Facile Reductive Routes to Air-Stable Uranium(III) and Neptunium(III) Materials

Justin N. Cross, Eric M. Villa, Victoria R. Darling, Matthew J. Polinski, Allen G. Oliver, Jian Lin, Xiaoyan Tan, Naoki Kikugawa, Michael Shatruk, Ryan Baumbach, Thomas E. Albrecht-Schmitt

Supporting Information

Figure S1. Photograph of Zn amalgam in the liner after being poured in from its molten state and used amalgams after being cleaned and ready for re-use.

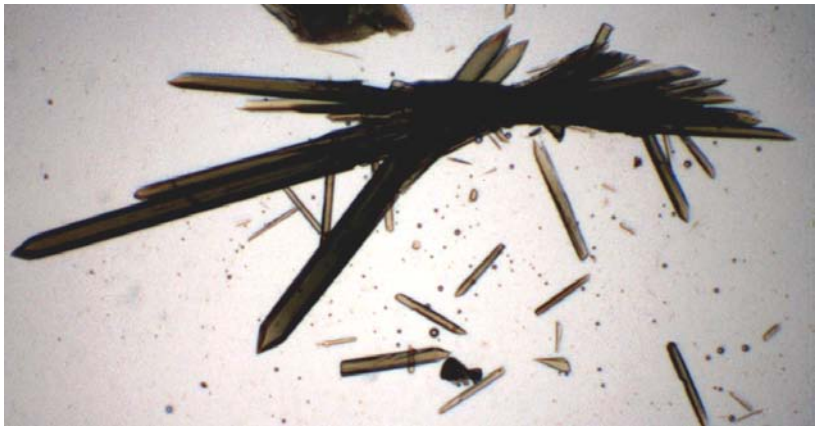

Figure S2. Photograph of crystals of $NaU(SO_4)_2(H_2O)$.

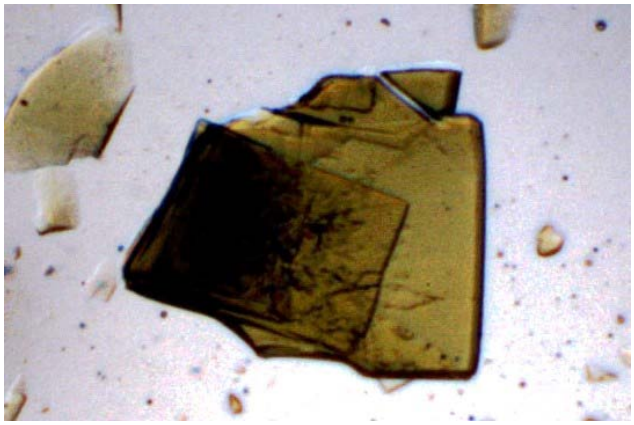

Figure S3. Photograph of crystals of $K_5U_2(SO_4)_6H_2O$.

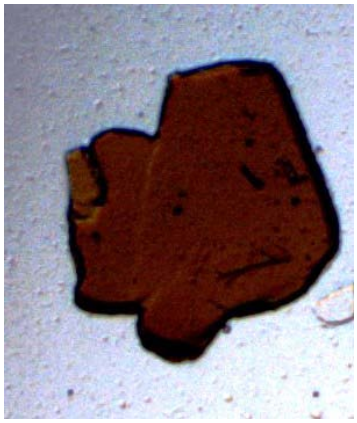

Figure S4. Photograph of crystals of $CsU(SO_4)_2$.

