

**“Engineering redox chemistry:
From non-innocent ligands to intracellular metal chelators”**



INORGANIC SEMINAR

Professor Elisa Tomat

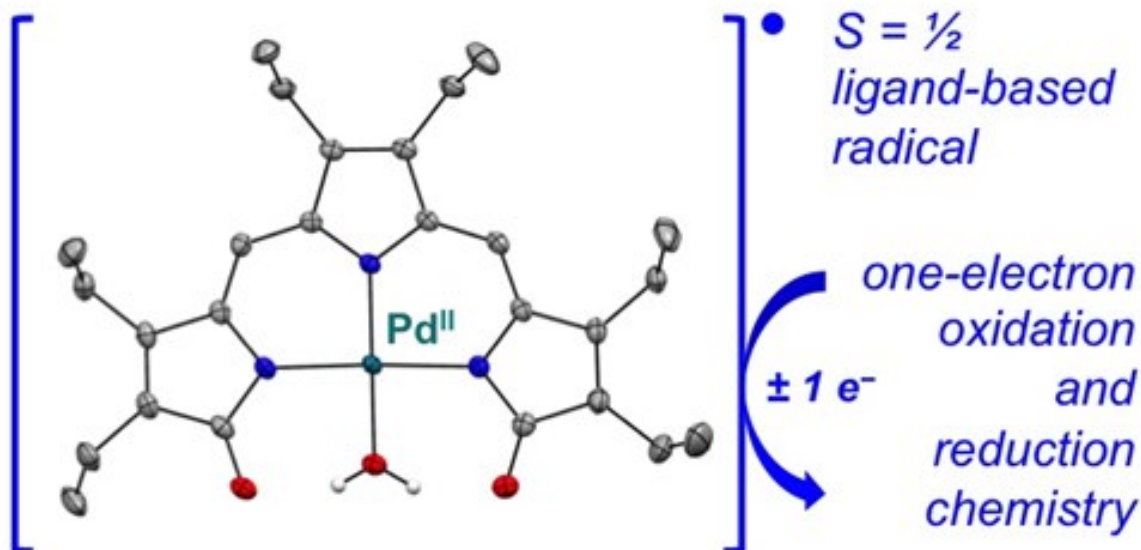
The University of Arizona

Department of Chemistry and Biochemistry

Thursday, February 8th, 4:00pm

Hutchison Hall 473

University of Rochester
Department of Chemistry



Abstract

Current projects in the Tomat laboratory pursue (i) the development of therapeutic strategies targeting the multifaceted roles of transition metal ions in human disease, and (ii) the engineering of redox reactivity patterns inspired by biologically occurring ligands. Our approaches on the molecular design of iron prochelators will be discussed. Our redox-activated systems, which intercept iron cations in the intracellular milieu, seek to exploit an emerging vulnerability of cancer cells, namely their altered iron metabolism and increased demand for this essential metal ion. In addition, our recent findings on the redox chemistry of complexes featuring naturally occurring oligopyrrolic ligands will be illustrated. Tripyrrolic and dipyrrolic compounds deriving from bacterial biosynthesis or mammalian metabolism are examined as redox-active ligands.

Host: Kara Bren, email: bren@chem.rochester.edu