

Supporting data:

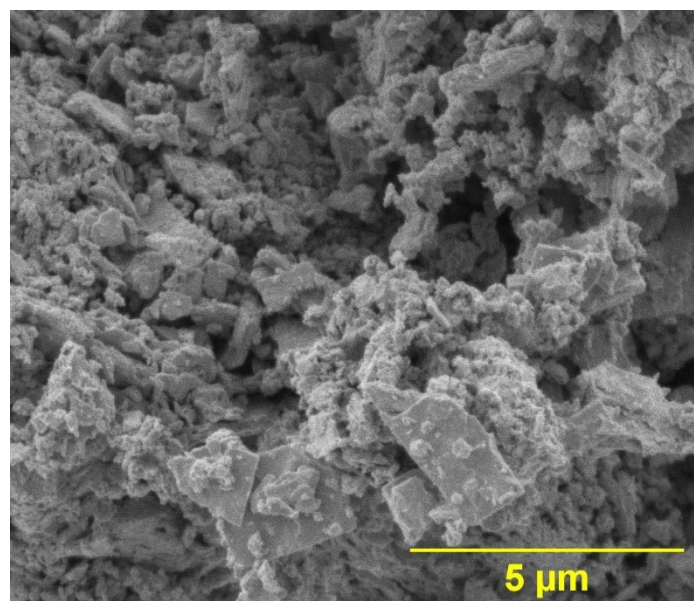


Figure S1 : Micrograph of a mixed oxide obtained through thermal treatment of a mixed oxalate. The platelet shape is inherited from the oxalate precursor (1000°C, 4h, Ar/H₂-4% atmosphere).

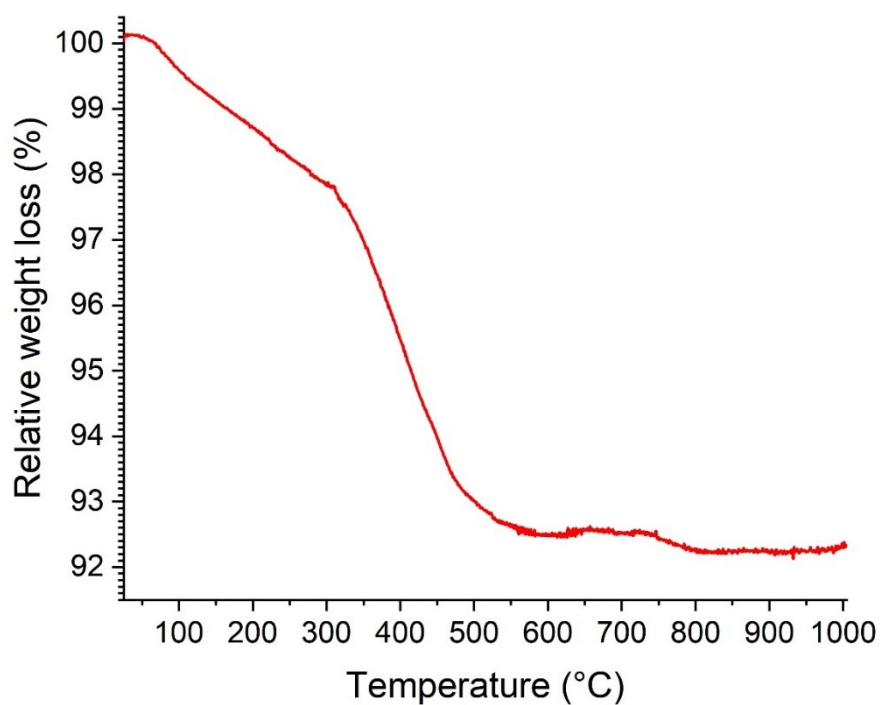


Figure S2 : Thermogravimetric analysis of the oxide sample formed through hydrothermal conversion of a mixed uranium-cerium oxalate (T = 250°C, pH = 8, t = 24 h).

Table S 1: O/M ratios calculated with Sali's equation⁴³, as a function of initial pH.

pH	Calculated lattice parameter (Å) (from Figure 2 refinements)	Ce/(U+Ce) molar ratio (from Table 1)	O/M ratio
2	5.4339 ± 0.0002	0.23 ± 0.02	2.34
4	5.4355 ± 0.0002	0.23 ± 0.02	2.31
5.5	5.4355 ± 0.0003	0.22 ± 0.02	2.32
8	5.4355 ± 0.0003	0.19 ± 0.02	2.36
10	5.4341 ± 0.0002	0.21 ± 0.02	2.36

Table S 2 : O/M ratios calculated with Sali's equation⁴³, as a function of hydrothermal treatment time.

Hydrothermal treatment time (h)	Calculated lattice parameter (Å) (from Figure 7 refinements)	Ce/(U+Ce) molar ratio (from Table 3)	O/M ratio
1	5.4349 ± 0.0006	0.21 ± 0.02	2.35
2	5.4261 ± 0.0007	0.19 ± 0.02	2.52
3	5.4280 ± 0.0006	0.24 ± 0.02	2.43
5	5.4244 ± 0.0001	0.19 ± 0.02	2.54
7	5.4309 ± 0.0005	0.20 ± 0.02	2.42
24	5.4355 ± 0.0003	0.19 ± 0.02	2.36
48	5.4367 ± 0.0003	0.21 ± 0.02	2.32

Table S 3: O/M ratios calculated with Sali's equation⁴³, as a function of xCe.

Ce/(U+Ce) molar ratio (from Table 5)	Calculated lattice parameter (Å) (from Figure 11 refinements)	O/M ratio
0.10 ± 0.02	5.4419 ± 0.0003	2.36
0.19 ± 0.02	5.4355 ± 0.0003	2.36
0.35 ± 0.02	5.4254 ± 0.0003	2.34
0.48 ± 0.02	5.4184 ± 0.0002	2.31
0.57 ± 0.02	5.4194 ± 0.0002	2.18
0.72 ± 0.02	5.4171 ± 0.0002	2.05