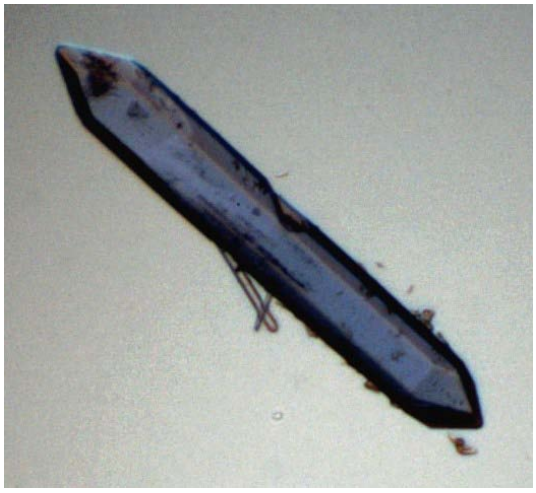

Figure S5. Photograph of crystals of NaNp(SO4)2(H_2O)

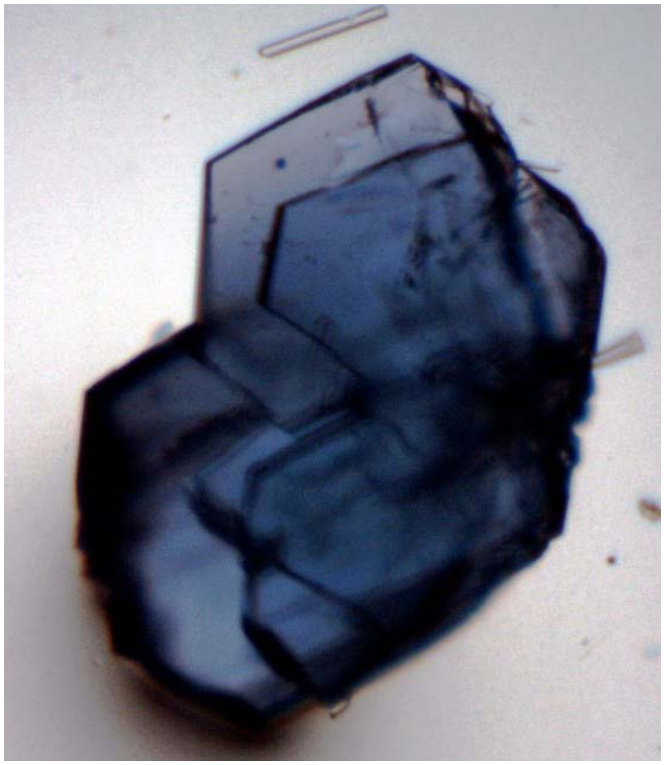

Figure S6. Photograph of crystals of both $KNp(SO4)_2(H_2O)$ (small needle) and $KNp(SO_4)_2$ (large blocks).

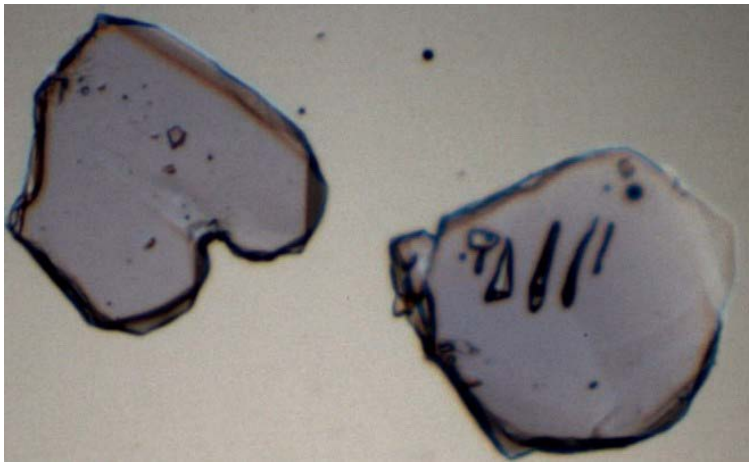

Figure S7. Photograph of crystals of $RbNp(SO4)_2$.

Figure S8. Photograph of a crystal of $CsNp(SO4)_2$.

