Electronic Supplementary Material (ESI) for Nanoscale.

Nonlinear Optical Potassium Niobate Nanocrystals as Harmonic Markers: The Role of Precursors and Stoichiometry in Hydrothermal Synthesis

Zunhao Wang,[ab] Christian Kijatkin,[b] Alexander Urban,[ab] Markus Haase,[a] Mirco Imlau,[b] Karsten Kömpe,*[a]

Electronic Supplementary Informations (ESI)

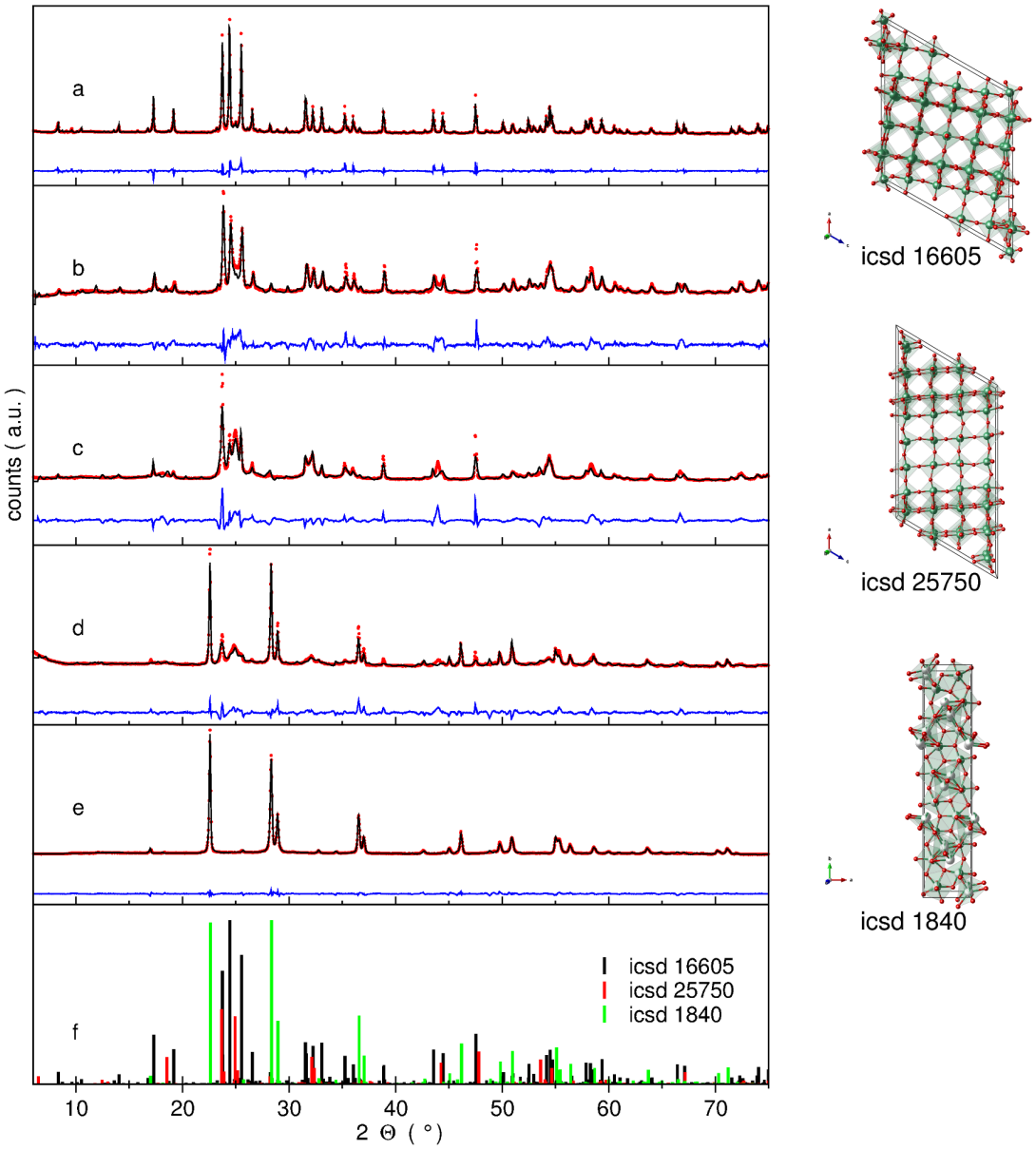

Fig. S 1 Rietveld refinements of the used Niobium oxides. (a) Niobium oxide NbO-4, (b) NbO-3, (c) NbO-2, (d) NbO-1 and (e) NbO-5. (f) The peak positions of the H-form according to ICSD 16605, of the N-form according to ICSD 25750, and of the T-form according to ICSD 1840. Schematic representations of the unit cells hereof are given on the right.

