Palladium and Copper Catalyzed Aerobic Oxidation Reactions

Prof. Shannon S. Stahl
University of Wisconsin (USA)

Friday 22nd November, 2013. ICIQ Auditorium, 12 p.m.

Professional career

Shannon Stahl is a Professor of Chemistry at the University of Wisconsin-Madison. He was an undergraduate at the University of Illinois at Urbana-Champaign (B.S., Chemistry, 1992). He subsequently attended Caltech (Ph.D., Chemistry, 1997), where he studied Pt-catalyzed oxidation of methane to methanol in the laboratory of Prof. John E. Bercaw. From 1997-1999, he conducted postdoctoral research at MIT in the lab of Prof. Stephen J. Lippard, investigating an enzyme called methane monooxygenase. These experiences evolved into his current interest in practical catalytic oxidation reactions capable of using $\text{O}_2$ as the stoichiometric oxidant. His contributions in this area have been recognized in several ways, including a 2013 Arthur C. Cope Scholar Award from the American Chemical Society, appointment as a Fellow of the American Association for the Advancement of Science, an Alfred P. Sloan Research Fellowship, and an Alexander von Humboldt Senior Research Award.

Research Interests

The Stahl research group specializes in the development and mechanistic characterization of catalytic aerobic oxidation reactions. In addition to fundamental studies of these reactions, they have been working with companies in the pharmaceutical and commodity-chemical industries (Eli Lilly, Pfizer, Merck, Dow Chemical) to address practical challenges in the implementation such reactions on scale. More recently, they have initiated projects focusing on chemistry of molecular oxygen related to renewable energy, including fuel cells and photoelectrochemical solar-energy conversion.