

INORGANIC CHEMISTRY SEMINAR



Professor Justin R. Walensky

Department of Chemistry
University of Missouri, Columbia

The Softer Side of Actinide Chemistry

Abstract: The actinide elements are known to prefer oxygen and other hard Lewis bases. Curiously, the use of extractor ligands that contain sulfur, a soft Lewis base, has led to the selective sequestering of actinides over their lanthanide counterparts. Therefore, the coordination chemistry of energy production relevant actinides, specifically thorium, uranium, and neptunium, with soft Lewis bases (sulfur, selenium, phosphorus, arsenic) warrants further investigation. Additionally, compounds containing multiple bonds between actinide and ligands will be explored to examine pi-bonding with 5f orbitals. The overall objectives of our laboratory are the creation of new compounds that demonstrate the unique structure, bonding, and reactivity of these under studied elements while developing the underlying fundamental science involved in the separation of actinides. This seminar will focus on our recent efforts.

Wednesday, May 18, 2016
Cram Conference Room, 3440 Mol Sci
4:30 pm