PAUL L. EDMISTON
CURRICULUM VITAE

Professional Preparation:

Pepperdine University	Chemistry	B.S. 1993
University of Arizona	Chemistry/Biochemistry	Ph.D. 1997

Academic Appointments:

Theron and Dorothy Peterson Professor of Chemistry	2010-
Associate Professor of Chemistry, College of Wooster	2005-2010
Assistant Professor of Chemistry, College of Wooster	1999-2005
Camille and Henry Dreyfus Fellow, College of Wooster	1997-1999

Sabbatical Appointments:

Visiting Scholar, The Ohio State University, Dr. Umit Ozkan Lab	2013-2015
Research Fellow, Georgia Tech Research Institute	2009-2012

Non-Academic Positions:

Chief Science Officer ABS Materials, Wooster, Ohio	2008- 2016

Awards:

Popular Mechanics, Breakthrough of the Year, 2011
NorTech Gold Metal for Advanced Materials, 2010
MIT Clean Energy Prize, Clean Hydrocarbons. 2009
National Science Foundation CAREER Award, 2003
Society of Applied Spectroscopy Graduate Student of the Year Award, 1997
American Chemical Society Fellowship, Analytical Division, 1996

Publications: 61 since 1993; 26 since 2015
Awarded Patents: 14
Research Grant Funding: $5.4 million since 1999 (PI or Co-PI awards)

Profession Boards and Committees:

National Science Foundation Advisory Committee (CHEM): Nexus of Water and Agriculture. August 2013-July 2014
U.S. EPA Technical Advisory Board for Analytical Methods to Monitor Drinking Water Impacts of Hydraulic Fracturing, 2013.
National Science Foundation Committee of Visitors (IIP). April 2013.
National Science Foundation Water Remediation Proposal Review Panelist. Dec 2010.
National Science Foundation Committee of Visitors (CHEM). February 2004.
American Chemical Society Analytical Chemistry Graduate Fellowship Committee, 2000-2021, Co-Chair
Pfizer Graduate Travel Grants Committee: Division of Analytical Chemistry, American Chemical Society, Chairperson 2002-2008.

Professional Organizations:

American Chemical Society

Publications:

Edmiston, Paul, Alexa Bencic*, Bella Coenen*, Riley McErlean*, Olivia Wenger, Ethan Scott, Jennifer Hershberger, and Brandon Smith. Serum Metabolites in Individuals with Pccb C. 1606a> G (P. Asn536asp) Variant Propionic Acidemia Examining Correlations with Dilated Cardiomyopathy." Available at SSRN 5240557.

Hunoor, A., Patil, S., Naughton, E., Gyamfi, J.N., Nwankor, C.M., Conroy, D., Jawdekar, T., Gunduz, S., Edmiston, P. and Ozkan, U.S., Effect of the Aromatic Content of Organosilica Supports on Aqueous Phase Phenol Hydrogenation. *ChemCatChem*, p.e202500344. (2025)

Patil, S.S., Gyamfi, J.N., Gilliespie, L., Khalifa, Y., Gunduz, S., Edmiston, P.L. and Ozkan, U.S., 2025. Amine-incorporated bridged polysilsesquioxane as a catalyst support for aqueous phase phenol hydrogenation. Catalysis Today, p.115567. (2025)

Ozkan, Umit S., Anagha Hunoor, Snehal Patil, Nisha Iyer, Dan Coroy, Seval Gunduz, Paul Edmiston, and Dan Conroy. Aryl-Bridged Polysilsesquioxanes as Support for Aqueous Phase Catalytic Phenol Hydrogenation: Effect of Hydrophobicity and Organic Content of the Support. *ChemCatChem:* e202401935 (2025).