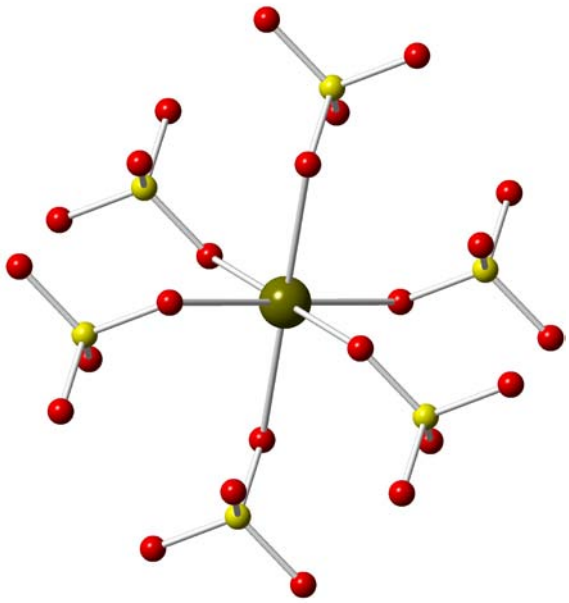

Figure S9. Ball and stick representation of U^{3+} coordination in $RbU(SO_4)_2$.

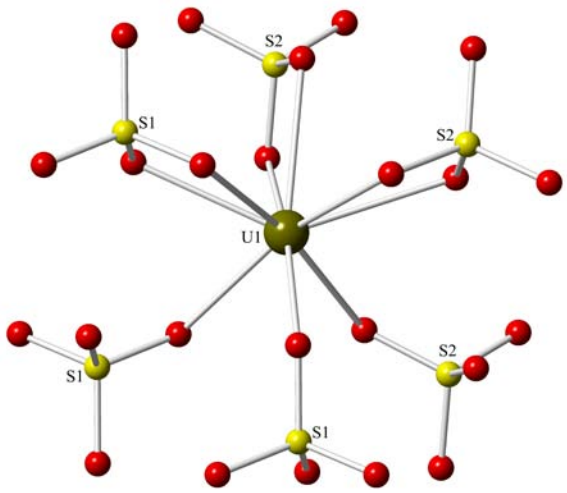

Figure S10. Ball and stick representation of U^{3+} coordination in $CsU(SO_4)_2$.

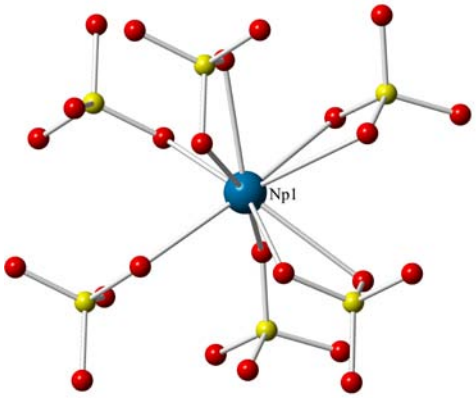

Figure S11. Ball and stick representation of Np^{3+} coordination in $RbNp(SO_4)_2$.

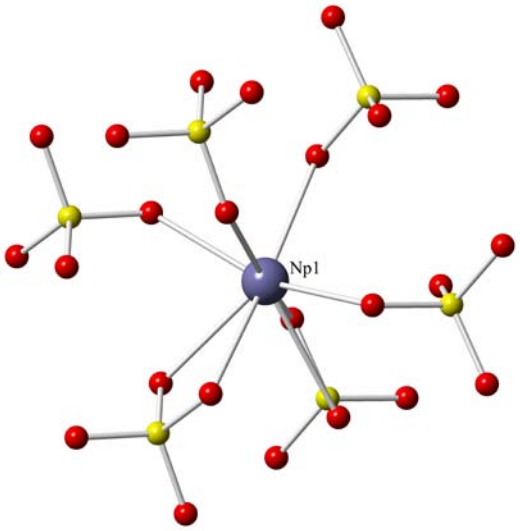

Figure S12. Ball and stick representation of Np^{3+} coordination in $RbNp(SO_4)_2$.

