## **Publications:** \* denotes undergraduate student

- 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*. 2023
- Edmiston, P.L., Carter, E., Toth, K., Hershberger, R.\*, Hill, N.\*, Versluis, P., Hollinden, P., Divine, C. Field evaluation the Sentinel<sup>TM</sup> 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)

- 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).

- 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).
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- 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. 119

## **Invited Seminars and Conference Presentations (Past 12 years):**

- 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** Tech

- 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.
- Edmiston, P.L. Varga, M. Curtze, A. "Versatile catalyst supports that use swellable, highly tensioned organosilica materials to pre-concentrate reagents in nanoscale pore

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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 Change on the Change of t

Strategic Environmental Research and Development Program (SERDP). "Removal of Complex Mixtures of Per236 (P) -4 1ur27.92 06 (P) - -4 1PAcis 236 ((r) -7 (om -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -7 (or -2 ()2 (P) (W) 4 (a) 4 (t) -2 (e) 4 (r) -

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