Ailawar, S., Hunoor, A., Edmiston, P.L. and Ozkan, U.S., Aqueous Phase Hydrogenation of Toluene over Ru Catalysts Supported on Swellable Organically Modified Silica (SOMS). Industrial & Engineering Chemistry Research, 64(2), pp.1072-1084. (2024)

Edmiston, P.L., Hill, N., Hershberger*, R., Hartmann*, H., Carter, E. and Divine, C., 2023. Laboratory validation of an integrative passive sampler for per-and polyfluoroalkyl substances in water. *Environmental Science: Water Research & Technology.* 9, 1849-1861, (2023).

Edmiston, P.L., Carter, E., Toth, K., Hershberger, R.*, Hill, N.*, Versluis, P., Hollinden, P., Divine, C. Field evaluation the Sentinel™ integrative passive sampler for the measurement of per- and polyfluoroalkyl substances in water using a modified organosilica adsorbent. *Groundwater Monitoring & Remediation* (2023) *in press.*

Kim, Y.,* Pike, K. A.*, Gray, R., Sprankle, J. W.*, Faust, J. A., & Edmiston, P. L. Non-targeted identification and semi-quantitation of emerging per-and polyfluoroalkyl substances (PFAS) in US rainwater. *Environmental Science: Processes & Impacts. 25,* 1771 - 1787 (2023)

Hunoor, A., Patil, S., Edmiston, P. L., & Ozkan, U. S. Animated organic-inorganic hybrid materials and their use as catalyst scaffolds. *Catalysis Today.* (2022).

Huff C. A., Gordon, C., Hartmann, H.A.*, Bartell, S.E., Ansah, E., Yan, T., Li, B., Dampha, N.K., Edmiston, P.L., Novak, P.J. and Schoenfuss, H.L., Contaminants of Emerging Concern in the Lower Volta River, Ghana, West Africa: The Agriculture, Aquaculture, and Urban Development Nexus. *Environmental toxicology and chemistry*, *41*(2), 69-381 (2022).

Ailawar, S., Hunoor, A., Basu, D., Rudzinski, B., Burel, L., Millet, J.M.M., Miller, J.T., Edmiston, P.L. and Ozkan, U.S. Aqueous phase hydrodechlorination of trichloroethylene using Pd supported on swellable organically modified silica (SOMS): Effect of support derivatization. *Journal of Catalysis*, *411*, pp.15-30. (2022).

Hartmann, H.A.*; Hefner, C.;* Cater, E.; Liles, D.; Divine, C.; Edmiston, P.L; Passive Sampler Designed for Per- and Polyfluoroalkyl Substances Using Polymer-Modified Organosilica Adsorbent. *AWWA Water Science,* 3, e1237 (2021).

Pike, K.A.*, Edmiston, P.L., Morrison, J.J. and Faust, J.A., Correlation Analysis of Perfluoroalkyl Substances in Regional US Precipitation Events. *Water Research*, 190, (2021)

Ailawar, S., Hunoor, A., Khalifa, Y., Miller, J.T., Edmiston, P.L. and Ozkan, U.S. Elucidating the Role of Ethanol in Aqueous Phase Hydrodechlorination of Trichloroethylene Over Pd Catalysts Supported on Swellable Organically Modified Silica (SOMS). *Applied Catalysis B: Environmental*, 285, p.119819. (2021)

Ailawar, S., Hunoor, A., Rudzinski, B., Celik, G., Burel, L., Millet, J.M., Miller, J.T., Edmiston, P.L. and Ozkan, U.S., On the Dual Role of the Reactant During Aqueous Phase Hydrodechlorination of Trichloroethylene (HDC Of TCE) Using Pd Supported on Swellable Organically Modified Silica (SOMS). *Applied Catalysis B: Environmental*, 291, p.120060. (2021).

Pitell, S.E.*; Pham, D.*; Graham, A.L.*; Edmiston, P.L. Function and Structural Stability of Protein Adsorbed to Swellable Organosilica. *Microporous and Mesoporous Material.* 296, 109-115 (2020).

