

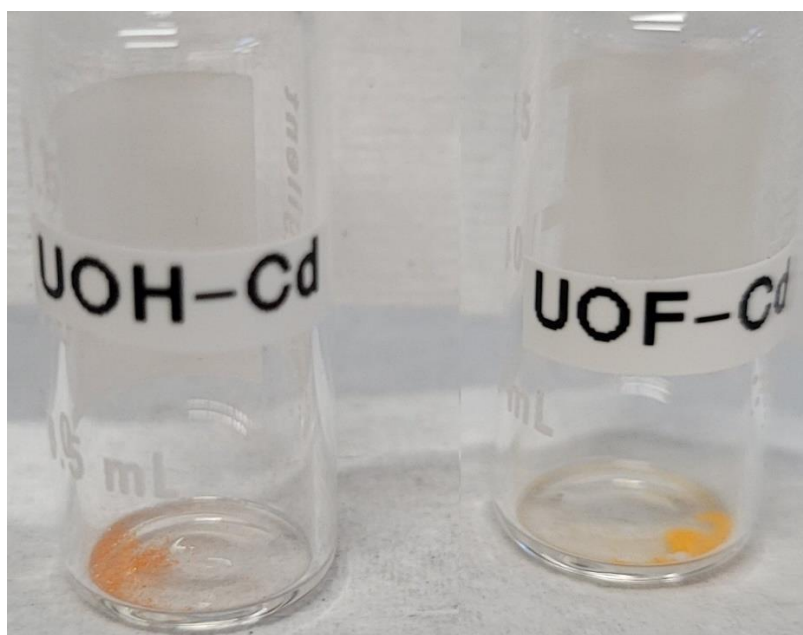
*Electronic Supplementary Information*

Exploring the influence of pH on the structural intricacies of uranium oxide hydrates containing both Cd(II) and K(I) ions

