

Supplementary Information

Organozinc Precursor-Derived Crystalline ZnO Nanoparticles: Synthesis, Characterization and Their Spectroscopic Properties

Yucang Liang ^{1,*}, Susanne Wicker ¹, Xiao Wang ², Egil Severin Erichsen ³ and Feng Fu ^{4,*}

¹ Institut für Anorganische Chemie, Eberhard Karls Universität Tübingen, Auf der Morgenstelle 18, 72076 Tübingen, Germany; susanne.wicker@ipc.uni-tuebingen.de

² School of Physics and Electronics, Hunan University, Changsha 410082, China; xiao_wang@hnu.edu.cn

³ Laboratory for Electron Microscopy, University of Bergen, Allégaten 41, 5007 Bergen, Norway; Egil.Erichsen@mnfa.uib.no

⁴ College of Chemistry & Chemical Engineering, Yan'an University, Shaanxi Key Laboratory of Chemical Reaction Engineering, Yan'an 716000, China

* Correspondence: yucang.liang@uni-tuebingen.de (Y.L.); yadxfufeng@126.com (F.F.); Tel.: +49-07071-29-76216 (Y.L.); +86-911-2332037 (F.F.)

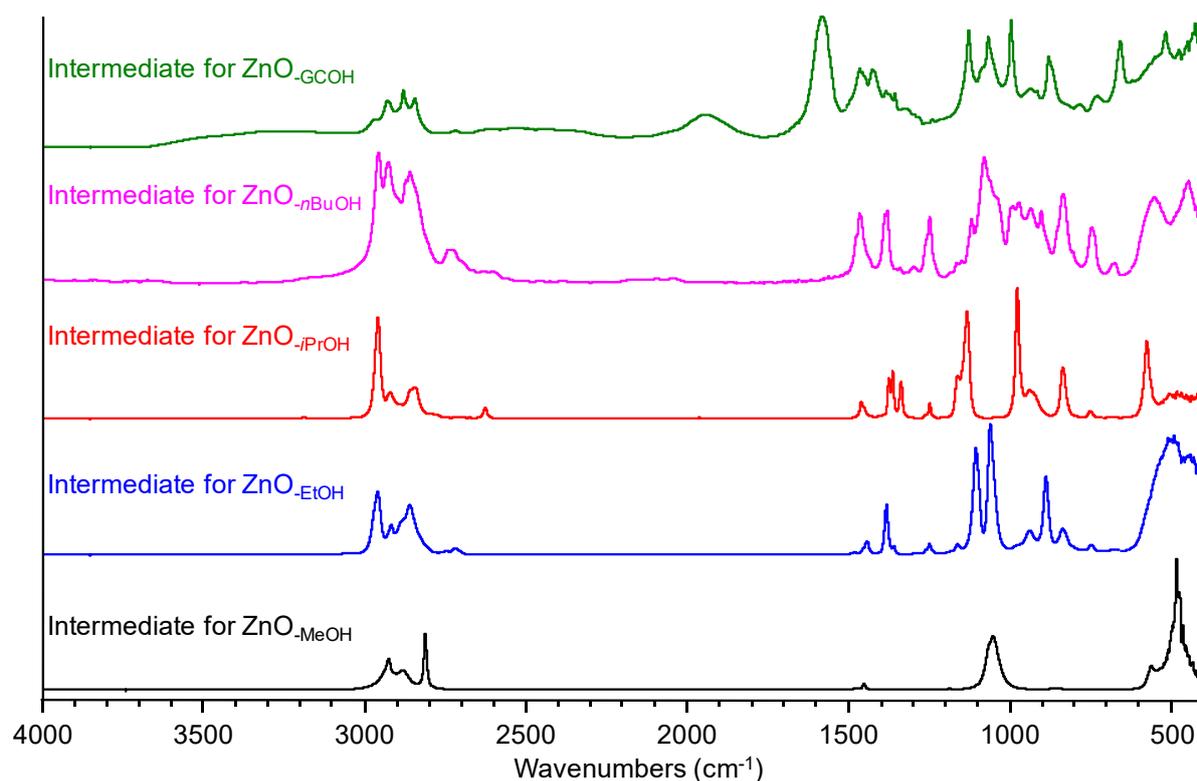


Figure S1. DRIFT spectra of the separated and dried intermediate zinc alkoxides before thermal decomposition.

