

Supporting information

Synthesis of Zinc Oxide Nanorods via the Formation of Sea Urchin Structures and Their Photoluminescence after Heat Treatment

Mattias E. Karlsson,^a Yann C. Mamie,^a Andrea Calamida,^a James M. Gardner,^b Valter Ström,^c Amir Masoud Pourrahimi*^a and Richard T. Olsson*^a

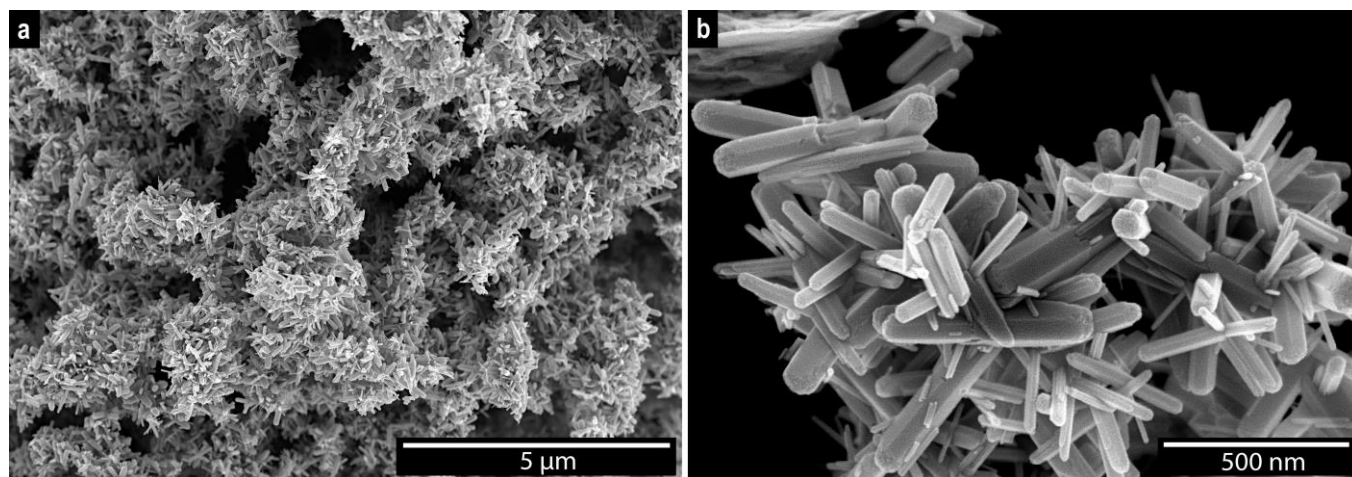


Fig. S1. The micrographs show the results of carrying out the synthesis at 100 °C for the same concentrations of reaction components, yielding rods with average size of ca. 300 x 50 nm.

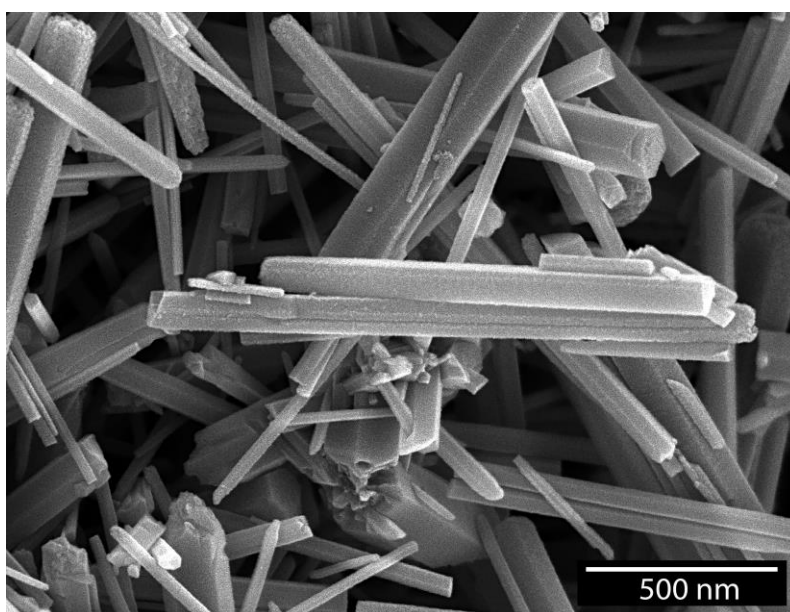


Fig. S2. The micrograph shows rods with irregular ends.