Basu, D., Ailawar, S., Celik, G., Edmiston, P., Ozkan, U. S. Effect of High Temperature On Swellable Organically Modified Silica (SOMS) and its Application For Preferential CO Oxidation in H_2 Rich Environment. *ChemCatChem* 12, 1-17 (2020).

Stebel, E.K.*; Pike, K.A.*; Nguyen, H.*; Hartmann, H.A.*; Klonowski, M.J.*; Lawrence, M.G.* Rachel M. Collins, R.M.*; Hefner, C.E.* Edmiston, P.L. Absorption of Short-Chain to Long-Chain Perfluoroalkyl Substances Using Swellable Organically Modified Silica." *Environmental Science: Water Research & Technology* 5, 1854-1866 (2019).

Molé, R.A.*; Good, C.J.*; Stebel, E.K.*; Higgins, J.F.*; Pitell S.A.*; Welch A.R.*; Minarik, T.A.; Schoenfuss, H.L.; Edmiston, P.L. Correlating Effluent Concentrations and Bench-scale Experiments to Assess the Transformation of Endocrine Active Compounds in Wastewater by UV or Chlorination Disinfection. *Chemosphere*, 226, 565-575 (2019).

Celik, G., Ailawar, S. A., Gunduz, S., Edmiston, P. L., Ozkan, U. S. Formation of Carbonaceous Deposits on Pd-based hydrodechlorination catalysts: Vibrational spectroscopy investigations over Pd/Al_2O_3 and Pd/SOMS. *Catalysis Today* 323, 129-140 (2019).

Celik, G.; Ailawar, S.A.; Gunduz, S.; Miller, J.T.; Edmiston, P.L. Ozkan, U.S. Aqueous-Phase Hydrodechlorination of Trichloroethylene over Pd-Based Swellable Organically Modified Silica: Catalyst Deactivation Due to Sulfur Species. *Industrial & Engineering Chemistry Research* 58, 4054-4064 (2019).

Celik, G.; Ailawar, S.; Sohn, H.; Tang, Y.; Tao, F.;Miller, J.T.; Edmiston, P.L.; Ozkan, U.S. Swellable Organically-modified Silica (SOMS) as a Catalyst Scaffold for Catalytic Treatment of Water Contaminated with Trichloroethylene. *ACS Catalysis* 8, 6796-6809 (2018).

Edmiston, P.L. Carter K.A.*; Graham, A.L.*; Gleason, E.J.* Chemisorption of Microcystins to a Thiol and Amine Functionalized Organosilica. *Separation and Purification Technology* 197, 244-252 (2018).

Edmiston, P.L.; Gilbert, A.R.*; Harvey, Z.*; Mellor, N.* Adsorption of Short Chain Carboxylic Acids from Aqueous Solution by Swellable Organically Modified Silica Materials. *Adsorption* 24, 53-63 (2018).

Celik, G., Ailawar, S.A., Gunduz, S., Miller, J.T., Edmiston, P.L. and Ozkan, U.S., Aqueous-phase Hydrodechlorination of Trichloroethylene over Pd-based Swellable Organically-Modified Silica (SOMS). *Applied Catalysis B: Environmental,* 239, pp.654-664.

Sohn, H.; Celik, G.; Gunduz, S.; Majumdar, S.S.; Dean, S.L; Edmiston, P.L; Ozkan U.S. Effect of High-Temperature on the Swellable Organically-Modified Silica (SOMS) and Its Application to Gas-Phase Hydrodechlorination of Trichloroethylene. *Applied Catalysis B Environmental* 209, 80-90 (2017).

Sohn, H.; Celik, G., Gunduz, S.; Dean, S.L; Painting, E.;* Edmiston, P.L; Ozkan U.S. Hydrodechlorination of Trichloroethylene over Pd Supported on Swellable Organically-Modified Silica (SOMS). *Appl. Catal. B.* 203, 641-653 (2017).

