

Electronic Supplementary Information

The Origin of ZnO Twin Crystals in Bio-inspired Synthesis

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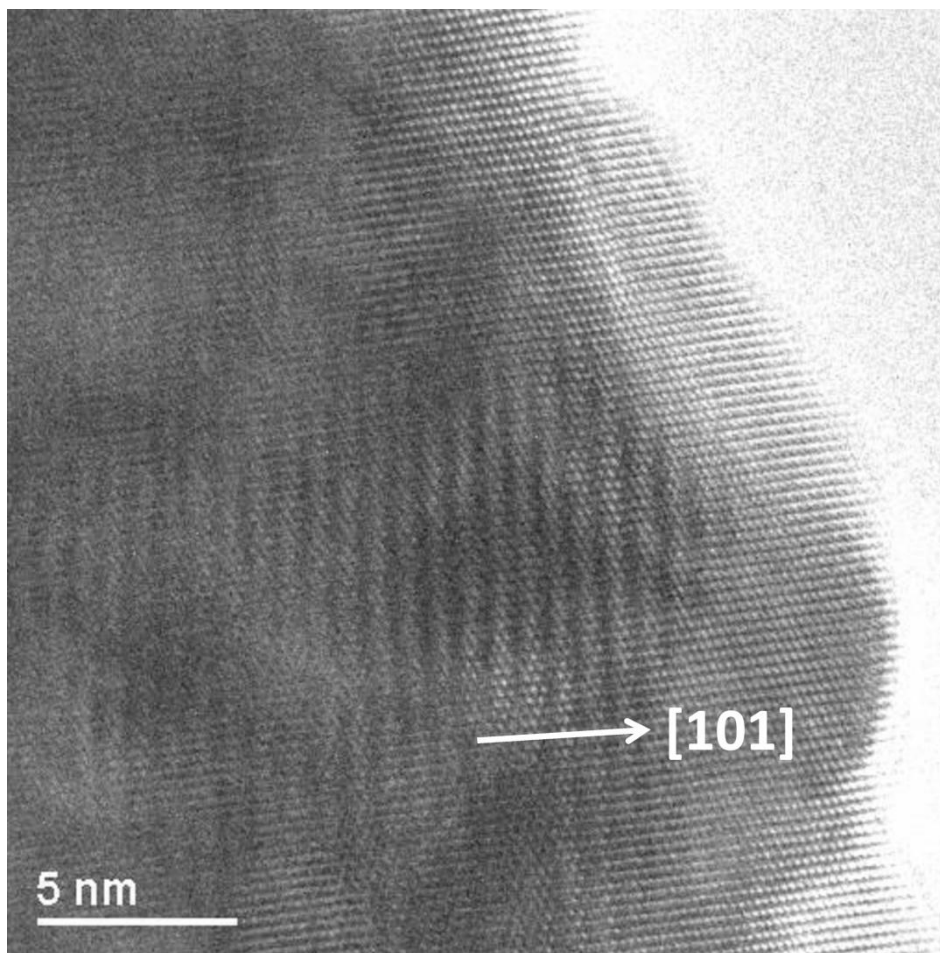


Fig. S1 HRTEM image from the 2 h sample, showing 3-fold superstructure along the [101] zone axis of ZnO. It is possibly due to extra oxygen in the ZnO structure.

