CURRICULUM VITAE

**BRETT J. STANLEY**

Professor

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**EDUCATION**

**[1992]** *Doctor of Philosophy*, Chemistry, Utah State University, Logan, UT.

**[1987]** *Bachelor of Science*, Chemistry, University of Pittsburgh, Pittsburgh, PA.

**[1983]** Graduated from Blue Ridge High School, New Milford, PA.

**EXPERIENCE**

**[2004-present]** *Professor,* Department of Chemistry and Biochemistry, California State University, San Bernardino, CA.

**[2011-2017]** *Chair*, Department of Chemistry and Biochemistry, California State University, San Bernardino, CA.

**[2006-2011]** *Graduate Coordinator*, M.S. Environmental Sciences, California State University, San Bernardino, CA.

**[1999-2004]** *Associate Professor*, Department of Chemistry, California State University, San Bernardino, CA.

**[1994-1999]** *Assistant Professor*, Department of Chemistry, California State University, San Bernardino, CA.

**[1992-1994]** *Post-doctoral Research Associate*, Department of Chemistry, University of Tennessee, Knoxville, TN.

**[1988-1992]** *Research and Teaching Assistant*, Department of Chemistry, Utah State University, Logan, UT.

**[1987-1988]** *Teaching Assistant*, Department of Chemistry, University of Idaho, Moscow, ID.

**[1986-1987]** *Research Assistant*, Department of Chemistry, University of Pittsburgh.

**AWARDS/HONORS**

**[2005]** *Faculty/Staff Award of Special Appreciation*, Coyote Student Athlete Council, California State University, San Bernardino,

CA.

**[2004]** *Who’s Who Among America’s Teachers*, Educational Communications, Inc., Austin, TX.

**[1999]** *Outstanding Achievement in Professional Development Activities Award*, College of Natural Science, California State

University, San Bernardino, CA.

**[1998]** *Faculty/Staff Award of Special Appreciation*, Coyote Student Athlete Council, California State University, San Bernardino,

CA.

**[1997]** *Outstanding Achievement in Instructionally-Related Activities Award***,** School of Natural Science, California State University,

San Bernardino, CA**.**

**[1996]** *Faculty/Staff Award of Special Appreciation*, Coyote Student Athlete Council, California State University, San Bernardino,

CA.

**[1990-1991]** *Presidential Scholarship Award*, Utah State University, Logan, UT.

**AFFILIATIONS**

**[2018-present]** *Phi Kappa Phi* honor society, CSUSB chapter.

**[1999-2007]** *Sigma Xi* research society, Research Triangle Park, NC.

**[1998-present]** *Water Resources Institute*, California State University, San Bernardino, CA; Faculty Council.

**[1996-2005]** *California Separation Science Society*, San Francisco, CA.

**[1995-2002]** *Council on Undergraduate Research*, Asheville, NC.

**[1992-2002]** *Phi Kappa Phi* scholar, Baton Rouge, LA.

**[1989-present]** *American Chemical Society*, Washington, D.C., analytical chemistry division, chromatography sub-division.

**ACADEMIC COURSE DEVELOPMENT**

**Chemistry in the Modern World*.*** Course for non-science majors, representing a general introduction to chemistry and its importance in the everyday world. Fours per week + 3 hours of laboratory.

**Chemicals in Our Environment.** Primer course on environmental chemistry for non-science majors. Two hours per week, no laboratory. Text reader authored. Fully online version developed.

**Modern Quantitative Analysis*.*** First course in analytical chemistry for chemistry/science majors. Three hours per week + 6 hours of laboratory.

**Environmental Chemistry.** For chemistry/science majors, introduction, 2 hours per week, no laboratory.

**Instrumental Analysis.** Second course in analytical chemistry for B.S. - American Chemical Society Certified chemistry majors. Fours per week + 6 hours of laboratory.

**Graduate Seminar in Environmental Sciences.** For M.S. students in Earth & Environmental Sciences. Student projects developed, planned, and presented. Two hours per week.

# PROGRAM DEVELOPMENT

**Master of Science in Earth and Environmental Sciences.** Helped design, implement, and served as the first graduate coordinator of an interdisciplinary “Professional Science Master (PSM)” degree program with courses in chemistry, geology, geography, health science, information science, and others, beginning in 2006. Internship requirement. Post-internship research with faculty member bridging gap between academia and community agencies, organizations, and consulting companies.

