

Synthesis and Reactivity of Uranium Compounds Containing Redox-Active α -Diimine Ligands

By: Steven J. Kraft, Phillip E. Fanwick, Suzanne C. Bart*.
Inorganic Division: Lanthanides and Actinides.

The highly reducing nature of low valent uranium centers can be controlled using redox-active ligands. Uranium compounds containing redox-active α -diimine ligands have been synthesized and isolated. These compounds were characterized by ^1H NMR, CHN analysis, and X-ray absorption spectroscopies. Crystallographic data and DFT calculations will also be reported on these complexes. Upon the addition of alkyl halides, these complexes undergo ligand oxidation, and produce synthetically relevant uranium (IV) halide species.

