



## Glenn T. Seaborg Center Seminar

### New Opportunities in Uranyl Oxo Functionalization

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4:00 pm – 5:00 pm  
Bldg. 70A, Room 3377**

The reduction of uranyl ( $\text{UO}_2^{2+}$ ) to U(IV) is relevant to both the speciation of uranium in the environment and the geological storage of spent nuclear fuel. However, the reduction of uranyl to U(IV) requires disruption of the strong U-O triple bond, and as a result, cleavage of the uranyl ion is quite challenging. A variety of strategies have been established over the past 20 years to effect controlled uranyl functionalization and cleavage, including the use of strongly electron donating equatorial co-ligands, the deployment of strong electrophiles, and 'reductive silylation'. Amongst these transformations, reductive silylation has proven to be the most successful and features the greatest scope. In this presentation, several new examples of reductive silylation will be presented. In addition, the prospects for effecting this transformation in a catalytic fashion will be discussed.