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Institut Català d'Investigació Química

2014 Seminar Program

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Copper Oxygen Intermediates Relevant to Metalloenzymes and Other Oxidation Catalysts

Prof. William B. Tolman

University of Minnesota (USA)

Monday 23rd June, 2014. ICIQ Auditorium, 12 p.m.

Professional Career

William B. Tolman obtained a B.S. degree from Wesleyan University, CT, in 1983, where he performed organometallic chemistry research under the direction of Alan R. Cutler. He did graduate research with K. Peter C. Vollhardt at the University of California, Berkeley, that culminated in a Ph.D. in 1987. He was then introduced to bioinorganic chemistry during a postdoctoral period, 1987-1990, in the laboratory of Stephen J. Lippard at the Massachusetts Institute of Technology. He was appointed as Assistant Professor in the Department of Chemistry at the University of Minnesota in 1990, and has risen through the ranks there to his current position as Distinguished McKnight University Professor. He is a member of the Centers for Metals in Biocatalysis and Sustainable Polymers and currently is serving as Chair of the Department of Chemistry. Among the honors he has received are the Searle Scholars, NSF National Young Investigator, Camille & Henry Dreyfus Foundation Teacher-Scholar, and Alfred P. Sloan Foundation Awards, the Buck-Whitney Medal from the American Chemical Society, and a Research Award from the Humboldt Foundation. He is a Fellow of the American Association for the Advancement of Science and the American Chemical Society. Tolman served as Associate Editor (2009-2012) and now as Editor-in-Chief of *Inorganic Chemistry* (2013-present), and serves on the governing boards of the ACS Petroleum Research Fund and the Council for Chemical Research. He also served as Chair of the Gordon Research Conferences on Inorganic Reaction Mechanisms (2005) and Metals in Biology (2011).

Research Interests

Current research in the Tolman group encompasses synthetic bioinorganic and organometallic/polymer chemistry. In the bioinorganic area, his objective is to gain a fundamental structural, spectroscopic, and mechanistic understanding of metalloprotein active sites of biological and environmental importance via the synthesis, characterization, and examination of the reactivity of model complexes. The current goal of his research in the organometallic/polymer area is to synthesize and characterize a variety of metal complexes for use as catalysts for the polymerization of cyclic esters and for converting biomass feedstocks to useful monomers. In this project, particular emphasis is being placed on developing controlled synthesis of polymers derived from renewable resources.