[a] *Institute of Chemistry of new Materials, University of Osnabrück, Barbarastraße 7, D-49076 Osnabrück, Germany.*
[b] *Department of Physics, University of Osnabrück, Barbarastraße 7, D-49076 Osnabrück, Germany.*

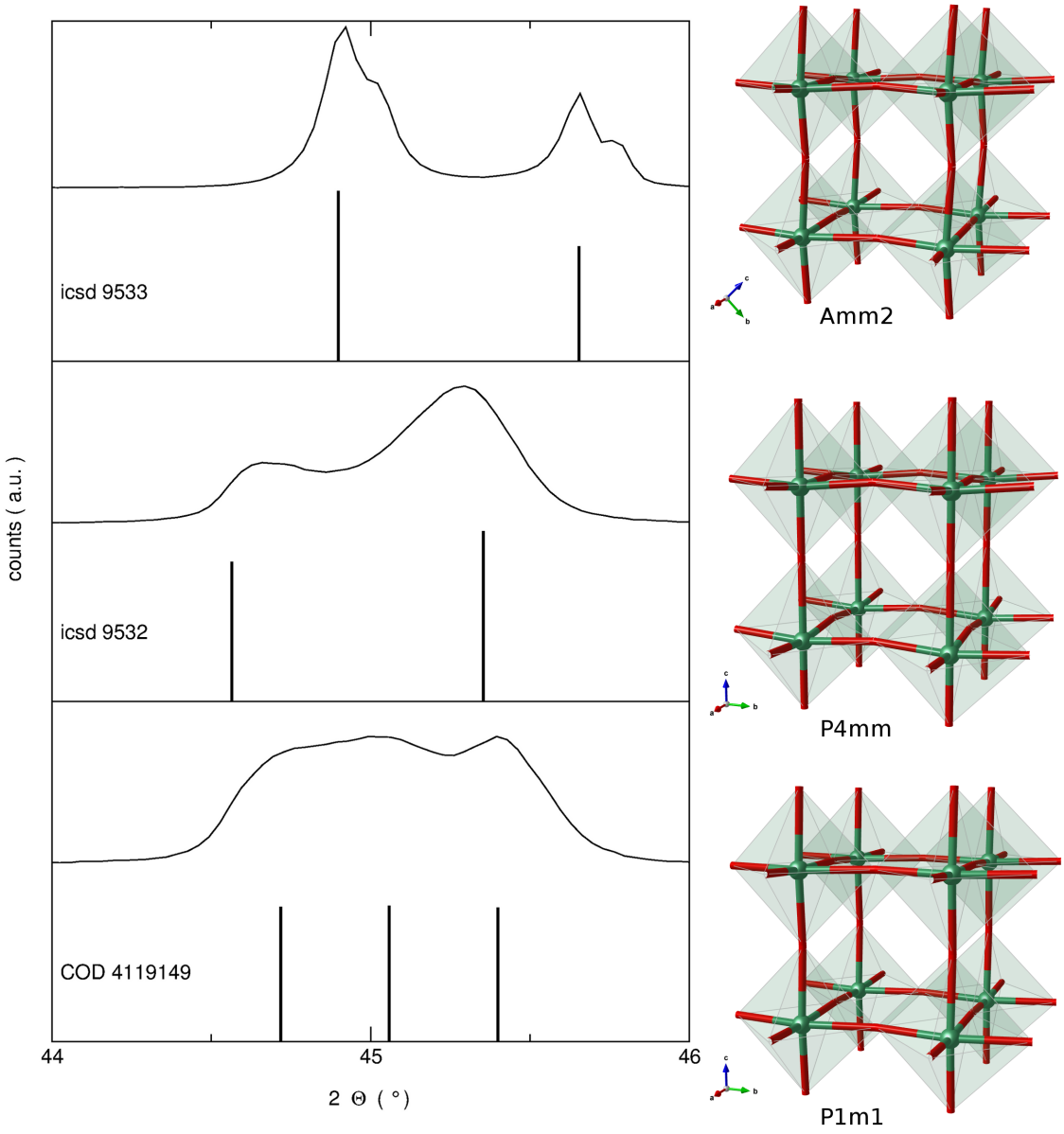

Fig. S 2 Distinction between the modifications of the orthorhombic (ICSD 9533), the tetragonal (ICSD 9532) and the monoclinic (COD 4119149) potassium niobate. The schematic representations of these modifications are given on the right. From top to bottom, for the orthorhombic, the tetragonal, and the monoclinic modification, four Nb-O octahedra are shown. Potassium and Oxygen are left out for better visibility.

