TEXAS STATE UNIVERSITY

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MSEC Seminar and Commercialization Forum

Invited Speaker:

Dr. Ryan Peterson

"The evolution of a modern (bio)inorganic chemist"

November 1st, 2019
1:30 – 3:00 PM
RFM 3224

Biography:

Ryan Peterson received his B.S. in Chemistry from Sonoma State University in 2006. Later that year he moved Baltimore, MD to study inorganic chemistry under the guidance of Kenneth D. Karlin at the Johns Hopkins University (JHU). Ryan received his PHD in Chemistry in 2013 where his graduate research focused on the activation of dioxygen (O_2) by ligand supported copper ions. As a post-doctoral researcher in the Val Culotta group at the JHU Bloomberg School of Public Health, he studied the metal activation pathways and biochemistry of a new class of copper superoxide dismutase enzymes (SODs). In 2016, he moved to Basel Switzerland to study under the guidance of Tom Ward at the University of Basel where his research focused on developing artificial metalloenzymes employing Biotin-Streptavidin Technology. Ryan's Independent research group at Texas State University will focus on repurposing enzymes for polymer degradation and characterizing the metal proteome of Oomycetes pathogens that impact aquaculture supply chains and global food security.

Abstract:

This talk will focus my journey and evolution of a modern (bio)inorganic chemist in 3 short accounts. 1. We will highlight the use of small molecule copper complexes for the use in O_2 activation processes including oxygen reduction catalysts. 2. Followed by the characterization of novel class of copper containing antioxidant enzymes that are required for fungal

For more information or if you would like to have lunch with the speaker, please contact Dr. Shannon Weigum at sweigum@txstate.edu

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pathogenesis. 3. The design and rational engineering of a streptavidin-chimera to unlock new chemical reactivity for artificial metalloenzymes. Finally, we will conclude with an overview of the projects the Peterson Research Group seeks to establish at Texas State University.

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