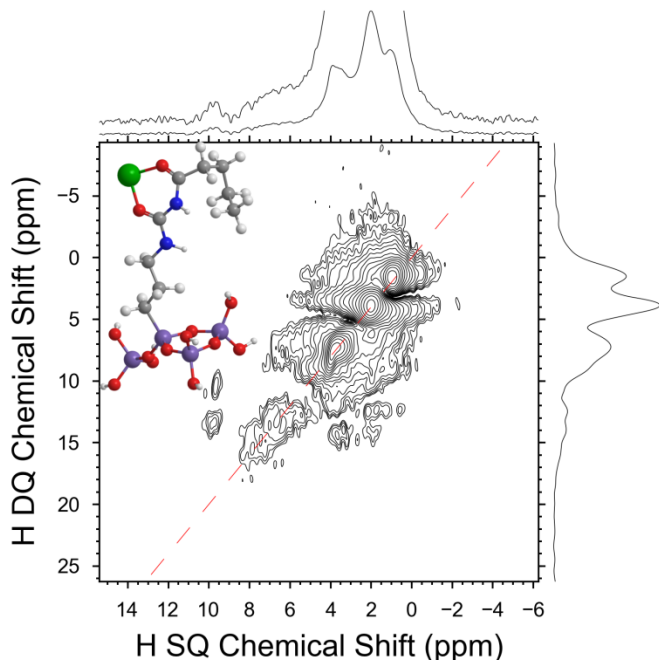


NMR Spectroscopy for Radiochemistry Applications



Research Overview

Applying novel solid and solution NMR spectroscopic methods to investigate actinide interactions in natural and engineered systems.



2D solid state NMR of actinide separations materials

Potential Collaborations

- Interactions of actinides at mineral/water interface
 - Surface specific solid-state NMR to identify reactive surface species
- Development of Functionalized surfaces for actinide/lanthanide separations
 - Structure and function of novel materials
- Actinide solution speciation and reaction kinetics with organic ligands

Previous Dissertations

- Trivalent actinide/lanthanide separations (Jennifer Shusterman, UC Berkeley, 2015)
- U(IV) separations (Eva Uribe, UC Berkeley, 2015)
- Np(VI) ligand exchange kinetics (Adele Panasci, UC Davis 2015)
- Pressure-dependent Np(VI) ligand exchange (Corey Pilgrim, UC Davis 2016)

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