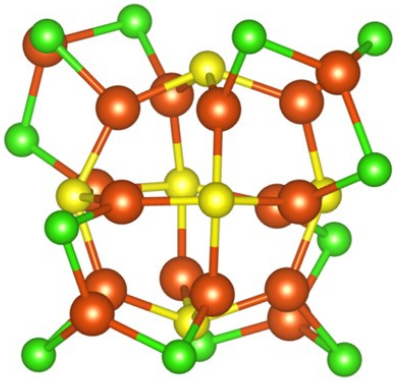
Inorganic Seminar

Title: "Synthesis and Characterization of Atomically Precise Copper Nanoclusters"

Monday, September 24, 4:00pm
Hutchison Hall 473
University of Rochester
Department of Chemistry

Guest Speaker:

Professor Trevor W. Hayton
University of California, Santa Barbara
Department of Chemistry & Biochemistry



Abstract:: Atomically precise group 11 nanoclusters (NCs) are of intense interest, both for their fundamental properties and for their potential use in a wide variety of applications, including catalysis. As a result, the last 5 years have seen significant progress in the synthesis of well-defined, monodisperse group 11 nanoclusters. Yet, while many examples of thiol-passivated silver and gold NCs are now known, such as [Au102(SC6H4-p-CO2H)44] and [Ag25(SCH2CH2Ph)18]-, comparable copper NCs have remained elusive due, in part, to their higher air-sensitivity. In this presentation I will describe our attempts to synthesize the analogous thiol-stabilized copper NCs. Additionally, I will discuss their characterization by a variety of techniques, including XANES and EXAFS as well as our initial efforts to synthesize NCs of Fe, Co, and Ni.

Host: Michael Neidig ● Email: neidig@chem.rochester.edu