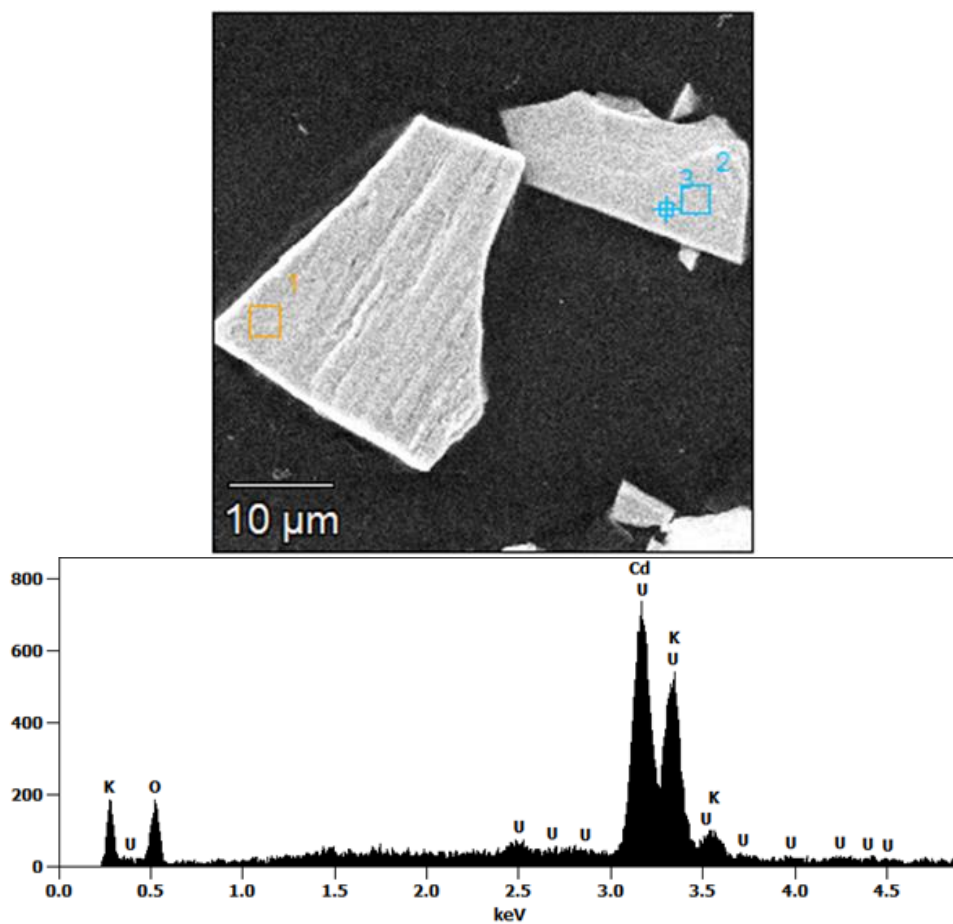
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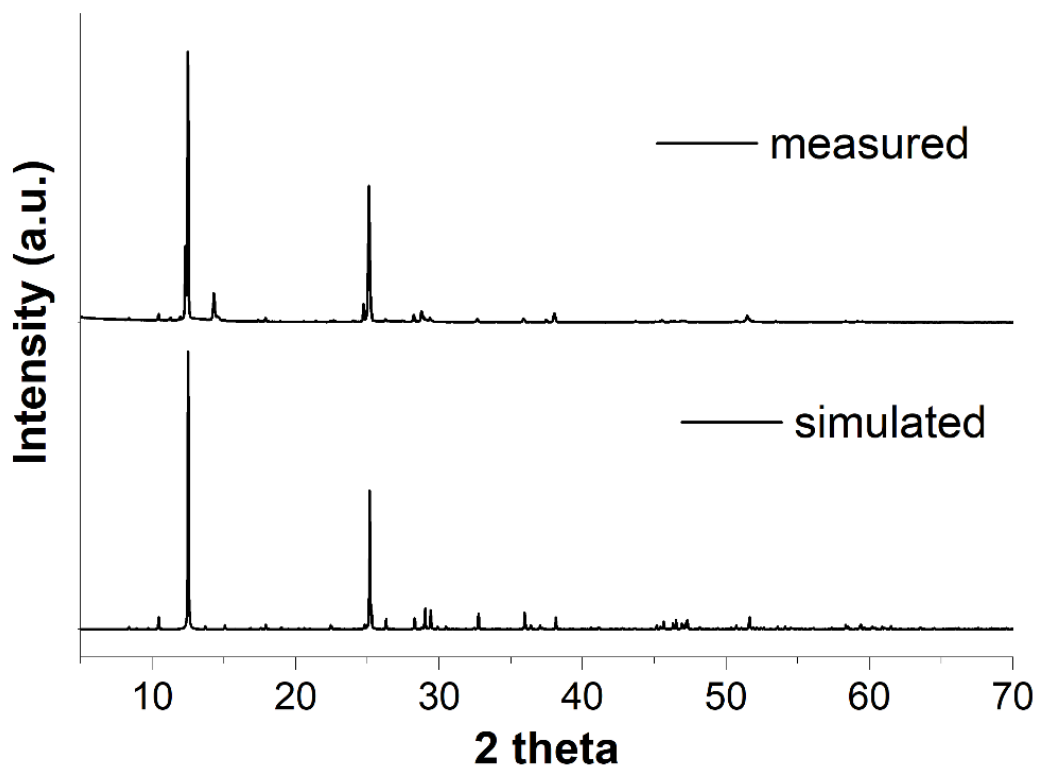
**Key words:** spent nuclear fuel, uranium oxide hydrate, cadmium, potassium, uraninite, structure diversity



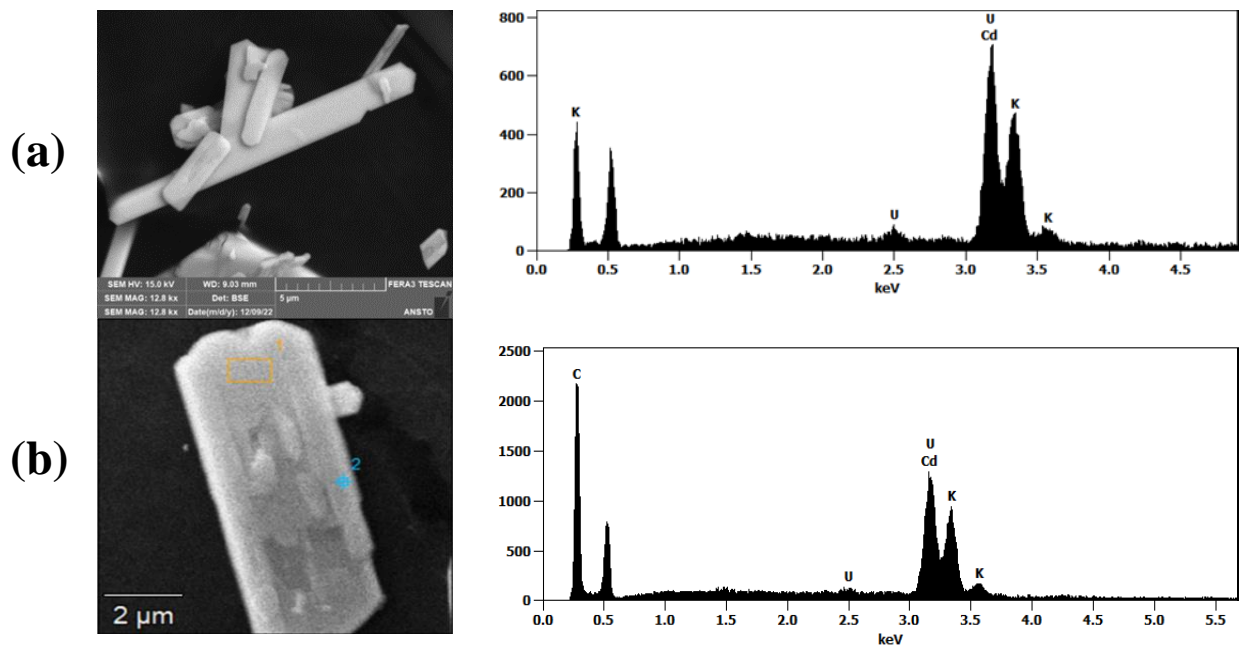
**Fig. S1.** Photos of compounds **UOH-Cd** (left) and **UOF-Cd** (right) showing yellow-orange color, typical for uranyl compounds.