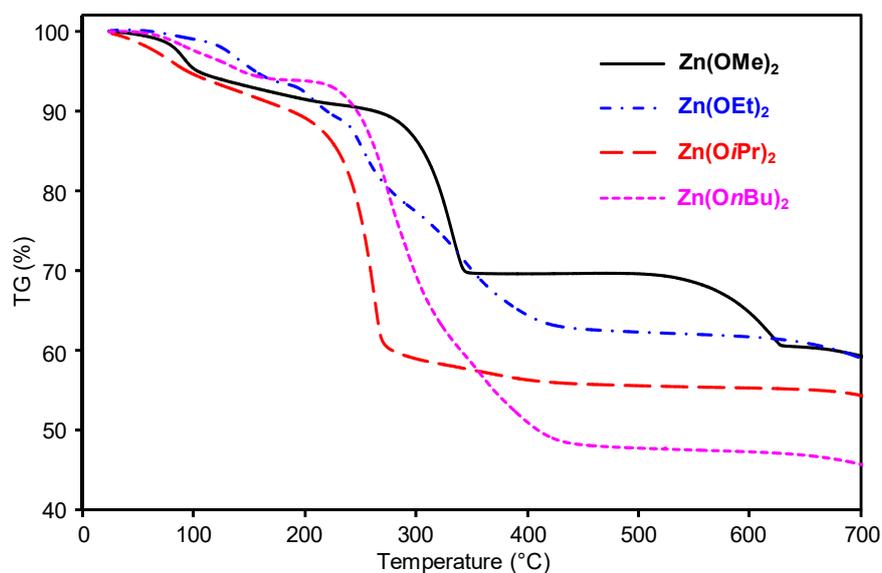


Figure S2. Thermogravimetric analysis curve of zinc alkoxides, $Zn(OR)_2$ ($R = \text{Me, Et, } i\text{Pr}$ and $n\text{Bu}$).

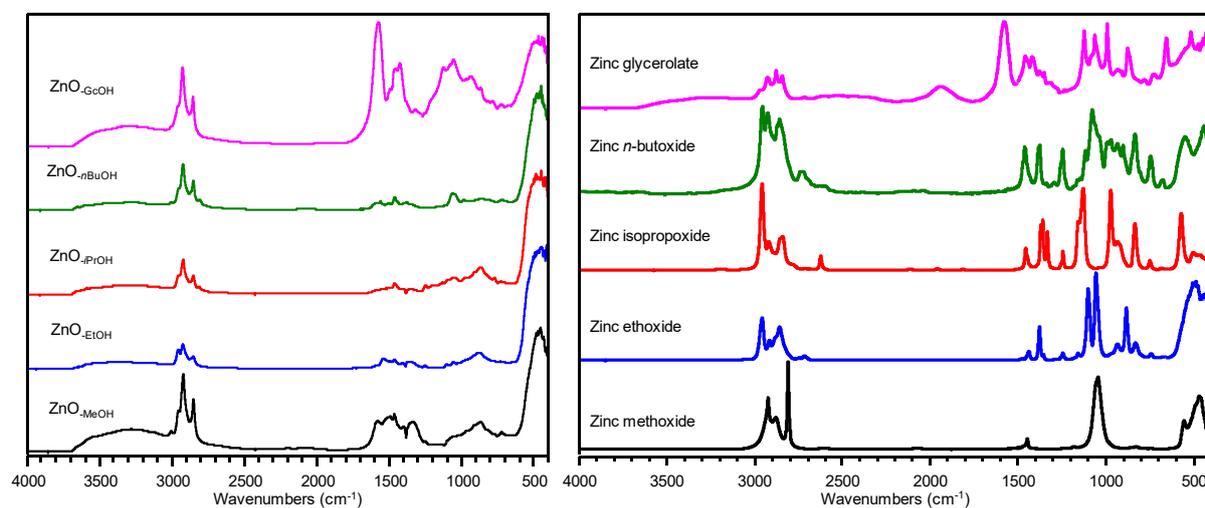


Figure S3. DRIFT spectra of as-made $ZnO\text{-MeOH}$, $ZnO\text{-EtOH}$, $ZnO\text{-}i\text{PrOH}$, $ZnO\text{-}n\text{BuOH}$ and $ZnO\text{-GcOH}$ nanoparticles (Left), and zinc alkoxides (Right).

