

Al^{3+}OOH (diaspore) \rightarrow Ga^{3+}

Fe_xO_y

As (5+: AsO_4^{3-})

V?

Ti^{4+}O_2 (anatase) \rightarrow **Th⁴⁺**, U, Ta, Nb

XRD
(bulk)
XRF (bulk)

LA-ICP-MS

μ -XANES
 μ -EXAFS

K-40, Th-232, U-238, U-235, U-234

Th⁴⁺, U⁴⁺, U⁶⁺ (UO_2^{2+} -uranyl)

γ -ray
spectrometry