**Quarter-to-Semester Conversion.** Department coordinator for transformation of the chemistry undergraduate curriculum and four degree programs from the quarter to the semester format. Team leader for the transformation of the M.S. PSM program to the semester system.

# RESEARCH

My research has primarily focused on retention mechanisms and modeling in gas and liquid chromatography (i.e. inverse chromatography), with the development of adsorption isotherm data acquisition, the modeling of the data so obtained with heterogeneous adsorption energy distributions, and the interpretations thereof in understanding more completely how separation occurs. This includes use of the data and models to probe interactions between receptor targets and ligands or drugs of interest. I have also focused on ion exchange media and environmental applications with perchlorate, flow injection analysis of cyanide in wastewater using both colorimetric and amperometric detection, and the study of proton exchange membrane degradation mechanisms in fuel cells. Currently we are investigating amino acids as precursors to disinfection by-products such as cyanide. I work with both undergraduate students in chemistry and M.S. students in earth and environmental sciences.

**PUBLICATIONS**

“Reliable Analysis of the Interaction between Specific Ligands and Immobilized Beta-2-Adrenoceptor by Adsorption Energy Distribution”, Q. Li, X. Ning, Y. An, B.J. Stanley, Y. Liang, J. Wnag, K. Zeng, F. Fei, T. Liu, H. Sun, J. Liu, X. Zhao, and X. Zheng, *Anal. Chem.*, **2018**, *90*, 7903-7911.

“Interlaboratory Study of Free Cyanide Methods Compared to Total Cyanide Measurements and the Effect of Preservation with Sodium Hydroxide for Secondary- and Tertiary-Treated Waste Water Samples”, B.J. Stanley and K. Antonio, *Water Env. Res.*, **2012**, *84*, 2010-2016.

“Utilization of Iodide as a Perchlorate-laden Resin Regenerating Solution and Isolation of Perchlorate from Simulated Groundwater Samples”, D.A. Gutierrez, K. Hanna, and B.J. Stanley, *Separation and Purification Technology*, **2008**, *61*, 469-473.

“Thermodynamic Characterization of Separations on Alkaline-Stable Silica-Based C18 Columns: Why Basic Solutes *May* Have Better Capacity and Peak Performance at Higher pH”, J. Samuelsson, A. Franz, B.J. Stanley and T. Fornstedt, *J. Chromatogr. A*, **2007**, *1163*, 177-189.

“Postnatal Manganese Exposure Attenuates Cocaine-induced Locomotor Activity and Reduces Dopamine Transporters in Adult Male Rats”, C.M. Reichel, J.J. Wacan, C.M. Farley, B.J. Stanley, C.A. Crawford and S.A. McDougall, *Neurotoxicol. Teratol.*, **2006**, *28*, 323-332.

“Heterogeneous Adsorption of 1-Indanol on Cellulose Tribenzoate and Adsorption Energy Distribution of the Two Enantiomers”, G. Götmar, D. Zhou, B.J. Stanley and G. Guiochon, *Anal. Chem.*, **2004**, *76*, 197-202.

“Analysis of Active Sites and Heterogeneity in Commercial Reversed-Phase Octadecylsilanated Silica with Numerically Calculated Sorption Distributions”, B.J. Stanley and J. Krance, *J. Chromatogr. A*, **2003**, *1011*, 11-22.

 “Heterogeneous Adsorption of β-Blockers on Immobilized Cel7A and Adsorption Energy Distribution of Two Enantiomers on a Chiral Phase”, G. Götmar, B.J. Stanley, T. Fornstedt and G. Guiochon, *Langmuir*, **2003**, *19*, 6950-6956.

 “Determination of Single Component Isotherms and Affinity Energy Distribution by Chromatography”, F. Gritti, G. Götmar, B.J. Stanley and G. Guiochon, *J. Chromatogr. A*, **2003**, *988*, 185-203.

 “Affinity Distributions of a Molecularly Imprinted Polymer Calculated Numerically by the Expectation-Maximization Method”, B.J. Stanley, P. Szabelski, Y.-B Chen, B. Sellergren and G. Guiochon, *Langmuir*, **2003**, *19*, 772-778.