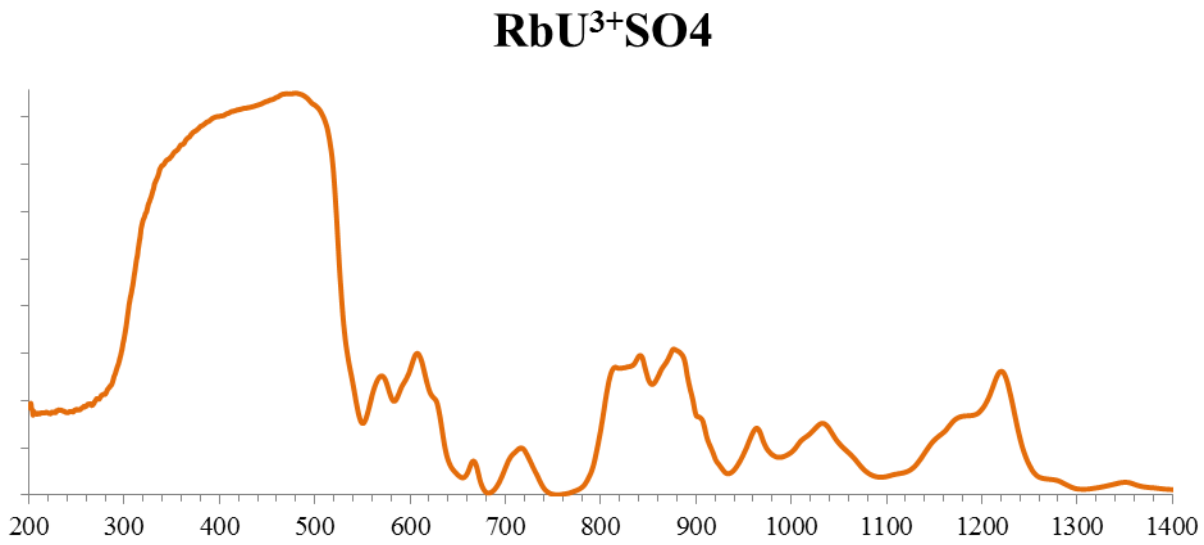

Figure S13. Solid state absorption spectra of $RbU(SO_4)_2$.

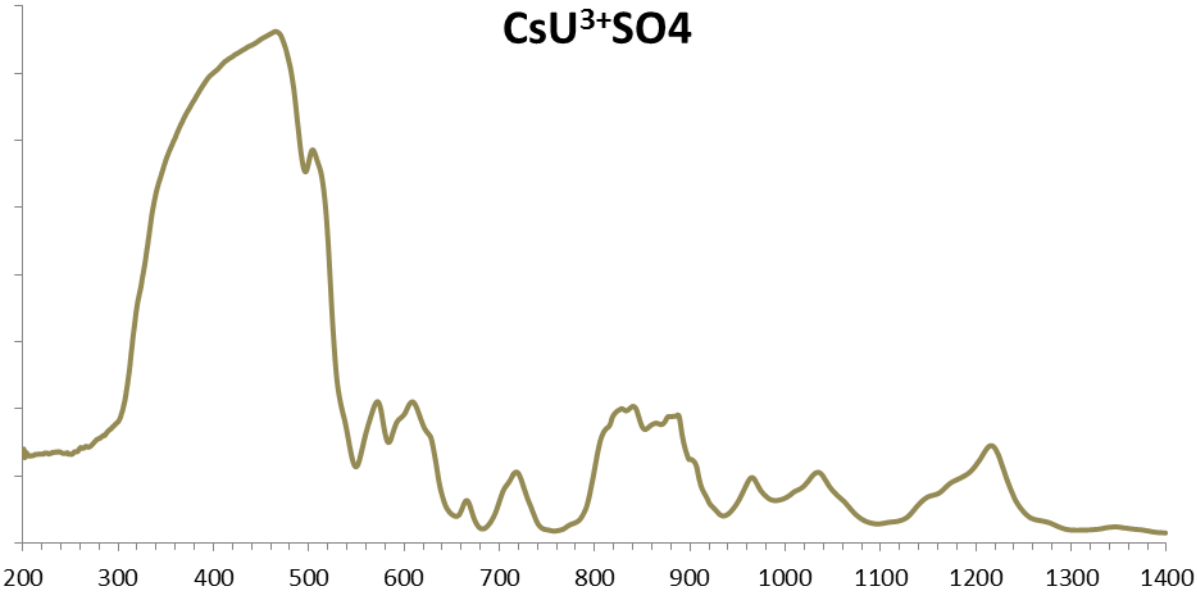

Figure S14. Solid state absorption spectra of $CsU(SO_4)_2$.

