



Joseph Falkowski

Graduate Institution: University of North Carolina at Chapel Hill

Graduate Discipline: Chemistry

Hometown: Spring Hill, FL

Relevant SC Research: Basic Energy Sciences

Research Interest:

I am interested in the use of metal-organic frameworks (MOFs) as asymmetric catalysts in the synthesis of value-added fine chemicals. The high cost and toxicity of the transition metals typical of asymmetric catalysts have often hindered their industrial application; the heterogenization of these catalysts through incorporation of catalytically active moieties into solid-phase MOFs allows for facile recovery and reuse of the catalyst from the reaction mixture. Furthermore, the MOFs' crystallinity lends the material to structural determination via X-ray crystallography and the elucidation of structure-function relationships.

About Me:

I graduated from the University of Florida in 2008 with a B.S. in chemistry, and I am currently a rising fifth-year Ph.D. candidate in the inorganic division of the chemistry department at the University of North Carolina at Chapel Hill. I hope to pursue a career in industrial research to develop new catalytic systems for energy applications and to ultimately use that

background in a public policy capacity. I am a member of the American Chemical Society and the League of Shadows. In my free time, I enjoy tutoring chemistry to high school and college students.



U.S. DEPARTMENT OF
ENERGY

Office of
Science