 “Determination of the Thermodynamic Contribution to Peak Asymmetry of Basic Solutes in Reversed-Phase Liquid Chromatography”, B.J. Stanley, J. Krance and A. Roy, *J. Chromatogr. A.*, **1999**, *865*, 97-109.

“Estimation of the Adsorption Energy Distributions for the Jovanovic-Freundlich Isotherm Model with Jovanovic Local Behavior”, I. Quinones, B. Stanley and G. Guiochon, *J. Chromatogr. A..*, **1999**, *849*, 45-60.

"Calculation of the Hydrodynamic Contribution to Peak Asymmetry in High-Performance Liquid Chromatography Using the Equilibrium-Dispersive Model", B.J. Stanley, T.L. Savage and J.J. Geraghty, *Anal. Chem.*, **1998**, *70*, 1610-1617.

"The Consolidation of Particles and the Packing of Chromatographic Columns", G. Guiochon, T. Farkas, H. Guan-Sajonz, M. Sarker, B.J. Stanley and T. Yun, *J. Chromatogr. A.*, **1997**, *762*, 83-88.

"On the Reproducibility of Column Performance in Liquid Chromatography and the Role of the Packing Density", B.J. Stanley, C.R. Foster and G. Guiochon, *J. Chromatogr. A.*, **1997**, *761*, 41-51.

"Consolidation of the Packing Material in Chromatographic Columns Under Dynamic Axial Compression. IV. - Mechanical Properties of Some Packing Materials", B.J. Stanley, M. Sarker and G. Guiochon, *J. Chromatogr. A.*, **1996**, *741*, 174-184.

"Calculation of Adsorption Energy Distributions of Silica Samples Using Nonlinear Chromatography", B.J. Stanley and Guiochon, *Langmuir*, **1995**, *11*, 1735-1745.

"Using Parallel Supercomputers to Calculate Surface Energy Distributions from Adsorption Isotherms", B.J. Stanley, C. Halloy, and G. Guiochon, *J. Chem. Inf. Comput. Sci.*, **1995**, *35*, 110-114.

"Importance of the Accuracy of Experimental Data in the Nonlinear Chromatographic Determination of Adsorption Energy Distributions", B.J. Stanley and G. Guiochon, *Langmuir*, **1994**, *10*, 4278-4285.

"Analysis of the Surface Heterogeneity of Unmodified and Modified Silica by Capillary Inverse Gas-Solid Chromatography at Finite Dilution", M. Pyda, B.J. Stanley, M. Xie, and G. Guiochon, *Langmuir*, **1994**, *10*, 1573-1579.

"Analysis of the Heterogeneous Rate of Dissociation of Cu(II) from Humic and Fulvic Acids by Statistical Deconvolution", B.J. Stanley, K. Topper, and D.B. Marshall, *Anal. Chim. Acta*., **1994**, *287*, 25-34.

"Theoretical Study of the Accuracy and Precision of the Measurement of Single Component Isotherms by the Elution by Characteristic Points (ECP) Method", H. Guan, B.J. Stan­ley, and G. Guiochon, *J. Chroma­togr.*, **1994**., *659*, 27-41.

"Pressure-Jump Relaxation Apparatus Using Bipolar-Pulse Conductivity Detection", B.J. Stanley and D.B. Marshall, *Rev. Sci. Instr.*, **1994**, 65, 199-203.

"Numerical Estimation of Adsorption Energy Distributions from Adsorption Isotherm Data with the Expectation-Maximiza­tion Method," B.J. Stanley and G.A. Guiochon, *J. Phys. Chem.* **1993**, *97*, 8098-8104.

"Analysis of First-Order Rate Constant Spectra with Regular­ized Least-Squares and Expectation-Maximization: I. Thery and Numerical Characterization," B.J. Stanley, S.E. Bialkowski, and D.B. Marshall, *Anal. Chem.* **1993**, *65*, 259-267.

"Application of Microcomputer-Based Robust Regression Methods to Nonlinear Data Analysis," B.J. Stanley and D.B. Marshall, *J. Chem. Inf. Comput. Sci.* **1989**, *29*, 244-251.