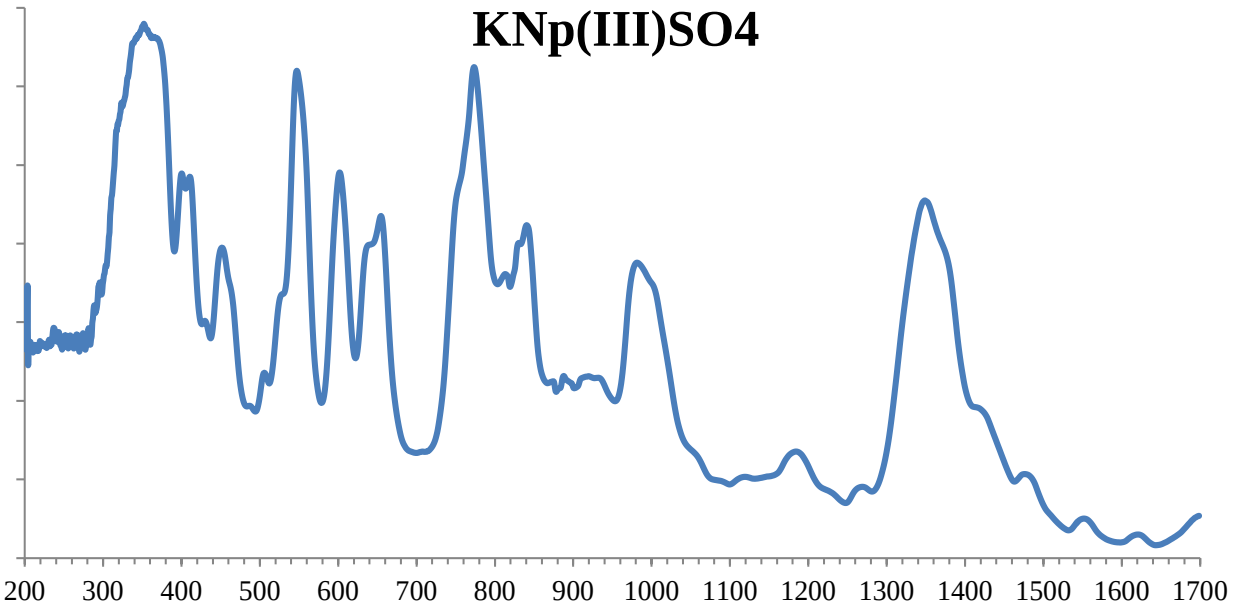

Figure S15. Solid state absorption spectra of $KNp(SO_4)_2$.