Edmiston, P.L.; West, L.J.*; Chin, A.*; Mellor, N.* Barth, D.* Adsorption of Gas Phase Organic Compounds by Swellable Organically Modified Silica (SOMS). *Ind. Eng. Chem. Res.* 55, 12068-12079 (2016).

Edmiston, P.L.; Swellable, Nanoporous Organosilica for Extended and Triggered Release, *Cosmetics and Toiletries: Applied Science*, 754-762 (2013).

Edmiston, P.L.; Bilge and Ballast Water Treatment Using Nanotechnology. In *Aquananotechnology,* Ed. David Reisner, CRC Press, Boca Raton, FL (2014).

Edmiston, P.L.; Jolly, S. Nanoengineered Organosilica Materials for the Treatment of Produced Water. In *Aquananotechnology,* Ed. David Reisner, CRC Press, Boca Raton, FL (2014).

Edmiston, P.L.; Osborne, C.; Reinbold, K.P.; Pickett, D.C.*; Underwood, L.A. Pilot Scale Testing Swellable Organosilica Nanoscale Zero-Valent Iron for In Situ Remediation of Trichloroethylene. *Remediation Journal*, 22, 105-121 (2011).

Edmiston, P.L.; Campbell, D.P.; Gottfried, D.S.; Baughman, J.*; Timmers, M.M.* Detection of Trinitrotoluene in the Parts-per-Trillion Range Using Waveguide Interferometry, *Sensors & Actuators B.* 143, 574-582 (2010).

Edmiston, P.L.; Underwood, L.A.* Absorption of Dissolved Organic Species from Water Using Organically Modified Silica that Swells. *Separation and Purification Technology* 66, 532-540 (2009).

Burkett, C. M.*; Underwood, L. A.*, Volzer, R. S.*; Baughman, J. A.*; Edmiston, P. L. Organic-Inorganic Hybrid Materials that Rapidly Swell in Non-Polar Liquids: Nanoscale Morphology and Swelling Mechanism. *Chemistry of Materials* 20, 1312-1321 (2008).

Jourden, M. J.*; Clarke, C. N.*; Palmer, A. K.*; Barth, E. J.*; Prada, R. C.*; Hale, R. N.*; Fraga, D. Snider, M. J.; Edmiston, P. L. Changing the Substrate Specificity of Creatine Kinase from Creatine to Glycocyamine: Evidence for a Highly Evolved Active Site"*Biochim. Biophys. Acta,* 1774, 1519-1527 (2007).

Walker, N. R.*; Linman M. J.*; Timmers, M. M.*; Dean S. L.*; Burkett, C. M.*; Lloyd, J. A.*; Keelor, J. D.*; Baughman, B. M.*; Edmiston, P. L.. Selective Detection of Gas-Phase TNT by Integrated Optical Waveguide Spectrometry Using Molecularly Imprinted Sol-Gel Sensing Films. *Analytica Chimica Acta*, 593, 82-91 (2007).

Ohren, J. F.; Kundracik, M. L.*; Borders, C. L.; Edmiston P. L.; and Viola R. E. Structural Asymmetry and Intersubunit Communication in Muscle Creatine Kinase. *Acta Cryst*. D63, 381-389 (2007).

Carlson, C. A.; Lloyd, J. A.; Dean, S. L.; Walker, N. R., Edmiston, P. L. Sensor for Fluorene Based on the Incorporation of an Environmentally Sensitive Fluorophore Proximal to a Molecularly Imprinted Binding Site, *Anal. Chem*., 78 (11), 3537 -3542 (2006).

Burkett, C. M.*; Edmiston P. L.; Highly Swellable Sol-Gels Prepared by Chemical Modification of Silanol Groups Prior to Drying. *J Non-Crystalline Solids* ,*351* , 3174-3178 (2005).