**Conference Proceedings**

“The Analytical Chemistry of Cyanide in Treated Wastewater”, B.J. Stanley, Southwestern Analytical Professors (SWAP) 2011, University of California, Riverside, CA, January 29, 2011.

“Thermodynamic Characterization of New Generational Alkaline-Stable C18 Columns: Why Do Basic Compounds Show Better Performance at Alkaline pH?”, J. Samuelsson, B.J. Stanley and T. Fornstedt, 30th International Symposium on High Performance Liquid Phase Separations and Related Techniques, San Francisco, CA, June 19, 2006.

“Why Do Basic Solute Have Better Capacity and Peak Performance at Alkaline pH?”, J. Samuelsson, A. Franz, B. Stanley and T. Fornstedt, International Symposium on Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques, Baltimore, MD, May 16, 2006.

“Heterogeneous Adsorption of 1-Indanol on Cellulose Tribenzoate and Adsorption Energy Distribution of the Two Enantiomers”, G. Götmar, D. Zhou, B.J. Stanley and G. Guiochon, International Symposium on Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques, San Francisco, CA, July 1, 2003.

“Effect on the Enantiomer Elution Profiles of the Heterogeneity of a Molecularly-Imprinted Polymer Used as a Stationary Phase in Affinity Chromatography”, B.J. Stanley, Y.B. Chen, B. Sellergren and G. Guiochon, International Symposium on Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques, San Francisco, CA, July 1, 2003.

“Determination of Langmuir Sorption distributions of Basic Solutes in Reversed-Phase Chromatography Systems to Characterize Secondary Eluite-Stationary Phase Interactions”, B.J. Stanley and J.R. Krance, 221st National Meeting of the American Chemical Society, San Diego, CA, April 1, 2001.

“Determination of the Thermodynamic Contribution to Peak Asymmetry of Basic Solutes in Reversed-Phase Liquid Chromatography”, B.J. Stanley, 12th International Symposium, Exhibit & Workshops on Preparative/Process Chromatography, Ion Exchange, Adsorption/Desorption Processes & Related Separation Techniques, P-135, San Francisco, CA, May 24, 1999.

"Determination of the Thermodynamic and Hydrodynamic Contributions to Peak Asymmetry in HPLC", B.J. Stanley, T.L. Savage and J.J. Geraghty, Chromatography Award Symposium: Liquid Chromatography-Characterization and Novel Techniques, Division of Analytical Chemistry, #0120, 215th American Chemical Society National Meeting and Exposition, Dallas, TX, April 1, 1998.

"Production of Increased-Efficiency High Performance Liquid Chromatograph Columns", B.J. Stanley, First Annual Technology Transfer Symposium, Connecting Research & Economic Development for the 21st Century (CORE21), #29, Ontario, CA, February 24, 1998.

"Estimation of the Adsorption Energy Distributions for the Heterogeneous Surface Jovanovic-Freundlich Isotherm Model and Jovanovic Local Behavior", I. Quinones, B. Stanley and G. Guiochon, 1997 International Symposium on Preparative Chromatography, Ion Exchange, Adsorption/Desorption Processes and Related Techniques, P-220, Washington, DC, 1997.

"Packing Behavior of C18 Reversed-Phase Stationary Phases in Analytical, Semi-Preparative, and Axial Compression Preparative Columns", B.J. Stanley, C.R. Foster, G. Guiochon and M. Sarker, 20th International Symposium on High Performance Liquid Phase Separations, L-2404, San Francisco, CA, 1996.

"Using Parallel Supercomputers to Efficiently Calculate Surface Energy Distributions from Adsorption Isotherms", B.J. Stanley and C. Halloy, 1994 Scalable High Performance Computing Conference, Knoxville, TN, 1994.

"Estimation of Surface Energy Distributions from Gas/Solid Adsorption Isotherms", B.J. Stanley and G. Guiochon, Symposium on Inverse Chromatog­ra­phy, Polymeric Materials Science and Engineering Division, #247, 207th ACS National Meeting, San Diego, CA, 1994.

**Student Conference Proceedings**

“Holding Time Study of Cyanide in Wastewater Effluent Samples by Colorimetric Flow Injection Analysis”, S. Ugrin, A. Obligado Rebong, and B.J. Stanley, Southern California Undergraduate Research Conference in Chemistry and Biochemistry, California State University Channel Islands, April 7, 2012.