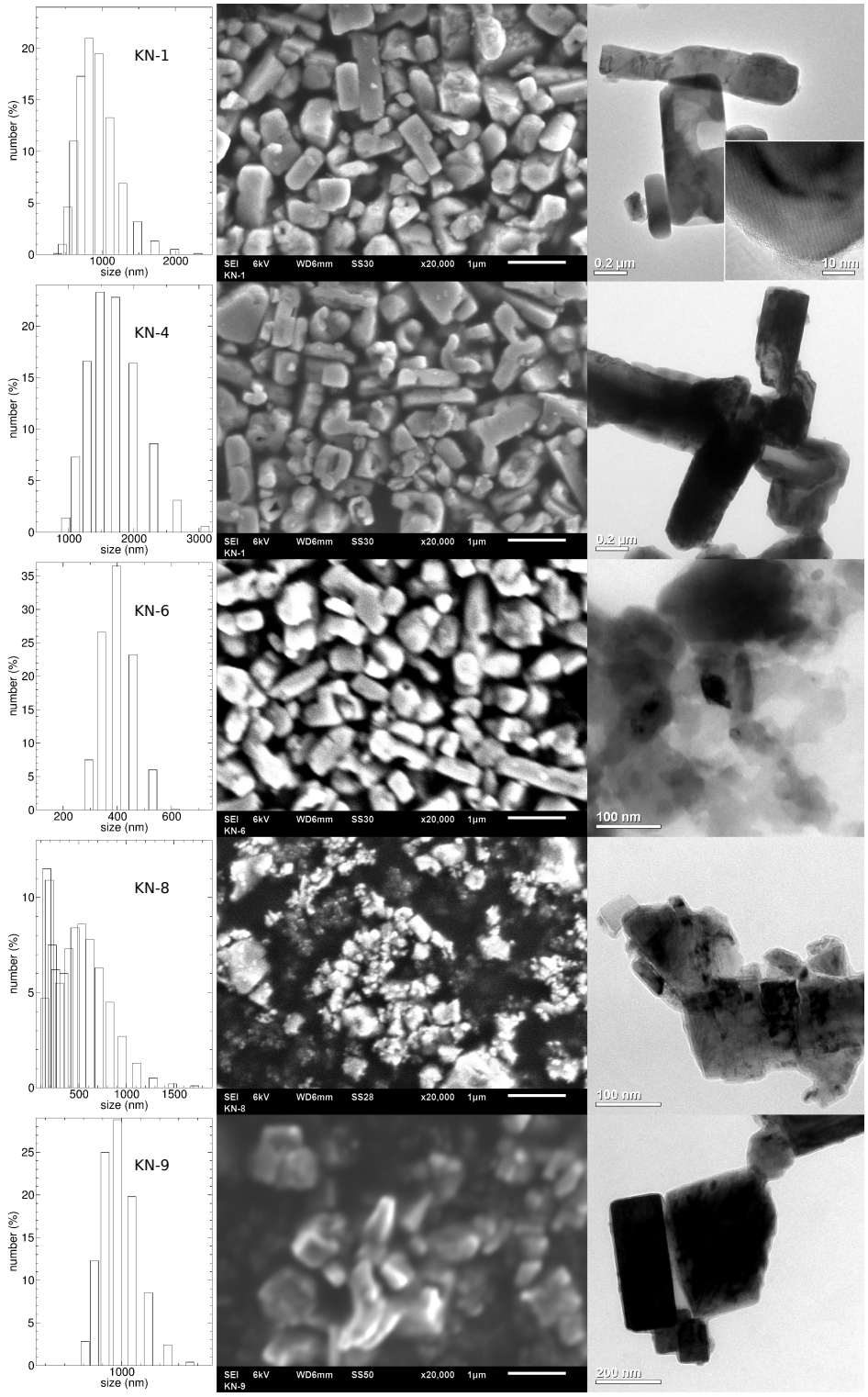

Fig. S 3 Dynamic light scattering results (left), SEM images (middle), and TEM images (right) of the samples KN-1, KN-4, KN6, KN-8, and KN-9 (from top to bottom).