Morphological investigations on mesostructured metal oxides

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The synthesis and characterization of mesostructured zirconia and titanium oxides are presented. The samples were investigated by x-ray powder diffraction (XRD), transmission electron microscopy (TEM), and atomic force microscopy (AFM). XRD and TEM revealed only lamellar structures for both materia1s, whereas AFM could detect locally restricted initial stages of cubic or hexagona1 phases in a globally lamellar Ti oxide.