“The Analysis of Cyanide in Wastewater”, K. Antonio, B.J. Stanley, and J. Noblet, 25th Annual CSU Research Competition, California State University Fullerton, May 5, 2011.

 “Hydrogen Fuel Cell Degradation”, H. Murphy, T.Usher, R. Jenkins, B. Stanley, A. Williams, A. Rodriguez, K. Kloesel, Southern California Conference for Undergraduate Research, Pepperdine University, November 20, 2010.

“The Analysis of False Positive Cyanide in Wastewater Due to Chlorination and Preservation”, K. Antonio and B.J. Stanley, Southern California Conference for Undergraduate Research, Pepperdine University, November 20, 2010.

“The Study of Accelerated Nafion® Degradation by X-ray and Fenton’s Reagents”, A. Williams and B.J. Stanley, 20th Annual CSUSB Student Research Conference, June 9, 2010.

“The Analysis of Cyanide in Wasterwater”, K. Antonio, H. Lutes, J. Noblet and B.J. Stanley, Southern California Undergraduate Research Conference in Chemistry and Biochemistry, University of Southern California, April 25, 2009.

“Determining X-ray Dose Rate for Nafion”, T. Tassano, T. Usher and B.J. Stanley, Southern California Conference on Undergraduate Research, California State Polytechnic University, Pomona, November 22, 2008.

“The Effect of X-ray Exposure on Nafion® Membranes, A. Rodriguez, A. Williams and B.J. Stanley, Southern California Conference on Undergraduate Research, California State Polytechnic University, Pomona, November 22, 2008.

“The Effects of Fenton’s Reagent on Nafion”, A. Williams, A. Rodriguez and B.J. Stanley, Southern California Conference on Undergraduate Research, California State Polytechnic University, Pomona, November 22, 2008.

“The Degradation of Nafion Membranes”, Greg Barding, B.J. Stanley and T. Usher, 19th CSUSB Student Research Conference, June 2008.

“The Degradation of Nafion Membranes”, Greg Barding, B.J. Stanley and T. Usher, 22nd CSU Student Research Competition, May 2008.

“The Degradation of Nafion Membranes”, Greg Barding, B.J. Stanley and T. Usher, Southern California Conference on Undergraduate Research, November 17, 2007.

“Utilization of Iodide as a Perchlorate-Laden Resin: Regenerating Solution and Isolation of Perchlorate from Simulated Ground Water Samples”, D. Gutierrez and B.J. Stanley, 21st Annual California State University Student Research Competition, Dominguez Hills, CA, May, 2007.

“Detection of Radiation-Induced Nafion Degradation”, G. Johnson and B.J. Stanley, 21st Annual California State University Student Research Competition, Dominguez Hills, CA, May, 2007.

“Reactive Ion Exchange of Perchlorate”, D. Gutierrez and B.J. Stanley, Ronald E. McNair Student Conference, Lake Lawn Lodge, Delavan, WI, September, 2007.

“Reactive Ion Exchange of Perchlorate”, D. Gutierrez and B.J. Stanley, Ronald E. McNair Scholars Colloquium, California State University, San Bernardino, CA, August, 2005.

“Modeling Peak Profile Asymmetry of Basic Compounds in Reversed-Phase High Performance Liquid Chromatography”, J.R. Krance and B.J. Stanley, 221st National Meeting of the American Chemical Society, San Diego, CA, April 2, 2001.

“Determination of the Thermodynamic Contribution to Peak Asymmetry of Basic Solutes in Reversed-Phase Liquid Chromatography”, A. Roy and B.J. Stanley, 14th Annual Student Research Competition, California State Polytechnic University, Pomona, CA, May 5, 2000.

“Determination of the Thermodynamic Contribution to Peak Asymmetry of Basic Solutes in Reversed-Phase Liquid Chromatography”, A. Roy and B.J. Stanley, 1999/2000 Student Research Competition, California State University, San Bernardino, CA, March 1, 2000.

“Prediction of Chromatography Peak Tailing Using Isotherms", J.J. Geraghty and B.J. Stanley, 8th Annual CSUSB Student Research Conference, California State University, San Bernardino, CA, June 5, 1998.

