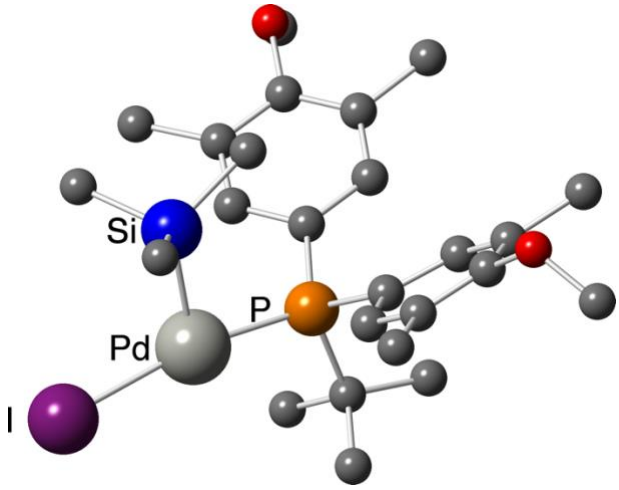
2021 Delaware Section Award Address
"The Development and Discovery of Novel Cross Coupling Reactions Using Heteroatomic Electrophiles"
Dr. Donald Watson, University of Delaware
Tuesday, September 13, 2022 at 7:00 pm
Location to be announced



Abstract: Over the past several years, our group has become interested in the development of new transition metal-catalyzed cross-coupling reactions that involve heteroatomic electrophiles as one of the coupling partners. Mechanistically, these reactions represent an *umpolung* strategy compared to the classic cross-coupling manifolds, and the transformations have proven to be useful in the introduction of heteroatoms and the construction of heterocycles in complex organic molecules. In this lecture, I will highlight some of the reactions that we have discovered and/or developed in this area, including silyl-, boryl-, and aza-Heck reactions and related transformations, discuss our current mechanistic understanding of the reactions, and describe some of the directions that we are currently pursuing in these areas.

Biography: Donald A. Watson received his BS in Chemistry from UC San Diego in 1998. He completed his PhD in Organic Chemistry at UC Irvine in 2004, working with Professor Larry E. Overman on stereochemical problems in palladium-catalyzed transformations. From 2004 to 2006 he was a NIH Postdoctoral Fellow with Professor Robert G. Bergman at UC Berkeley and developed zirconium-based catalysts for asymmetric intramolecular hydroaminations. He then moved to the Massachusetts Institute of Technology as a Postdoctoral Associate with Professor Stephen L. Buchwald, where he studied metal catalyzed processes the construction of fluorinated aromatic groups.

He joined the Chemistry and Biochemistry faculty at the University of Delaware as an Assistant Professor in July 2009. In 2015 he was promoted to Associate Professor, and in 2018 he was promoted to Professor. His research focuses on the development of new chemical methods for preparing organic molecules and structures, with a particular interest in the development transition-metal based catalytic reactions and in the construction of carbon-heteroatom bonds.