

Curriculum Vitae – Monty L. Fetterolf

Department of Chemistry and Physics
University of South Carolina Aiken
471 University Parkway, Aiken SC 29801
May 2009

EDUCATIONAL BACKGROUND

Degrees – Ph.D. Physical Chemistry, University of California Santa Barbara, 1987; B.S. Chemistry, Wichita State University, 1981.

Academic Positions – Chair, Department of Chemistry & Physics, University of South Carolina Aiken, 1999 – Present. Professor, 2004 – Present; Associate Professor (tenured), 1994 – 2004; Assistant Professor, 1989 – 1994, University of South Carolina Aiken. Instructor: California State University Long Beach, 1989; California Polytechnic University, Pomona, CA, 1988; Pierce College, Los Angeles County, CA, 1988–89; University of California Santa Barbara, 1987.

Research Positions - Postdoctoral Research: University of Southern California, Directed by Dr. Arthur Adamson, 1987–1988; University of California Santa Barbara, Directed by Dr. Henry Offen, 1987.

Affiliations – American Chemical Society, Since 1982; Society for Applied Spectroscopy, Since 1987; Sigma Xi, The Scientific Research Society, Since 1990; South Carolina Academy of Science, Since 1990; National Science Teachers Association (College Division), Since 2002.

TEACHING

Contact Coursework – Introductory, General and Physical Chemistry, average 12 contact hours with laboratories per semester. (Three course release per year as department chair.) Student Evaluations of Teaching routinely Very Good to Excellent. Taught AP Chemistry Institute June 2004, 2006, 2007 and 2008.

Course Developments (Selected) – Developed courses “Chemical Analysis of an Urban Wetlands”; “Introduction to Physical Chemistry”; “Chemistry for AP Teachers.” Introduced MathCad calculation software in physical chemistry problem solving and graphing. Authored a web page for posting help sheets and exam, quiz, and homework answer keys. Authored in-house physical chemistry laboratory manual. Co-authored in-house lab manual for General Chemistry I and II. Assisted in developing the integrated lecture/lab format for General Chemistry I and II.

Independent Study – Have overseen senior research (24), independent studies (7), and honors contracts (4). Mentored total of 3 USCA Research Day poster presentations 2008 & 2009.

Teaching Honors – Finalist for the USCA Excellence in Teaching Award, Spring 2000; Nominated Spring 2005.

SERVICE

University System Service – Member of the President’s Search Committee for USCA Chancellor, 2000.

University Committee Service(Selected) – USCA Strategic Planning Committee, January 2007 – Present; Chair 2008 – Present. USCA Strategic Planning Action Team – Communications, (Co-chair 2002 – 2003). USCA Strategic Planning Subcommittee – Institutional Values, 2000 – 2001. Institutional Self-Study Education Committee, March 1999 – December 2000. Courses and Curricula Committee, 1998 – 2001. Campus Committee on First-year Policy for Entering Students, 1998 – 2000. Ad Hoc Committee for Formation of a Post Tenure Review Policy, 1997 – 1998. Scholastic Standing and Petitions Committee, 1994 – 1997 (Chair 1995 – 1997). Academic Services Committee, 1994 – 1997. Kaplan Writing Award Committee, 1997. Faculty Assembly Ad Hoc Committee – New Teaching Evaluation Form, 1994 – 1995. Task Force for Campus Computing, 1994 – 1995. Faculty Welfare Committee, 1991 – 1994 (Chair 1993 – 1994). Chair

Geology Tenure Track Position Search Committee, 1992. Academic Grievance Hearing Subcommittee Committee, (Chair, 1991).

University Department Service (Selected) – Chair, Department of Chemistry & Physics at USCA, July 1999 – Present. Co-author Department Self Study, American Chemical Society Program Certification Process, 2002. Academic Advisor for 10 – 20 students annually in chemistry and pre-pharmacy, 1990 – Present. Science Club Faculty Advisor, 1990 – 1997. Student Affiliates Chapter of the American Chemical Society Faculty Advisor, 1997 – Present. Pacesetter Faculty Facilitator New Student Orientation, Summers, 1992 – 1994, 1998 – 2007. Moderator for USCA Career Panel in Chemistry, 1994, 1995, 1997 – 2006.