"Prediction of Chromatography Peak Tailing from Isotherms", J.J. Geraghty and B.J. Stanley, 8th Annual New Directions Undergraduate Research Conference, University of California, Riverside, CA, May 16, 1998.

"Prediction of Chromatography Peak Tailing from Isotherms", J.J. Geraghty and B.J. Stanley, 12th Annual CSU Student Research Competition, California State University, Chico, CA, May 2, 1998.

"Prediction of Chromatography Peak Tailing from Isotherms", J.J. Geraghty and B.J. Stanley, 1997-98 Student Research Competition, California State University, San Bernardino, CA, March 11, 1998.

"Chromatogram Peak Prediction in C18 Reversed-Phase High Performance Liquid Chromatography", J.J. Geraghty and B.J. Stanley, Southern California Conference on Undergraduate Research, California State University, Los Angeles, CA, November 22, 1997.

"The Impact of Different Packing Methods on the Results in Reversed-Phase High Performance Liquid Chromatography", E.R. Chandler and B.J. Stanley, Southern California Conference on Undergraduate Research, Occidental College, Los Angeles, CA, November 23, 1996.

"The Effects of Packing Solvent On Column Performance and Reproducibility in Reversed-Phase HPLC", K. Young and B.J.

Stanley, Ronald E. McNair Student Conference, Lake Lawn Lodge, Delavan, WI, November 9, 1996.

"The Effects of Packing Solvent On Column Performance and Reproducibility in Reversed Phase HPLC", K. Young, and B.J. Stanley, McNair Scholars Colloquium, California State University, San Bernardino, CA, August, 1996.

**M.S. Projects, Chair**

*“Comparison and Evaluation of Black Carbon and Elemental Carbon Instrumentation in a near Roadway Environment”*, Brandon J. Feenstra, California State University, San Bernardino, CA June 2013.

*“A Comprehensive Approach to Alluvial Fan Management – A Case Studey of Travertine Point, Coachella Valley”*, Jason J. Thomas, California State University, San Bernardino, CA, March 2013.

*“An Applied Investigation of Nafion Membranes in PEM Fuel Cells: Durability Issues”*, Amanda R. Rodriguez, California State

 University, San Bernardino, CA, September 2010.

*“Nutrient Analysis of the Estuarine and River Waters of the Santa Margarita River Estuary”*, Barbara E. Long, California State

 University, San Bernardino, CA, December 2009.

*“In Situ Bioremediation of Perchlorate in Soil and Groundwater”*, David C. Bertolacci, California State University, San Bernardino,

 CA, December 2009.

*“Cyanide Analysis in Wastewater”*, Heather M. Lutes, California State University, San Bernardino, CA, September 2009.

*“A Cost Benefit Analysis for the Denitrification of Wastewater Utilizing Wetlands Versus Wastewater Treatment Facilities”*, Jennifer

 M. Bell, California State University, San Bernardino, CA, June 2008.

**Invited Presentations**

“Analysis of Cyanide in Treated Wastewater and the Effect of Chlorination and Sample Preservation”, B.J. Stanley, undergraduate science seminar series, University of La Verne, CA, February 21, 2013.

“Analysis of Cyanide in Wastewater and the Effect of Chlorination and Sample Preservation”, B.J. Stanley, undergraduate chemistry seminar series, University of Redlands, CA, November 27, 2012.

“Degradation of Nafion in Proton Exchange Membrane Fuel Cells (PEMFCs)”, B.J. Stanley, graduate seminar series, Department of Chemistry, University of California, Riverside, November 8, 2010.

“Hydrogen Fuel Cells: What Are They, Where We Are, and Challenges for the Future”, San Bernardino County Annual Rideshare Luncheon, San Bernardino, 2009.

“The Science of Perchlorate”, Water Resources Institute Open House, California State Universtiy, San Bernardino November, 2005.

“Determination of Adsorption Heterogeneity Using Chromatographic Techniques and Expectation-Maximization”, B.J. Stanley, departmental seminar series, Department of Chemistry, California State University, San Bernardino, October 30, 2003.