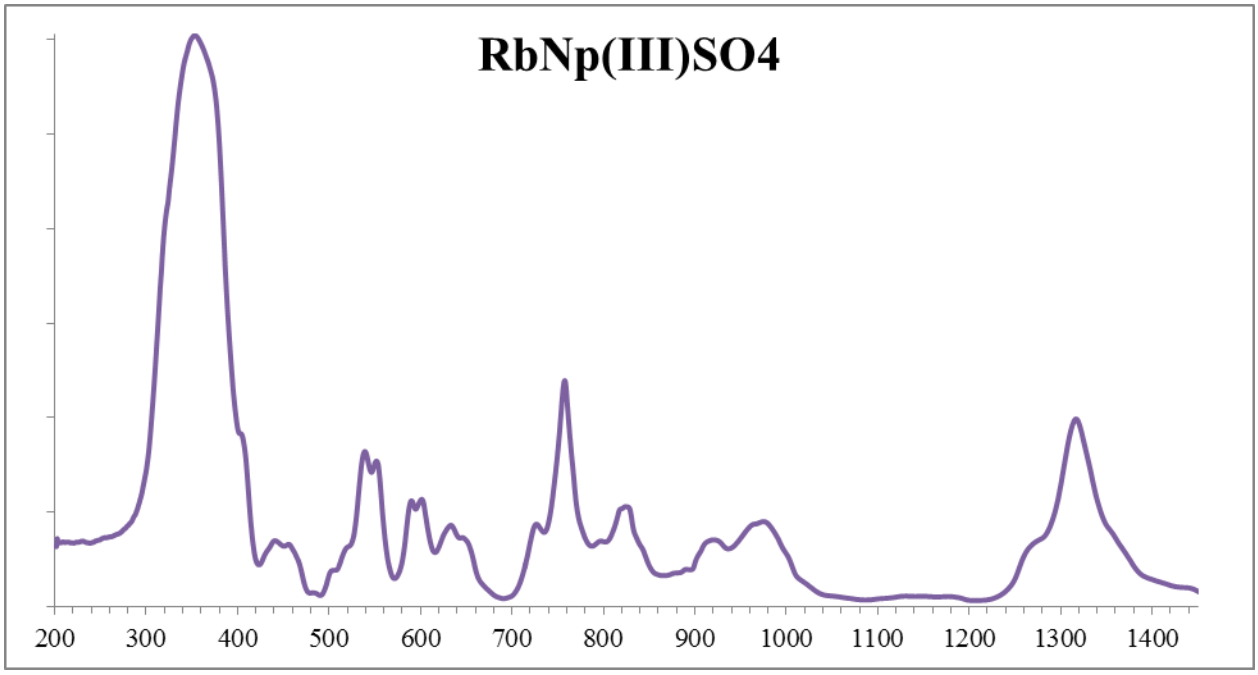

Figure S16. Solid state absorption spectra of $RbNp(SO_4)_2$.

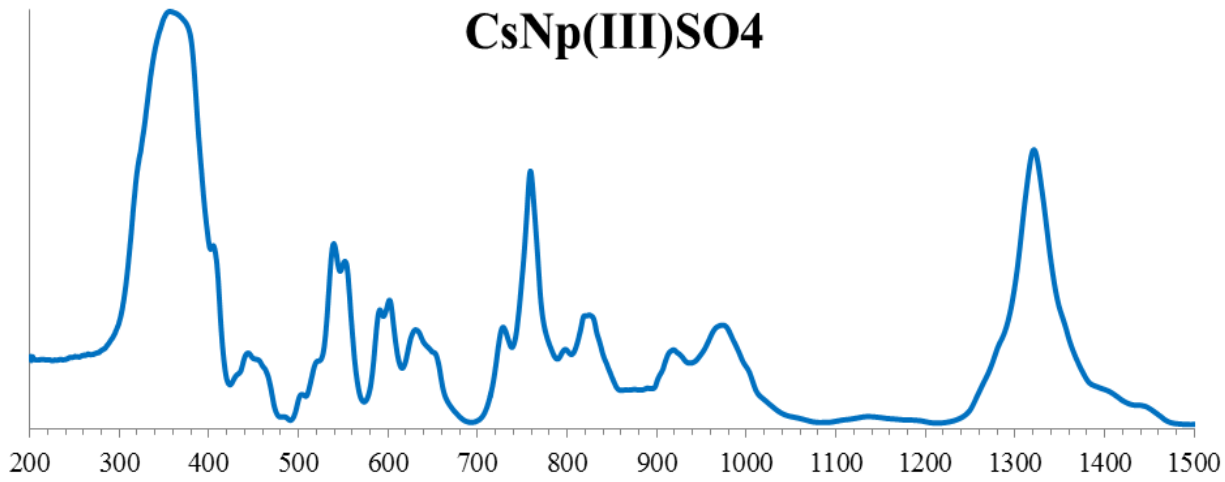

Figure S17. Solid state absorption spectra of $CsNp(SO_4)_2$.