

Jason W. Coym

Professional Preparation

The University of Texas at Austin
Florida State University
The University of Arizona

Chemistry, B.S., 1998
Chemistry, Ph.D., 2004
Chemistry, Postdoc, 2004-2005

Appointments

2011-present
of South Alabama 2005-2011
of South Alabama

Associate Professor of Chemistry, University
Assistant Professor of Chemistry, University

List of Publications since 2006, undergraduate students underlined

Ogden, P. B., Coym, J. W. (2011). Retention mechanism of a cholesterol-coated C18 stationary phase: van't Hoff and Linear Solvation Energy Relationships (LSER) approaches. *Journal of Chromatography A*, 1218, 2936-2943

Perry, P. R., Coym, J. W. (2010). Comparison of common mobile phase volume markers with polar-group-containing reversed-phase stationary phases. *Journal of Separation Science*, 33, 2310-2315.

Coym, J. W. (2010). Evaluation of ternary mobile phases for reversed-phase liquid chromatography: Effect of composition on retention mechanism. *Journal of Chromatography A*, 1217, 5957-5964.

Ogden, P. B., Coym, J. W. (2009). "Stability and selectivity of a cholesterol-coated C18 stationary phase," *Journal of Chromatography A*, 1216, 4713-4718.

Coym, J.W. (2008). "Comparison of retention on traditional alkyl, polar endcapped, and polar embedded group stationary phases," *Journal of Separation Science*, 31, 1712-1718.

Senarath-Yapa, M. D., Phimpivong, S., Coym J. W., Wirth, M. J., Aspinwall, C. A., Saavedra, S.S. (2007). "Preparation and Characterization of Poly(lipid)-Coated, Fluorophore Doped Silica Nanoparticles for Biolabeling and Cellular Imaging," *Langmuir*, 23, 12624-12633.

Coym, J. W., Roe, B. R., (2007). "Effect of Temperature on Gradient Reequilibration in Reversed-Phase Liquid Chromatography," *Journal of Chromatography A*, 1154, 182-188.

Current Annualized Level of External Research Funding: \$54,971

Average Total Annualized External Support over the Past Five Years: \$32,983

Research Funding: External

Coym, J. W. (Stenson, A. C. (PI)) (2010, October) MRI: Acquisition of a linear ion-trap mass spectrometer. National Science Foundation. \$387,001.

Coym, J. W. (Battiste, D. R. (PI)) (2010, April) Analytical support for national traps and lures QA/QC management. United States Department of Agriculture, \$125,000.

Coym, J. W. (2009, August) RUI: Novel mobile phase additives for reversed-phase liquid chromatography. National Science Foundation, \$164,913.

Research Funding: Internal

Charlton, S. A., Coym, J. W. (2010, April) Cyclodextrins as co-additives for cholesterol coating of alkyl stationary phases. University of South Alabama, University Committee for Undergraduate Research, \$2400.

Coym, J. W. (2009, May) Adsorption of cholesterol on reversed-phase chromatographic supports. University of South Alabama Research Council, \$3000.

Coym, J. W. (2007, January) A Combined Solvent Strength-Temperature Approach to Model Retention in Reversed-Phase Liquid Chromatography. University of South Alabama Summer Professional Development Award \$5200.

Coym, J. W. (2007, February) Solvent Strength Linearity in Liquid Chromatography. University of South Alabama Arts and Sciences Support and Development Award \$2500.

Henderson, C. N., Coym, J. W. (2006, April) Effect of Mobile Phase Additives on Shape Selectivity in Reversed-Phase Liquid Chromatography. University of South Alabama, University Committee for Undergraduate Research \$2200.

Presentations, undergraduate students underlined

Coym, J. W., Charlton, S. A., Hashmi, O. I. (2011). *The effect of methyl- β -cyclodextrin as a mobile phase co-additive with cholesterol in reversed-phase liquid chromatography.* Poster 36 presented at the 18th Annual University of South Alabama Research Forum, Mobile, AL.

Coym, J. W., Charlton, S. A., Hashmi, O. I. (2011). *The use of methyl- β -cyclodextrin to regulate cholesterol coating of a C18 stationary phase.* Poster 1220-9P presented at Pittcon 2011, Atlanta, GA.

Coym, J. W., Hashmi, O. I., Ogden, P. B., Charlton, S. A. (2010). *Cholesterol-coated C18 stationary phases: Linearity of van't Hoff and solvent strength plots.* Poster 221 presented at the 2010 Eastern Analytical Symposium, Somerset, NJ.

Charlton, S. A., Coym, J. W. (2010). *Cyclodextrins as Co-additives for Cholesterol Coating of Alkyl Stationary Phases.* Poster 5 presented at the University of South Alabama Undergraduate Research Week, Mobile, AL.

Hashmi, O. I., Ogden, P. B., Coym, J. W. (2010). Comparison of Solvent Strength Linearity and Pure-water Retention on Alkyl, Cholesterol-coated Alkyl, and Immobilized Membrane Stationary Phases. Poster 19 presented at the University of South Alabama Undergraduate Research Week, Mobile, AL.

Coym, J. W., Ogden, P. B. (2010). Retention mechanism of a dynamically modified, cholesterol-coated alkyl stationary phase. Paper 1970-4 presented at the 61st Annual Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, FL.

Ogden, P. B., Coym, J. W. (2009). Chromatographic Properties of a Cholesterol-Coated C18 Stationary Phase In HPLC. University of South Alabama, Honors Senior Showcase, Mobile, AL.

Coym, J. W., Ogden, P. B. (2009). Stability and selectivity of a cholesterol-coated chromatographic stationary phase. Poster presented at the 16th Annual University of South Alabama Research Forum, Mobile, AL.

Henderson, C. N., Coym, J. W. (2006). Effect of Mobile Phase Additives and Temperature on Shape Selectivity in Reversed-Phase Liquid Chromatography. University of South Alabama, Undergraduate Research Week, Mobile, AL.

Roe, B. W., Coym, J. W., (2006). Effect of Temperature on Gradient Reequilibration in Reversed-Phase Liquid Chromatography. Poster CHED-183 presented at the 232nd National Meeting of the American Chemical Society, San Francisco, CA.

Current Undergraduate Research Students (5):

Ariel Armstrong, Shauna Charlton, Omar Hashmi, Dalton Burks—Novel Mobile Phase Additives for Reversed-Phase Liquid Chromatography

Yasushi Yamamoto—Ternary Mobile Phases for Reversed-Phase Liquid Chromatography

Total Undergraduates Mentored since 2006: 15

Total Undergraduates Mentored to Date: 15

Synergistic Activities

1. Undergraduate researchers have been the cornerstone of my research group for the past five years. Several have gone on to, or are planning on, further graduate-level study in chemistry or other scientific or medical fields.
2. I am a member of USA's University Committee for Undergraduate Research, which sponsors a summer research program each year and financially supports 50-60 undergraduate summer projects.
3. I am a reviewer for several journals in analytical chemistry, including *Journal of Chromatography A* and *Analytical and Bioanalytical Chemistry*.