Community Service (Selected) – Assistant Coordinator, DHEC Graniteville Clinic, 2005. Presenter at Science Education Enrichment Day 1989 – 1995, 1998 – 2002, 2007 & 2008. Judge Aiken County High School Academic Team Final 2002 – Present. Science Fair Judge, March 1991 – 1994. Co-leader National Chemistry Week Demonstration Show for local 6th graders at USCA, November 1995, 1996, and 1997. (Two shows per year, 750 students per year. Two shows November 1998; Leavelle McCampbell Middle School, Graniteville, 150 students and 40 3rd – 5th graders from Mead Hall School, Aiken.) Lecturer, University Science Technical Enrichment Program (USTEP), 1989 – 1995.

Professional Service (Selected) – Chair & Staff Member, American Chemical Society – Savannah River National Chemistry Olympiad Committee, 1993 – Present. Peer reviewer for Research and Productive Scholarship USC System Grants, 2002 – Present. Grader for AP Chemistry Exam, Clemson University, 2006, 2008, 2009. Author/Reviewer of GRE Questions for Educational Testing Service – 2008 & 2009. Chaired Chemistry & Biochemistry Session, South Carolina Academy of Science, USCA, 1994, 2002. Review Panelist for Department of Energy – Radiochemistry Education Grants Program, 2002. Proposal Reviewer for the Petroleum Research Fund – American Chemical Society, 1992 – 1995, 2002. Content/Copy Editor for eleven projects; Benjamin Cummings, Harper Collins, Marcel Dekker, 1995 – Present. Book Reviewer Chang's *Essential Chemistry*, McGraw-Hill, 1997.

Service Awards – Volunteer Recognition Award from South Carolina Department of Health and Environmental Control, 2007 (Graniteville chlorine spill follow-up health clinic). Recognition of Outstanding Service, American Chemical Society – Savannah River Section, 1991 – 1998, 2006, 2007.

SCHOLARLY ACTIVITY

Books – Cobb, Cathy, Fetterolf, Monty, Goldsmith, Jack *Crime Scene Chemistry for the Armchair Scholar*; Prometheus Publications, Amherst NY, **2007**.

Cobb, Cathy and Fetterolf, Monty *The Joy of Chemistry: The Amazing Science of Familiar Things*; Prometheus Publications, Amherst, NY, **2005** (named an Outstanding Academic Book, *Choice*, 2005).

Articles –

M. L. Fetterolf; *Journal of Chemical Education*, **2007**, 84, 1062; Enhanced Intensity Analysis of the Rotational-Vibrational Spectrum of HCl.

M. L. Fetterolf, H. V. Patel, J. M. Jennings; *Journal of Chemical and Engineering Data*, **2003**, 48, 831; Adsorption of Methylene Blue and Acid Blue 40 on Titania from Aqueous Solution.

Monty L. Fetterolf, Jack G. Goldsmith; *Journal of Chemical Education*, **1999**, 76, 1276; An Interactive Dry Lab Introduction to Vibrational Raman Spectroscopy Using Carbon Tetrachloride.

C. Wes Fountain, Jeanne Jennings, Cheryl McKie, Patrice Oakman, Monty L. Fetterolf; *Journal of Chemical Education*, **1997**, 74, 224. Viscosity of Common Seed and Vegetable Oils.

Monty L. Fetterolf, Henry W. Offen; *Journal of Physical Chemistry*, **1988**, 92, 3437; Reductive

Quenching of Ru(bpy)₃²⁺ at High Pressures.

Monty Fetterolf, Alan E. Friedman, Yun-Yen Yang, Henry Offen., Peter C. Ford; *Journal of Physical Chemistry*, **1988**, 92, 3760; Pressure Effects on the Photophysical Properties of the Platinum(II) Dimer Pt₂(POP)₄⁴⁻ and Related d⁸-d⁸ Dinuclear Complexes in Solution.

Monty L. Fetterolf and Henry W. Offen; *Inorganic Chemistry*, **1987**, 26, 107; Photosubstitution Reactions of Ruthenium(II) Polypyridyls at High Pressures.

Monty L. Fetterolf, Henry W. Offen; *Journal of Physical Chemistry*, **1986**, 90,1828; Luminescence Lifetimes of Ruthenium(II) Polypyridyls in H₂O and D₂O at High Pressures.