Jourden, M. J.*; Geiss, P.*; Thomenius, M. J.*; Horst, L. A.*; Barty, M. M.*; Brym, M. J.*; Mulligan, G.B.*; Almeida, R.M.*; Kersteen, E.A.*; Myers, N.R.*; Snider, M. J.; Borders Jr., C. L.; Edmiston, P.L.; Transition State Stabilization by Six Arginines Clustered in the Active Site of Creatine Kinase. *Biochim. Biophys. Acta 1751* , 178-183 (2005).

Cox, J. M.*, Davis, C. A.*, Chan, C.*, Jourden, M. J.*, Jorjorian, A. D.*, Brym, M. J.*, Snider, M. J., Borders, Jr., C. L., Edmiston, P. L. Generation of an Active Monomer of Rabbit Muscle Creatine Kinase by Site-Directed Mutagenesis: The Effect of Quaternary Structure on Catalysis and Stability. *Biochemistry 42*, 1863-1871 (2003).

Borders, C. L.; MacGregor, K. M.*; Edmiston, P. L.; Gbeddy, E. R. K.*; Thomenius, M. J.*; Mulligan, G. B.*; Snider, M. J. Creatine Kinase: Asparagine 285 Plays a Key Role in Transition State Stabilization and Determination of the Catalytic Mechanism. *Protein Sci. 12*, 532-537 (2003).

Lloyd, J. A.*; Edmiston, P. L. Preferential Extraction of Hydrocarbons from Fire Debris Samples by Solid Phase Microextraction. *Journal of Forensic Sciences.* 48, 130-134 (2003).

Graham, A. L.*, Carlson, C. A.*, Edmiston. P. L. Development and Characterization of Molecularly Imprinted Sol-Gel Materials for the Selected Detection of DDT. *Anal. Chem*. *74*, 458-467 (2002).

Edmiston, P. L. A New Start to Advanced Analytical Laboratory: Comparison of the Performance Characteristics of Various Instruments. *J. Chem. Ed*. *79*(5), 616-618 (2002).

Borders, C. L. Snider, M. J., Wolfenden, R., Edmiston, P. L. Determination of the Affinity of Each Component of a Composite Quaternary Transition-State Analogue Complex of Creatine Kinase. *Biochemistry*, *41*, 6995-7000. (2002).

Thompson, R. Q. and Edmiston, P. L. Ohio's Crime Solvers: Analytical Chemistry Students Making the Case for Homicide. *Anal. Chem. 73*, 678A-684A (2001).

Edmiston, P. L., Schavolt, K. L.*, Kersteen, B. A.*, Moore, N. R.*, Borders C. L. Kinetic Analysis of R95 Mutants of Rabbit Muscle Creatine Kinase, *Biochem. Biophys. Acta*, *1546*, 291-298 (2001).

Edmiston, P. L. and Williams, T. R. An Analytical Experiment in Error Analysis: Repeated Determination of Glucose Using Commercial Glucometers. *J. Chem. Educ*.*77*, 377-379 (2000).

Edmiston, P. L. and Saavedra, S. S. Molecular Orientation Distributions in Protein Films III. Yeast Cytochrome *c* Films Immobilized on Pyridine Disulfide Capped Phospholipid Bilayers. *Biophys. J. 74*, 999-1006 (1998).

Edmiston, P. L. and Saavedra, S. S. Molecular Orientation Distribution in Protein Films IV. A Multilayer Composed of Yeast Cytochrome *c* Bound through an Intermediate Streptavidin Layer to a Planar Supported Phospholipid Bilayer. *J. Am. Chem. Soc. 120*, 1665-1671 (1998).

Wood, L. L., Cheng, S. S., Edmiston, P. L. and Saavedra, S. S. Molecular Orientation Distributions in Protein Films II. Site Directed Immobilization of Yeast Cytochrome *c* on Thiol-Capped, Self-Assembled Monolayers." *J. Am. Chem. Soc. 119*, 571-576 (1997).

Edmiston, P. L., Lee, J. E., Cheng, S. S. and Saavedra, S. S. Molecular Orientation Distributions in Protein Films. I. Cytochrome *c* Adsorbed to Substrates of Variable Surface Chemistry.", *J. Am. Chem. Soc. 119*, 560-570 (1997).