"Determination of the Thermodynamic and Hydrodynamic Contributions to Peak Asymmetry in HPLC", B.J. Stanley, T.L. Savage and J.J. Geraghty, Chromatography Award Symposium: Liquid Chromatography-Characterization and Novel Techniques, Division of Analytical Chemistry, #0120, 215th American Chemical Society National Meeting and Exposition, Dallas, TX, April 1, 1998.

"Fundamental Studies of Peak Shape in High Performance Liquid Chromatography", Phenomenex, Inc., Torrance, CA, August 5, 1997.

"Fundamental Studies of Column Performance in High Performance Liquid Chromatography", departmental seminar series, Department of Chemistry, California State University, San Bernardino, April 11, 1997.

**Financial Support**

*“Investigation of Interferences in Free Cyanide Testing of Wastewater”*, B.J. Stanley, $19,586, Supplemental Environmental Project, California Regional Water Quality Control Board, Santa Ana Region, Riverside, CA, 2011.

*“STEM Workforce Development at a HSI”*, T. Usher and B.J. Stanley, $10,000, California Space Grant Consortium, 2010.

*“Interdisciplinary Fuel Cells Studies of Fuel Cell Technology”*, B.J. Stanley and T. Usher, $80,000, Leonard University

 Transportation Center, California State University, San Bernardino, CA, 2008.

*“Analysis of Cyanide and Cyanide Interferences in Wastewater”*, B.J. Stanley and J. Noblet, $50,000, jointly sponsored by San

 Bernardino Water Department and a Supplemental Environmental Project through the California Regional Water Quality

 Control Board, 2008.

*“Degradation Processes in Fuel Cells”*, B.J. Stanley and T. Usher, $5,000, William and Barbara Leonard Transportation Center,

California State University, San Bernardino, CA, 2007.

*“Degradation of Nafion Polymer Electrolyte Membranes in Hydrogen Fuel Cells”*, B.J. Stanley and T. Usher, $20,000, California

Space Grant Foundation, 2006.

*“Fuel Cell Membrane Degradation, Preparative Chromatography of Perchlorate and Capillary Electrophoresis of Proteins”*, B.J.

Stanley, $5,000, College of Natural Sciences, CSUSB, San Bernardino Research Pod, Summer 2006.

*“Extraction and Preparative Chromatography of Perchlorate from Natural Groundwater”*, B.J. Stanley and J. Noblet, $20,000, WRI

Supplemental Environmental Program award, Water Resources Institute, CSUSB, Fall 2005.

*“Perchlorate Reduction by Reactive Ion Exchange”*, B.J. Stanley, $4,944, Faculty Development Mini-Grant, California State

University, San Bernardino, Fall 2004.

*“A Proposal To San Bernardino Valley Municipal Water District”*, J. Davis, B. Bierschback, D. Rickard and B.J. Stanley, $15,260,

April 21, 2003.

*“Adsorption Modeling and Data Acquisition of Purification Materials Using Chromatographic Methods”,* B.J. Stanley, $7,000, Water

Resources Institute, California State University San Bernardino, 2002.

*“Determination of Langmuir Sorption Distributions for the Prediction of Band Tailing in High Performance Liquid*

*Chromatography”,* B.J. Stanley, $30,000, American Chemical Society, Petroleum Research Fund, 1999.

*"A Unified Plan for Mathematical and Molecular Modeling Data Analysis and Chemical Communication in the Laboratory*

*Curriculum",* Cousins, K., Mantei, K., Stanley, B.J. and Tate J., $41,441, National Science Foundation, Instrumentation and Laboratory Improvement (ILI), 1998.

*"Model Design for the Optimization of Experimental Conditions for the Packing of Reversed-Phase High Performance Liquid*

*Chromatography Columns",* Stanley, B.J., $3,048.50, Faculty Development Mini-Grant, California State University, San Bernardino, 1997.

*"A Novel Program for the Development of Industrially Relevant GC/MS Experiments for the Undergraduate Curriculum Using*

*Student Liaisons",* Cousins, K., Maynard, D., Stanley, B.J., Smith, D. and Tate, J., $20,000, Dreyfus Foundation, 1996.

*"Evaluation of Heterogeneous Partitioning, Adsorption, and Hydrodynamics with Respect to Peak Asymmetry in Column Liquid*

*Chromatography"*, Stanley, B.J., $30,000, Cottrell Science Award, Research Corporation, 1995.