroxyl radical." And "Bromoform emission to the Arctic atmosphere by sea ice algae."
- **B.S.** Chemistry. Northern Arizona University, 1989.
- **B.S.** Forestry. Northern Arizona University, 1982.

Publications

- "Effects of Different Concept Map Activities on Chemistry Learning"
Wang, Z.; Adespoe, O.; Sundararajan, N.; and Buckley, P.; *Educational Psychology*, 2020 <https://doi.org/10.1080/01443410.2020.1749567>
- "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, p. 641, 2001.
- "Understanding the Greenhouse Effect: Is Global Warming Real?" Dunnivant, F., Moore, A., Alfano, M., Brzenck, R., Buckley, P.T., and Newman, M.
Journal of Chemical Education, Vol. 77, p 1602, 2000.
- "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, p. 2409, 1995.
- "Bromoform Emission from Arctic Ice Algae." Sturges, W.T., Cota, G.F., and Buckley, P.T. *Nature*, Vol. 358, p. 660, 1992.

University, College, and Departmental Service

- Director of Undergraduate Studies for the Department of Chemistry
- Faculty Senate
- Faculty representative to the Student Book Corporation
- WSU Academic Affairs Committee Member

- CAS Assessment Committee 2016- present. Department Assessment Coordinator, prepare reports to ACE on undergraduate program assessment.
- Chair, Committee on Teacher Education
- Access Center faculty liaison for Chemistry.
- Academic Integrity Hearing Board member 2016- 2018.

Grants

- Vice-Provost Grant for Course Redesign, awarded \$5,000 summer salary (2021) for work on designing project-based labs for General Chemistry.
- Academic Outreach and Innovation Affordable Learning Grant (\$4500 summer salary 2020) "Improving Curriculum Delivery and Lowering Student Costs in Chemistry 103"
- Alberts Grant (\$7500 summer salary for 2020) for development of textbook for Chem 103, to be delivered to students at no cost.
- Smith Teaching and Learning Grant (\$7000 summer salary 2017): "Providing Growth Opportunities for Struggling Chemistry Students". Developed Chem 103 and Chem 104; a novel curriculum to prepare students for General Chemistry.
- Alberts Grant (\$6500 summer salary for 2016) for development of POGIL worksheets
- Co-PI on NSF- iUSE Stem Writing Proposal: "Text+: Tools that Extend Students' Thinking and Ideas about Writing. " With Michael Dunn and Wendy Olson (WSU-Vancouver) \$299,954. Not funded.
- Idaho State Board of Education Technology Incentive Grant for acquisition of Atomic Absorption Spectrophotometer and UV-Vis Spectrophotometer. \$72,300.
- National Science Foundation, Division of Undergraduate Education, for scholarship funding for STEM students. \$600,000. Not funded.
- NASA Joint Venture Program, summer research at Kennedy Space Center, 1996-8; \$30,000.
- Idaho INBRE Grant: "The Mobility of Metals in Lake Coeur d'Alene: Creating an Experimental Model." \$2500 for equipment and undergraduate researcher salary.
- Idaho INBRE Grant: "The influence of pH on the Mobility of Sediment-Bound Heavy Metals in Lake Coeur d'Alene, ID." \$2500 for equipment and undergraduate researcher salary.
- Idaho INBRE Grant: "EDTA: Its influence on the Bioavailability of Metals in the Environment." \$2500 for equipment and undergraduate researcher salary.
- NSF CCLI Program: "Development of RadVision Educational Software for Radiochemistry." \$75,000. Not funded.

Awards

- Excellence in Assessment Award from the Office of Assessment of Curricular Effectiveness, 2017 and 2019.
- Nominated for College of Arts and Sciences Excellence in Teaching Award for Clinical Faculty, 2017 and 2018
- President's Award for Outstanding Teaching; Lewis-Clark State College, 2014-15.
- Department of Chemistry Award for Outstanding Graduate Teaching Assistant, University of Colorado, 1993.

Government Experience

- New Jersey Department of Environmental Protection. Conducted audits of state accredited analytical laboratories to ensure integrity of data used for regulatory decision-making. Developed pilot accreditation program for laboratories conducting analysis of stack emissions and ambient air in New Jersey. 2001-2003.
- U.S. Forest Service, Apache National Forest, AZ. Timber marker/Firefighter.

Industrial Experience

- Research Chemist, Prisco, Inc., Newark, N.J. HPLC and GC method development, competitive products analysis, QA-QC. 2000-2001.
- American Chemical Society Summer Intern in Analytical Chemistry, Phillips Petroleum, Bartlesville, OK, Summer 1989. Developed automated titration methods for gas and oil sample analyses. Wrote analytical procedures manual for these methods.