Edmiston, P. L. and Saavedra, S. S. Fabrication and Characterization of Uranium Oxide Doped Sol-Gel Planar Waveguides for Attenuated Total Reflectance Spectrometry. *Chem. Mater. 9*, 2599-2603 (1997).

Edmiston, P. L., Lee, J. E., Wood, L. L. and Saavedra, S. S. Dipole Orientation Distributions in Langmuir-Blodgett Films by Planar Waveguide Linear Dichroism and Fluorescence Anisotropy. *J. Phys. Chem. 100*, 775-784 (1997).

Kölchens, S., Phiphivong, S., Edmiston, P. L. and Saavedra, S. S. Time-Resolved Total Internal Reflection Fluorescence Microscopy of Cultured Cells using a Tb-Chelate Label. *Anal. Chim. Acta 307*, 403-417 (1995).

Edmiston, P. L., Wambolt, C., Smith, M. K. and Saavedra, S. S. Spectroscopic Characterization of Albumin and Myoglobin Entrapped in Bulk Sol-Gel Glasses." *J. Colloid Interface Sci. 163*, 395-406 (1994).

Edmiston, P. L., Kolchens, S., Saavedra, S. S. Temporally Gating a Slow-Scan CCD with a Liquid Crystal Shutter." *Appl. Spectroscopy 47*, 250 (1993).

Published Peer-Reviewed Conference Proceedings:

Edmiston, P. L., Keener, J., Buckwald, S., Sloan, B., Terneus, J. Flow Back Water Treatment Using Swellable Organosilica Media. SPE Eastern Regional Meeting, 17–19 August 2011, Columbus, Ohio, USA. 148973-MS DOI 10.2118/148973-MS (2011).

Edmiston, P. L., Underwood L.A.* Remediation of Dissolved Organic Pollutants in Water Using Organosilica-Based Materials that Rapidly and Reversibly Swell. MRS Proceedings, 1169 , 1169-Q06-17 doi:10.1557/PROC-1169-Q06-17 (2009).

Invited Seminars and Conference Presentations (Past 15 years):

Miami University, Chemistry & Biochemistry Seminar "Measurement of PFAS in Ohio's natural waters: Rainwater to the Ohio River", November 2025.

SERDP Webinar Series. "Field-Ready PFAS Passive Sampler Calibrated to EPA 1633 Analytes" August 2023

"Passive Sampler for the Time-Integrative Measurement of Per- and Polyfluoroalkyl Substances in Water, SETAC North America Conference November 2022.

2022 Emerging Contaminants in the Environment Conference, "Elucidating the Mechanisms of PFAS Adsorption by Varying Sorbent Surface Chemistry" March 2022

SERDP & ESTCP Symposium, "Elucidating the Mechanisms of PFAS Adsorption by Varying Sorbent Surface Chemistry" December 2021

BASF Scientific Innovation and Interaction Seminar, BASF North America, "Adsorption and Encapsulation Using Mesoporous Organosilica that Swells", Detroit, February 2020.

From Oceans to Clouds: The Environmental Chemistry of Water. Graduate Student Symposium – Presidential Event. "Per- and Polyfluoroalkyl Substances (PFAS) in the Environment: Lessons Learned from Studying Adsorption to Porous Solids. ACS National Meeting, San Diego, CA, September 2019

University of Illinois, Sustainable Technology Center, "Removal of Perfluoroalkyl Substances (PFAS) from Water Using Tailored and Highly Porous Organosilica Adsorbents" March 2019.

American Chemical Society Meeting National Meeting Presentation: Removal of Perfluoroalkyl Substances from Water Using Molecularly Engineered Coatings on Sand and Silica San Francisco, CA April 2017

"Combining Forces: Enhancing Function Through Chemomechanical Hybrid Materials" Indiana University-Purdue, Fort Wayne, IN March 2016.