Mary E. Zawadski, Arthur W. Adamson, Monty Fetterolf, Henry W. Offen; *Langmuir*, **1986**, 2, 541; Effect of Pressure on the Adsorption of Tris(2,2'-bipyridine)ruthenium(2+) from Solution.

Monty L. Fetterolf and Henry W. Offen; *Journal of Physical Chemistry*, **1985**, 89, 3320; Luminescence of Ruthenium(II) and Osmium(II) Polypyridyls in Acetonitrile at High Pressures.

Turley, D., Fetterolf, M.L., Offen, H.W. *High Pressure in Science and Technology Materials Research Society Symposia Proceedings*, **1984**, vol. 22, part II, p 155; Luminescence in Solutions Under Pressure.

Presentations (Selected) – “One Hundred and Ten Minutes: Combining Lecture and Lab into One Class Period,” K. Pariyadath, M.L. Fetterolf, J.G. Goldsmith, and T.J. Moore, National Meeting American Chemical Society, San Francisco, CA, Spring 2000.

“Integrated Lab-Lecture in the General Chemistry Sequence: A Three-Semester Study,” K. Pariyadath, M.L. Fetterolf, J.G. Goldsmith, and T.J. Moore, National Meeting American Chemical Society, New Orleans, LA, Fall 1999.

“Dye Adsorption Onto Titanium Dioxide Particulates Correlated with the Ionic Charge of the Dye,” M.L. Fetterolf and Patrick Smallwood, South Carolina Academy of Science Meeting, Columbia, SC, Spring 1997.

“Environmental Monitoring with Fiber Optic and Electrochemical Sensors Via Radio Telemetry,” M.L. Fetterolf, Kathleen Dickey, and Deborah Davenport, South Carolina Academy of Science Meeting, Aiken, SC, Spring 1994.

Photodegradation of Chlorophenols in Aqueous Slurries of Titanium Dioxide Particulates,” M.L. Fetterolf and Jennifer Rhoads, South Carolina Academy of Science Meeting, Aiken, SC, Spring 1994.

“Adsorption and Photodegradation of 3- and 4-Chlorophenol in Aqueous Solutions of TiO₂ Particulates Under Acidic and Basic Conditions,” M.L. Fetterolf, M. Ramachandran, J. Scott Lewis, and Jennifer Rhoads, Mid-Atlantic/Southeast Regional American Chemical Society Meeting, Washington, D.C., Spring 1992.

“Photodegradation at Different Surface Coverages of 4-Chlorophenol Adsorbed from Aqueous Solution Onto Titanium Dioxide Particulates,” M.L. Fetterolf and J. Rhoads, Southeast Regional American Chemical Society Meeting, Richmond, VA, Fall 1991.

Peer Review – Peer reviewer for twelve Journal of Chemical Education articles, 2000 – Present.

Research Grants (Funded) – United States Environmental Protection Agency, Environmental Education Grants Program. Project titled “Enhanced Understanding of Environmental Issues and Teaching Skills for Area Middle School and High School Teachers Using Chemical Analysis of Rainwater Runoff from an Urban Wetlands Setting,” July 1999 – 2001, (\$4700).

American Chemical Society Petroleum Research Fund (nationally peer-reviewed) for work titled "Surface Studies of Methylene Blue on TiO₂ Particulates by ATR-FTIR," 1993 – 1996, (\$20,000).

Research and Productive Scholarship Grant, USC System 1990 – 1992, (\$2750).

Economic Enterprise Institute Grant, USCA, 1990 – 1991, (\$2500).

Vice Chancellor's Summer Research Incentive Grant, USCA, 1990, (\$500).

Research/Professional Consulting – SCUREF/WSRC & USCA, Faculty Liaison and/or Associate Scientist for Three Projects; Synthesis and Spectroscopic Investigations of Novel Hydrogen Storage Materials, 2007 – Present, (\$38,000); Modeling Organic Decomposition Products in Waste Tanks at SRS, 1998, (\$15,000); Environmental Monitoring with Fiber Optics Based Systems, 1993 – 94, (\$90,000).

Toups Technology, Inc., Largo, FL, Associate Scientist Testing Possible Fuel Gas, 1998.

Trantor Inc., Edgefield, SC, Associate Scientist Working to Determine Reason for Unexpected Gas Production in a Refrigeration Cell and How to Rectify Problem, 1991 – 1992.