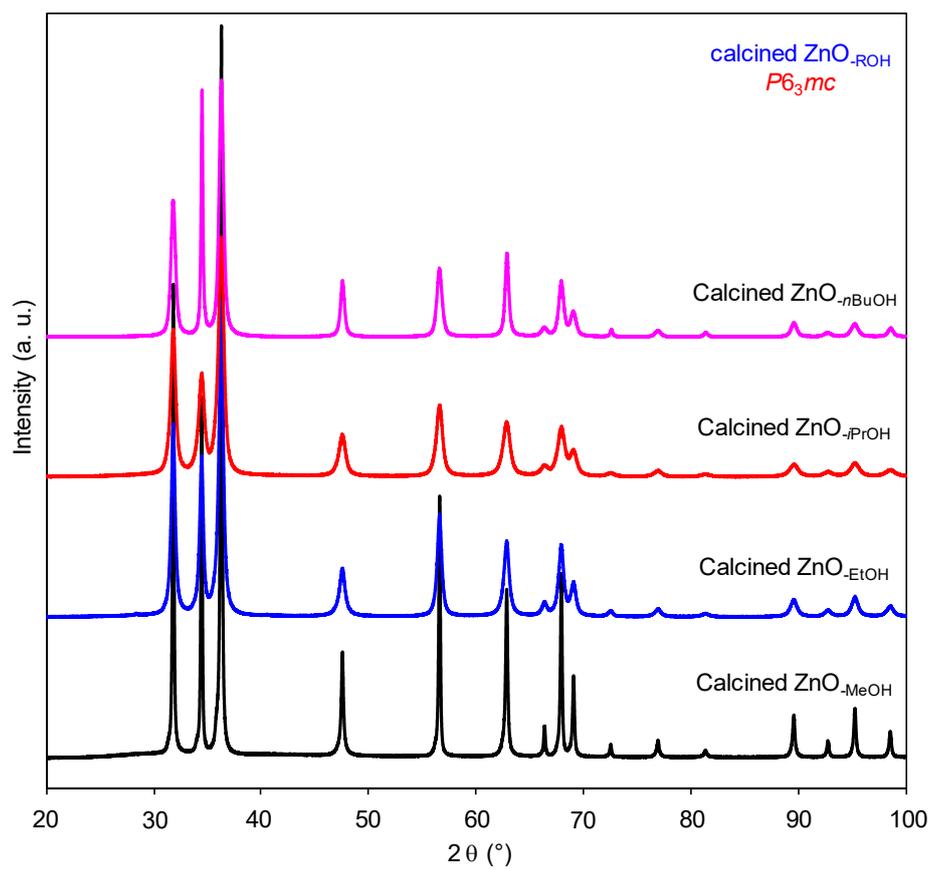


Figure S4. PXRD patterns of calcined $\text{ZnO}_{-\text{ROH}}$ (R = Me, Et, *i*Pr and *n*Bu)

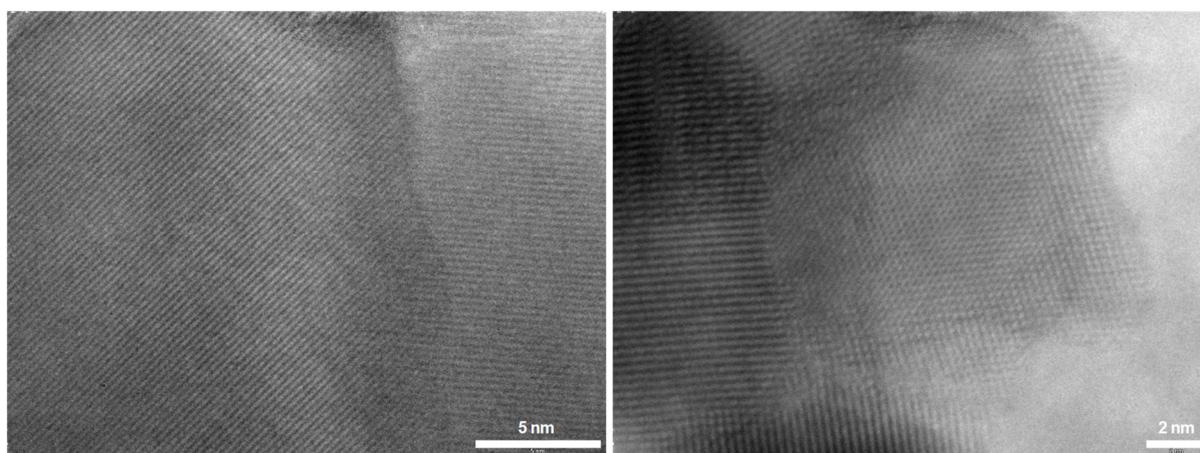


Figure S5. High-resolution TEM images of the crystalline $\text{ZnO}_{-\text{Me}}$ (Left) and $\text{ZnO}_{-i\text{Pr}}$ (Right) nanoparticles obtained by direct calcinations of $\text{Zn}(\text{OMe})_2$ and $\text{Zn}(\text{OiPr})_2$.