

Small Molecule Activation by Uranium complexes : Examples of Synergistic Effects

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In this presentation, we will focus on the performance of an efficient interplay between experience and theory to elucidate the reactivity of actinide-catalyzed small molecule activation reactions. Based on the theoretical description of N₂ activation to yield Ammonia or O₂ activation, we will demonstrate that synergistic effects between Uranium(III) and transition metal but also with non-metal, such as phosphorus, allow facile direct full activation of N₂ and O₂ under ambient conditions.