

Supporting Information

High-Temperature, High-Pressure Hydrothermal Synthesis and Characterization of a Salt-Inclusion Mixed-Valence Uranium(V,VI) Silicate: $[\text{Na}_9\text{F}_2][(\text{U}^{\text{V}}\text{O}_2)(\text{U}^{\text{VI}}\text{O}_2)_2(\text{Si}_2\text{O}_7)_2]$

Yu-Chih Chang,^a Wen-Jung Chang,^a Sophie Boudin,^b and Kwang-Hwa Lii^{*,a,c}

^aDepartment of Chemistry, National Central University, Jhongli, Taiwan 320, R.O.C.

^bLaboratoire CRISMAT, ENSICAEN, Université de Caen-Basse Normandie, 6 Bd
Maréchal Juin, 14050 Caen Cedex, France

^cInstitute of Chemistry, Academia Sinica, Taipei, Taiwan 115, R.O.C.

Table S1. The fitting parameters of U 4f XPS data for $[\text{Na}_9\text{F}_2][(\text{U}^{\text{V}}\text{O}_2)(\text{U}^{\text{VI}}\text{O}_2)_2(\text{Si}_2\text{O}_7)_2]$

Table S1. The fitting parameters of the U 4f XPS data for $[\text{Na}_9\text{F}_2][(\text{U}^{\text{V}}\text{O}_2)(\text{U}^{\text{VI}}\text{O}_2)_2(\text{Si}_2\text{O}_7)_2]$

Fitting parameters	U(VI)	Area	U(V)	Area
BE of $\text{U}4f_{7/2}$ (FWHM) (eV)	381.94[1.45]	29664	380.26[1.50]	15465
BE of $\text{U}4f_{5/2}$ (FWHM) (eV)	392.78[1.50]	24042	391.15[1.63]	11945
4f peak separation (eV)	10.84	Ratio=1.24	10.89	Ratio=1.29
Satellite of $\text{U}4f_{7/2}$ (FWHM) (eV)	385.85 [2.21]	992	388.91[2.16]	2698
Satellite of $\text{U}4f_{5/2}$ (FWHM) (eV)	396.67[3.18] 403.08[3.05]	3393 3817	399.92[2.50]	3359
Satellite of $\text{U}4f_{7/2}$ from main peak (eV)	3.91		8.65	
Satellite of $\text{U}4f_{5/2}$ from main peak (eV)	3.89 10.3		8.76	

Carbon-peak position: 285

Note:

FWHM = Full width at half maximum

The binding energies are referenced to the adventitious C 1s at 285.0 eV.