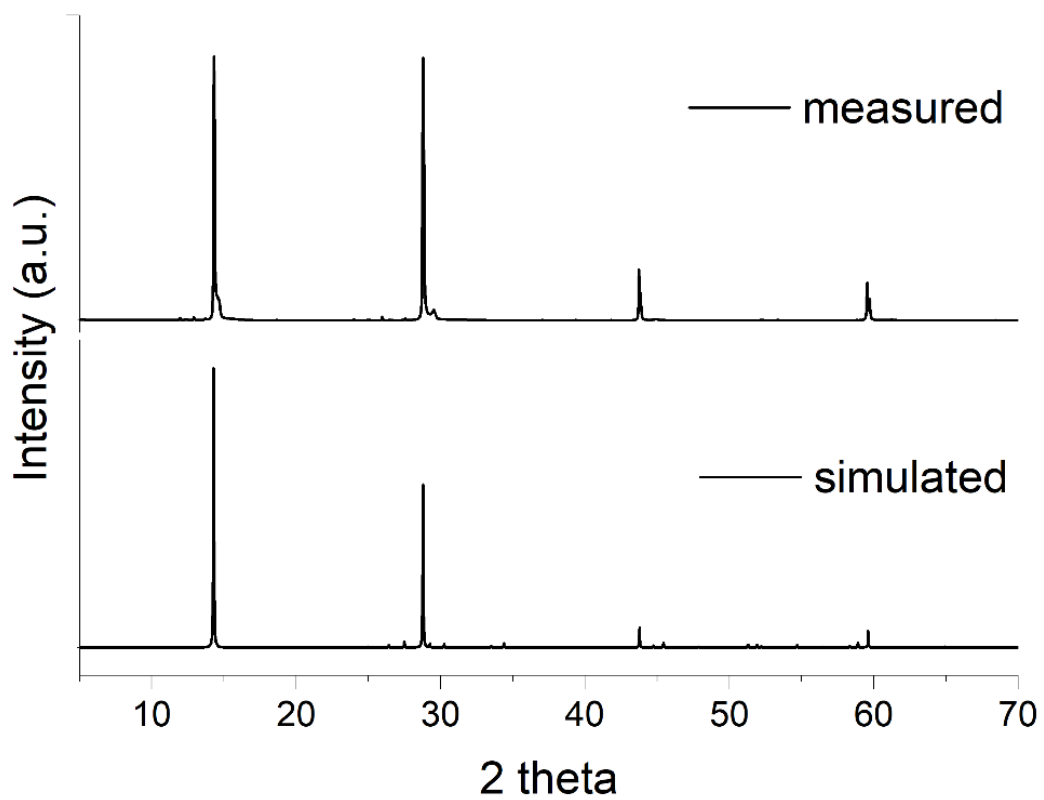
**Fig. S2.** A backscattered SEM image (top) and an EDS spectrum (bottom) of compound UOH-Cd.



**Fig. S3.** Powder XRD patterns of compound **UOH-Cd** with measured on top of the simulated one.



**Fig. S4.** Backscattered SEM images of compounds **UOF-Cd** (a) and a minor **UOH-Cd** (b) with the corresponding EDS spectra on the right.



**Fig. S5.** Powder XRD patterns of compound **UOF-Cd** with measured on top of the simulated one.