Supplementary Materials

Neptunyl(VI) Nitrate Coordination Polymer with Bis(2-pyrrolidone) Linkers Highlighting Crystallographic Analogy and Solubility Difference in Actinyl(VI) Nitrates

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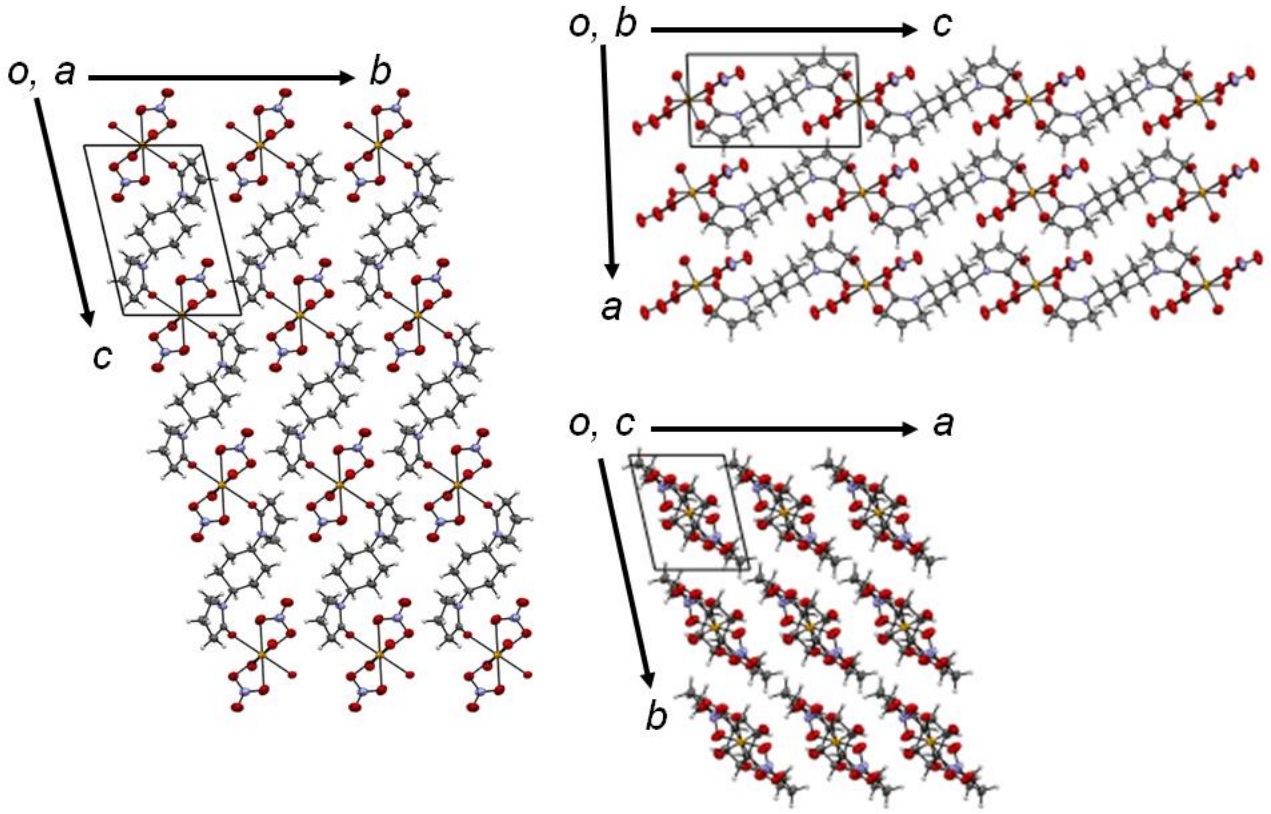

Figure S1. Packing diagram of $[NpO_2(NO_3)_2(\mathbf{L1})]_n$.

Table S1. Logarithmic Stability Constants (log β) of Typical Actinyl(VI) Complexes ($AnO_2(L)_n^{m+}$; An = U, Np, Pu; L = CO_3^{2-}, CH_3COO^-, F^-, Cl^-, NO_3^-, SO_4^{2-}), in Aqueous Systems at 298 K and Zero Ionic Strength[S1, S2]

	stoichiometry	log β		
L	AnO_2^{2+}:L	An = U	Np	Pu
CO_3^{2-}	1:1	9.94	9.86	9.50
	1:2	16.61	16.52	14.70
	1:3	21.84	19.90	18.00
CH_3COO^-	1:1	3.06	2.92	2.76
	1:2	5.57	5.14	4.47
	1:3	6.97	6.91	5.93
F^-	1:1	5.16	4.57	4.56
	1:2	8.83	7.60	7.25
	1:3	10.90		
	1:4	11.84		
Cl^-	1:1	0.17	0.40	0.23
	1:2	−1.10		−1.15
NO_3^-	1:1	−0.19		
SO_4^{2-}	1:1	3.15	3.28	3.38
	1:2	4.14	4.70	4.40
	1:3	3.02		

References.

[S1] *NIST Critically Selected Stability Constants of Metal Complexes Databese*, ed. by R. M. Smith, A. E. Martell, R. J. Motekaitis, **2004**.

[S2] *Second Update on the Chemical Thermodynamics of Uranium, Neptunium, Plutonium, Americium and Technetium*, ed. by I. Grenthe, X. Gaona, A. V. Plyasunov, L. Rao, W. H. Runde, B. Grambow, R. J. M. Konings, A. L. Smith, E. E. Moore, OECD Nuclear Energy Agency, Data Bank, Paris, France, **2020**.