Synthesis and Crystal Structure of Double Np(V) Cesium Oxalate $CsNpO_2C_2O_4 \cdot nH_2O$

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Abstract—An X-ray diffraction study of $CsNpO_2C_2O_4 \cdot nH_2O$ was carried out. The structure consists of NpO_2^+ and Cs^+ cations, oxalate anions, and water molecules. Dioxo cations are combined by cation–cation interaction into cyclic trimer in which each NpO_2^+ cation acts as monodentate ligand. The coordination polyhedron of the Np(V) atom is a pentagonal bipyramid. The similarity of the structures of $MNpO_2C_2O_4 \cdot nH_2O$ (M = NH_4, Cs) based on cyclic trimers combined by oxalate ions into a three-dimensional framework was confirmed.

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