The U.S. Algal Toxin Conference 2015. "Testing of new filter media to remove undesired molecules produced by Algae: Osorb media products for the Selective Removal of Microcystin" Akron, OH April 2015.

SERDP Technical Exchange Conference, "Multipurpose Sediment Passive Sampler with Improved Tissue Mimicry to Measure the Bioavailable Fraction" Norfolk, VA March 2015.

American Chemical Society National Meeting. Biotechnology Division "Extraction of Small Molecule Solutes Using Biocompatible Organosilica that Swells". Oral. Dallas, March 2014.

Edmiston, P.L. ACS Presidential Symposium on Ensuring the Sustainability of Critical Materials and Alternatives. "New Tools in the Water Technology Toolbox: Swellable

Organosilica for the Reversible Extraction of Organics and Metals" American Chemical Society National Meeting, Philadelphia August 2012.

Lubrizol Innovation Week, Plenary Speaker, Cleveland, September 2012 "Discovery Process in the Chemical Sciences" (Talk on innovation to 200 scientists at Lubrizol, and billion dollar specialty chemical company.)

Edmiston, P.L.; Pickett, D. "Osorb: A new platform technology for water purification" World IUPAC Meeting, San Juan, Puerto Rico, July 2011.

Edmiston, P.L. "The ACS Graduate Fellowship: Past, Present, and Future." PITTCON, Orlando, FL March 2012.

Externally Funded Grant Projects:

Hawaii Sea Grant (NOAA Funding). Tracy Wiegner, Ph.D. University of Hawaii, lead PI. Tracy Wiegner, Ph.D. $145,089.

Environmental Security Technology Certification Program (ESTCP). ER23-7696. Osorb Passive Sampler for Determination of PFAS in Sediment Porewater $118,747.

Strategic Environmental Research and Development Program (SERDP). Method to Measure PFAS in MIL-Spec AFFF by Extraction Using Osorb and Advanced Sorbents with Organofluorine Analysis. $140,884

Strategic Environmental Research and Development Program (SERDP). Sorbents to Remove PFAS from Natural Waters. 2022-2024, $186,863

National Science Foundation, MRI: Acquisition of a Liquid Chromatograph, Quadrupole, Time-of-Flight Mass Spectrometer to Enhance Undergraduate Research and Education in the Chemical and Biochemical Sciences $232,158 Funded 2020.

Strategic Environmental Research and Development Program (SERDP). "Osorb® Media Use in Per- and Polyfluoroalkyl Substances (PFAS) Passive Samplers" 2020-2022, $188,977

Strategic Environmental Research and Development Program (SERDP). "Removal of Complex Mixtures of Perfluoroalkyl Acids from Water Using Molecularly Engineered Coatings on Sand and Silica" 2018-2020, $199,998

NSF-GOALI: "Swellable Superhydrophobic Organosilica Materials as a Novel Catalyst Support for Water Purification Systems" PI: Umit Ozkan, Ohio State University in collaboration with ABS Materials 2014-2017, $362,520

National Science Foundation: "Food-Energy-Water Systems Challenging Chemists and Chemical Engineers in the 21st Century" PI: Tim Long, Virginia Tech; Co-PIs: Paul Edmiston, Frank Bright (SUNY Buffalo). (015-2016, $74,548

Strategic Environmental Research and Development Program (SERDP). "Multipurpose Sediment Passive Sampler with Improved Tissue Mimicry to Measure the Bioavailable Fraction" 2014-2016, $148.377

U.S. Department of Energy, SBIR Phase IIB. "Removal of Organics and Phenols for Refinery Waters Using Swellable Organosilica" $999,150. Funded 2014-2016. (funded with ABS Materials being lead organization)

National Science Foundation, SBIR Phase II. "Produced Water Treatment Using Animated Organosilicas that Rapidly and Reversible Swell" $498,222. Funded 2011-2014.

