



**College of Liberal Arts and Sciences**  
**Winter 2023 Chemistry Seminar Series**  
**Friday, March 10<sup>th</sup>**

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**Developing a versatile contrathermal Cope rearrangement platform for enantioselective synthesis**

**Abstract:** The Cope Rearrangement is a classic transformation of value to organic synthesis. Certain substrates classes have been well developed due to their ready availability and generally favorable energetic profiles. Conversely, 3,3-dicyano-1,5-dienes have been overlooked. We have been exploring 3,3-dicyano-1,5-dienes and have uncovered strategies to improve their energetic profiles in general ways that impact their applicability to complex molecule synthesis. We have also uncovered strategies for controlling absolute stereochemistry for this class of Cope substrate. This seminar will focus on how the marriage of fundamental and applied research has lead to a diversifiable platform for Cope rearrangement-centered method development, (enantioselective) catalysis, target and analog synthesis, and other direct and tangentially related studies.

**Biography:** Alex is from the northern suburbs of Chicago. He received his B.A. degree from Lake Forest College under the research supervision of Dr. William B. Martin in 2007. He received his Ph.D. in Chemistry in 2012 from the University of Kansas under the guidance of Prof. Jon A. Tunge where he developed various decarboxylative and deacylative allylation reactions. In 2012, he moved to Boston University to work with Prof. John A. Porco on complex molecule synthesis, most notably the development of new routes to polyprenylatedacylphloroglucinol (PPAP) natural products and analogs. Alex's independent career began in the summer of 2014 when he joined the faculty in the Department of Chemistry at the University of Florida in Gainesville.