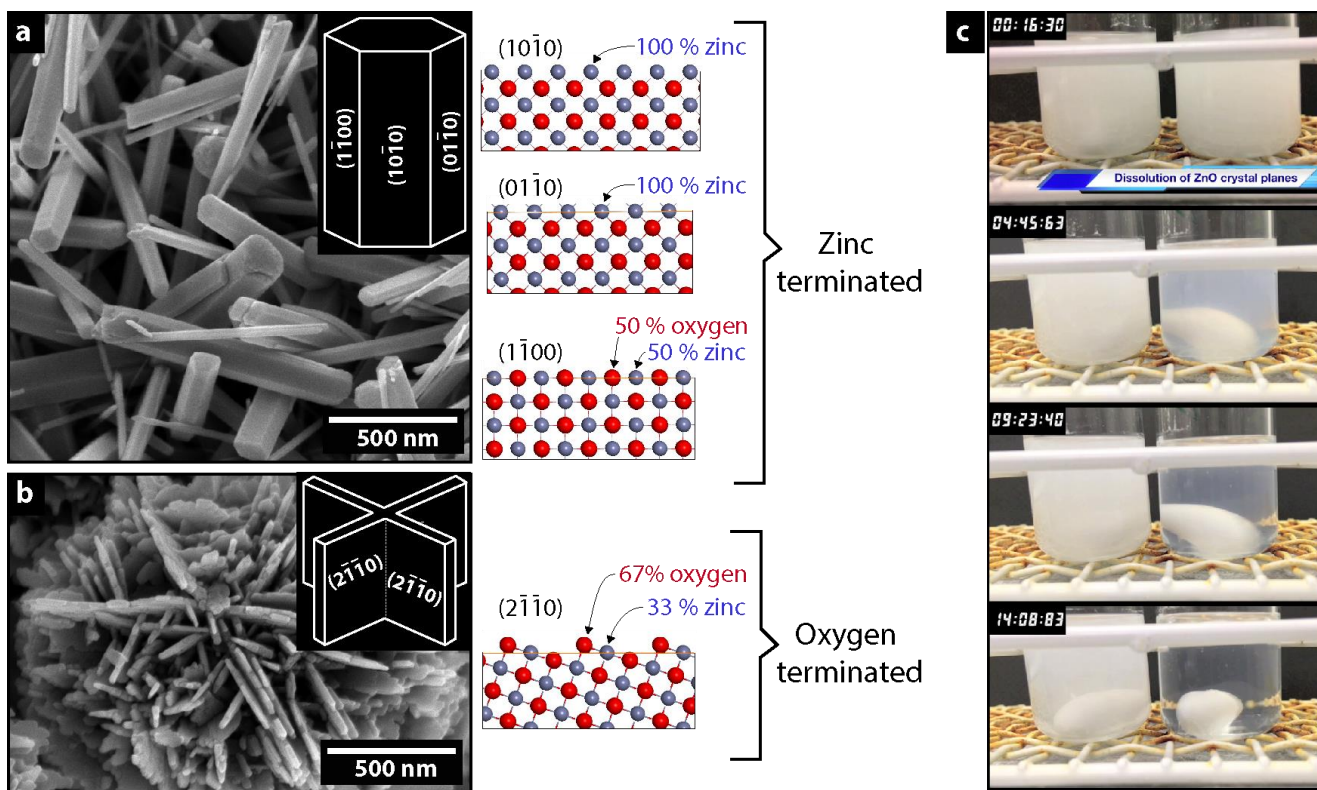


Fig. S3. The micrographs show ZnO nanorod particles (a) and ball-shaped ZnO particles (b) with schematic illustrations of the dominant crystal planes as insets. The theoretical lattice structures (viewed from the side) corresponding to the dominant crystal planes for each particle are shown to the right of the micrographs. The result from a dissolution experiment in an alkaline aqueous medium (2.5 M NaOH) of 20 mg nanorods to the left and 20 mg ball-shaped particles to the right is shown in (c). See the video from this experiment enclosed in the supporting information.

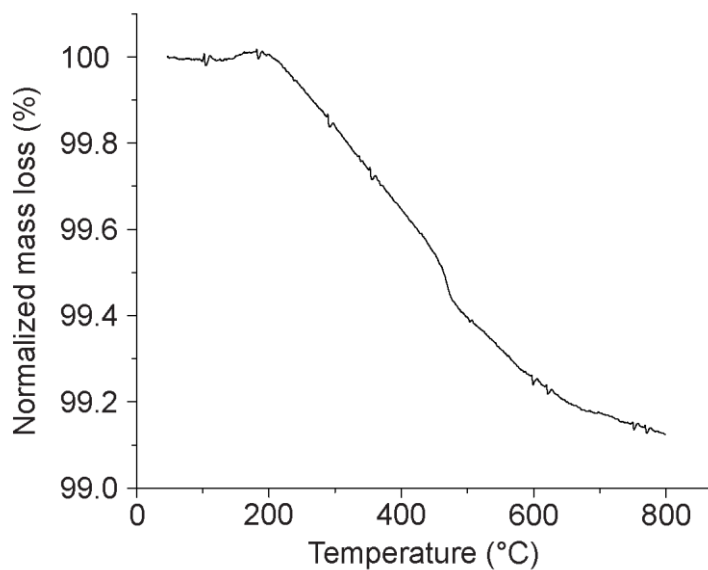


Fig. S4. Normalized mass loss as a function of temperature for ZnO nanorods during a thermogravimetric measurement.