National Science Foundation, RAPID. $200,000 "Process Development to Restore Osorb Swelling Glass Fouled While Recovering Gulf Oil-Water Mixtures" Funded 2010.

U.S. Department of Energy, SBIR Phase II. "Removal of Dissolved Organics From Flow Back Waters Using Swellable Organosilica" $978,821. Funded 2011-2014. (funded with ABS Materials being lead organization)

National Science Foundation, SBIR Phase I. "Produced Water Treatment Using Animated Organosilicas that Rapidly and Reversible Swell" $149,850. Funded 2010-2011.

Department of Energy, SBIR. "Frac Fluid and Flow Back water Treatment Using Animated Organosilicas that Rapidly and Reversible Swell" $98,150. Funded 2010-2011.

National Science Foundation, Chemical and Biological Separations. "Engineering Organosilica Materials that Rapidly and Reversible Swell for Water Remediation" $126,000. 2009-2011.

National Science Foundation EXP. “Active Sampling and Reactive Chemistry for Enhanced Detection of Explosives” $800,000, with David Gottfried, Daniel Campbell, and Jayme Caspell, Georgia Tech Research Institute. Funded 2007-2010.

National Science Foundation CAREER Award. “Optical Sensors for the Detection of Vapor Phase Explosives Using Molecularly Imprinted Sol-Gel Materials: Integration of Research and Learning Using Forensic Science.” $400,000, Funded 2003-2008.

National Science Foundation RUI. Co-PI with M. Snider (PI) and D. Fraga (Co-PI). “Comparative Structure/Function Analysis of Phosphagen Kinases” $320,307 Funded 2004-2007.

Agilent Technologies, University Grants. “Science Outreach Through Instrumentation” $155,000 for high performance liquid chromatography systems. P. L. Edmiston and T. R. Williams. Funded, 2002.

National Science Foundation CCLI Program. “Universal Application of a GC-MS in Science Education: Integrating Courses and Programs for Pre-College, Non-Science, and Science Students Using Instrumental Teaching Assistants” $48,989 P. L. Edmiston and T. R. Williams. Funded 2000.

National Science Foundation: RUI “Rabbit Muscle Creatine Kinase: Structure Function Roles of Key Amino Acids by Site-Directed Mutagenesis” $192,304 Charles L. Borders, Jr., P.I.,; P. L. Edmiston, Co-P.I. Funded 2000.

Camille and Henry Dreyfus Foundation Faculty Start-Up Grant “Development of Imprinted Thin Sol-Gel Films for Chemical Sensor Technologies” $20,000. Funded 1999.

Patents (granted):

1. US patent 7,790,830 (2006) “Swellable sol-gels, methods of making, and use”
2. US patent 8,367,793 (2009) “Swellable materials and methods of use.”
3. US patent 8,119,759 (2010) “Swellable sol-gels, methods of making, and use thereof”
4. US patent 8,217,131 (2011) “Method for extracting a metal particulate from an aqueous solution using a sol-gel derived sorbent.”
5. US patent 8,563,649 (2011) “Method of treating a material using a sol-gel derived composition”
6. US patent 8,703,895 (2011) “In-situ method and system for controlling the flow of an organic liquid”
7. US patent 8,754,182 (2011) “Sol-gel derived sorbent material containing a sorbate interactive material and method for using the same”
8. EP2601127. “Method and system for applying force against a solid object using a swellable sol-gel derived mater.
9. US patent 9,144,784. (2012) “Sorbent material and method for using the same.”
10. US patent 9,440,869 (2013). “Sol-gel derived compositions.”
11. US patent 10,881,598 (2021) “Method of using personal and home care compositions containing a sol-gel derived material”
12. US patent 11,471,859 (2022) Treatment and regeneration system and method for extracting organic solutes from-water.
13. US patent 11,650,138 (2023) “Passive Sampler”
14. US patent 11,703,426 (2023) “Passive Sampler”