

## Recent Advances in the Reductive Chemistry of the Rare-Earth and Actinide Metals.

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The reductive redox chemistry of the rare-earth and actinide metals has undergone major changes in recent years. New oxidation states are available for these elements in molecular complexes and these complexes expand the range of physical properties observable for f element compounds. This includes their use as quantum information bits, i.e., qubits. This seminar will present some perspective on these developments and illustrate the importance of interaction between synthetic chemists and researchers that are examining new physical properties. In addition some recent developments in reductive d orbital chemistry involving 3d and 6d(!) systems will be presented.