

Jonathan Lee Ticknor



Graduate Institution: Duke University

Graduate Discipline: Environmental Engineering

Hometown: Kissimmee, FL

Relevant SC Research: Biological and Environmental Research

Research Interest:

My research interests involve studying the biogeochemistry of mercury in the environment, particularly involving nanoparticulate mercury. This research is motivated by the potential for environmental mercury to form a toxic organic form of mercury, methylmercury. Mercury sulfide nanoparticles are of particular interest to me since their solubility, chemical structure, and bioavailability are quite distinct from bulk metacinnabar. My research goals are to quantify to dissolution and formation potentials of these nanoparticles as well

as their availability to microorganisms for methylation. The ultimate goal of my doctoral work is to develop a kinetic model to describe mercury speciation and methylation in aquatic environments. My other research interests include molecular modeling techniques and developing graphical user interfaces for simple model systems.

About Me:

I am currently finishing my first year as a doctoral student in the department of Civil & Environmental Engineering at Duke University. I completed my

undergraduate degree in Civil Engineering at the University of South Florida in 2010, as well as a M.S. in Environmental Engineering in 2012. At Duke University I am a member of Professor Heileen Hsu-Kim's group, and I also work closely with Professor Marc Deshusses. Outside of academics I enjoy playing sports and reading as often as possible. Outside of engineering, I enjoy spending time studying economics and finance, as well as some basic computer programming. In the future I hope to work as an environmental engineering researcher.



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