

## Flux Crystal Growth of Uranium(V) Containing Oxyfluoride Perovskites

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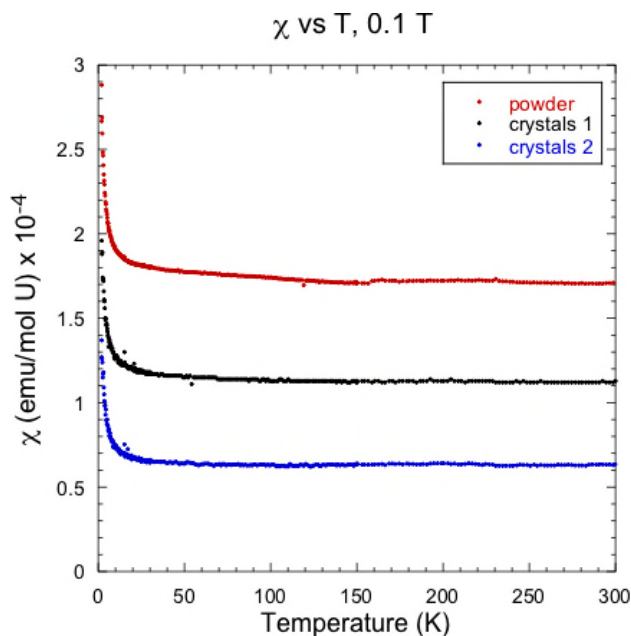
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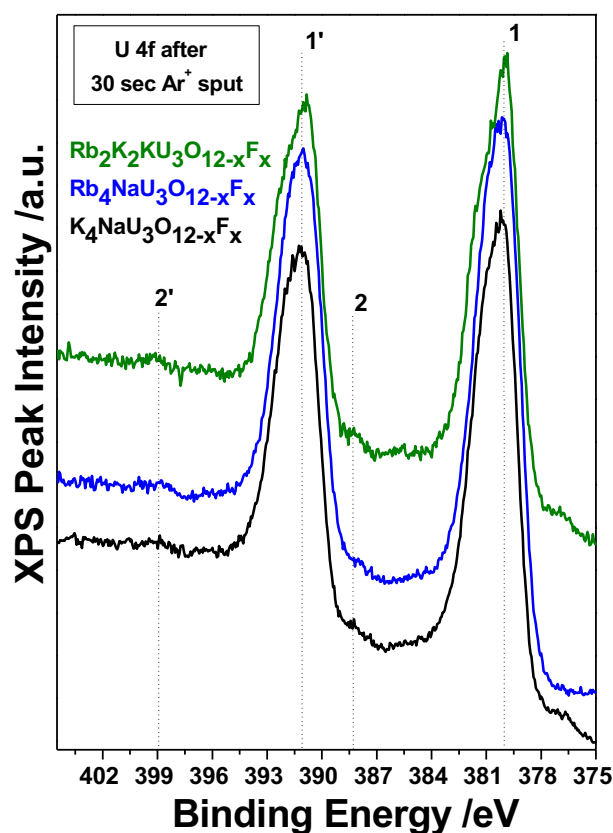


**Figure S1:**  $\chi$  vs T plot of three different samples of  $\text{K}_4\text{NaU}_3\text{O}_{12-x}\text{F}_x$  including powder and crystals, showing the consistent paramagnetic behavior of the samples, but inconsistent magnitude of the moment per uranium atom.

**Table S1:** Surface atomic ratios determined by XPS before and after sputtering

	C	K	U	O	F	Na
$\text{K}_4\text{NaU}_3\text{O}_{12-x}\text{F}_x$ Fresh						
Mass Conc. %	28.4	11.0	35.4	22.3	1.7	1.2
Atomic Conc. %	54.6	6.5	3.4	32.2	2.1	1.2
$\text{K}_4\text{NaU}_3\text{O}_{12-x}\text{F}_x$ Sputtering						
Mass Conc. %	30.3	10.1	36.1	20.3	1.9	1.3
Atomic Conc. %	57.9	5.9	3.5	29.1	2.3	1.3
$\text{Rb}_4\text{NaU}_3\text{O}_{12-x}\text{F}_x$ Fresh						
	Rb	C	U	O	F	Na
Mass Conc. %	25.1	17.2	35.0	19.6	1.9	1.2
Atomic Conc. %	9.1	44.0	4.6	37.7	3.0	1.6
$\text{Rb}_4\text{NaU}_3\text{O}_{12-x}\text{F}_x$ Sputtering						
Mass	23.2	16.4	38.8	18.0	2.3	1.3

Conc. %						
Atomic Conc. %	8.8	44.0	5.3	36.2	3.9	1.8
Rb <sub>2</sub> K <sub>2</sub> KU <sub>3</sub> O <sub>12-x</sub> F <sub>x</sub> Fresh						
	Rb	C	K	U	O	F
Mass Conc. %	10.6	38.5	8.2	20.8	20.9	1.0
Atomic Conc. %	2.5	64.3	4.2	1.8	26.2	1.0
Rb <sub>2</sub> K <sub>2</sub> KU <sub>3</sub> O <sub>12-x</sub> F <sub>x</sub> Sputtering						
Mass Conc. %	11.1	40.7	6.6	24.3	16.1	1.2
Atomic Conc. %	2.7	69.7	3.5	2.1	20.7	1.3



**Figure S2:** XPS spectra of Rb<sub>4</sub>NaU<sub>3</sub>O<sub>12-x</sub>F<sub>x</sub> (Blue), K<sub>4</sub>NaU<sub>3</sub>O<sub>12-x</sub>F<sub>x</sub> (Black), and Rb<sub>2.1</sub>K<sub>1.9</sub>KU<sub>3</sub>O<sub>12-x</sub>F<sub>x</sub> (Green) after 30 seconds of Ar sputtering.