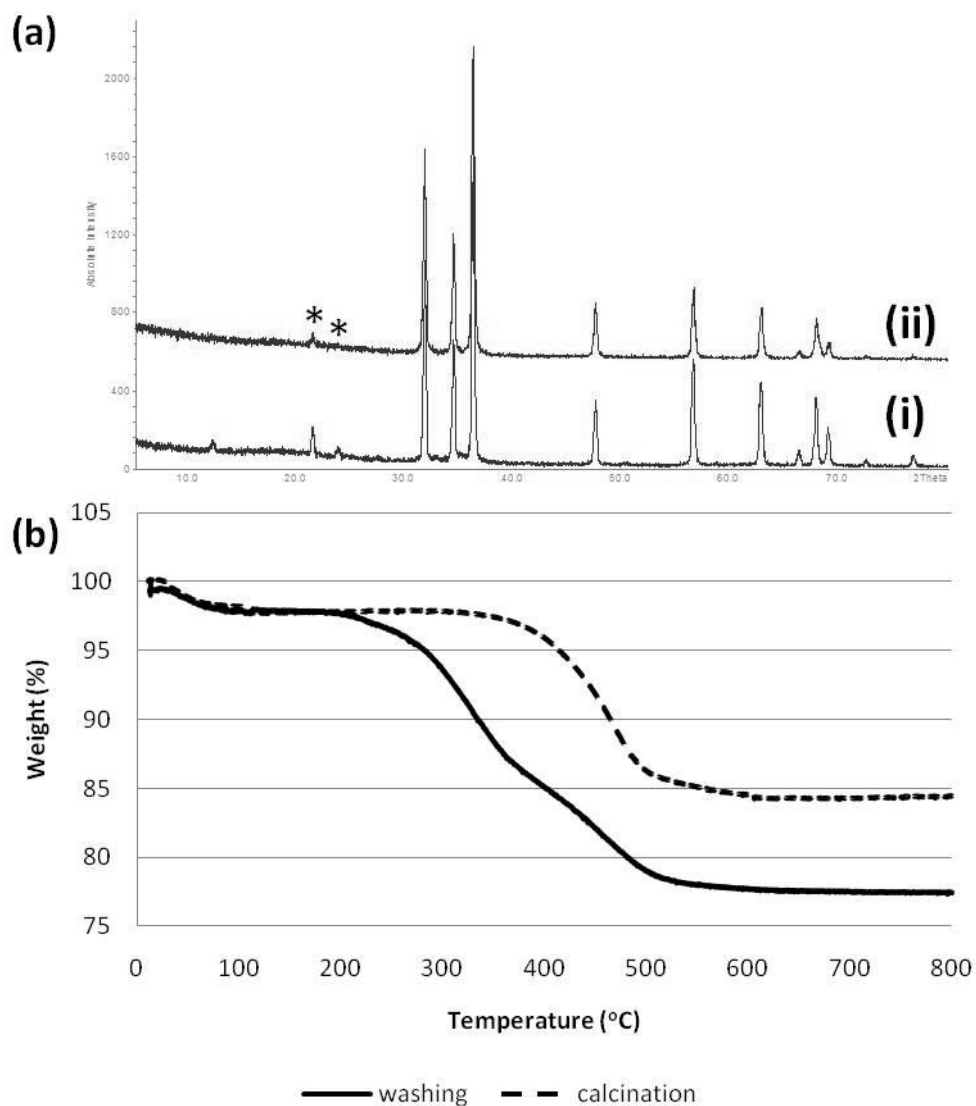


Fig. S2 (a) XRD of samples prepared with a gelatin concentration of 5g/L for a reaction time of 21 h and the gelatin template removed by (i) washing three times with H₂O at 40°C and (ii) calcination under N₂ at 600°C for 6 h. (b) The corresponding TGA results from the 21 h specimens whereby the gelatin has been removed by calcination or washing. The first mass loss observed between 10 and 115°C occurred from the evaporation of the water adsorbed in gelatin whilst the second mass loss observed between 170 and 650°C occurred from the decomposition of gelatin.

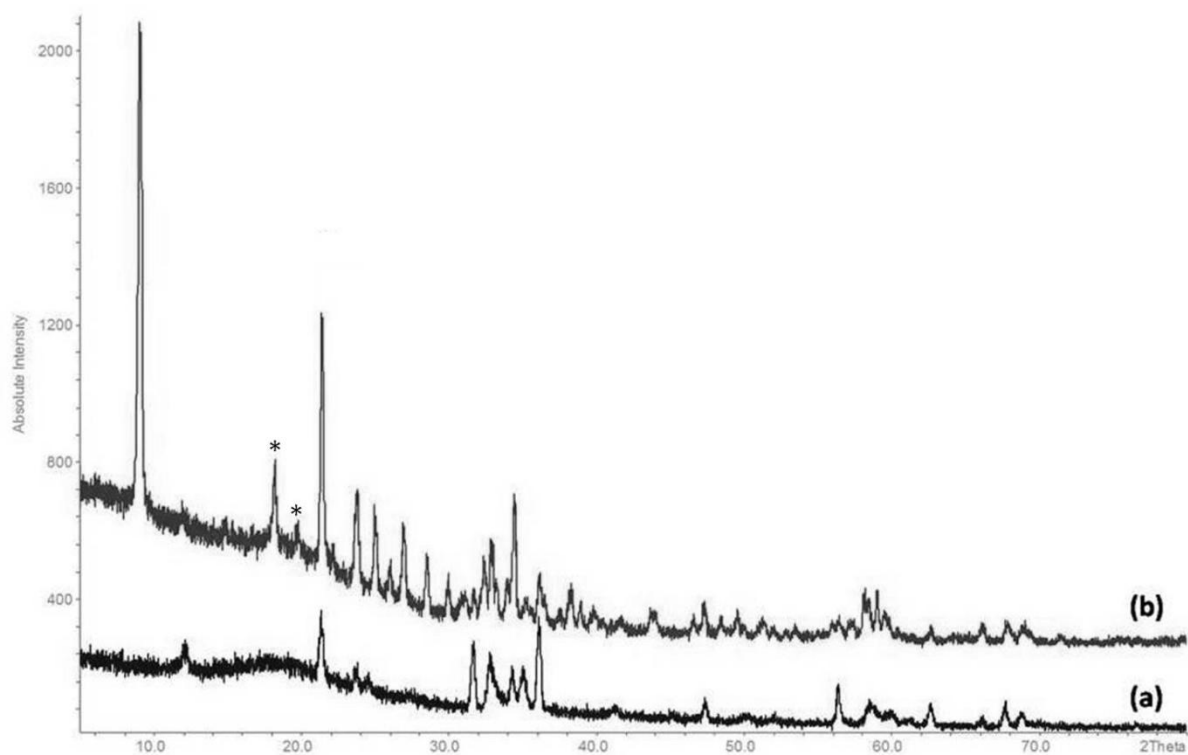


Fig. S3 XRD of specimens prepared with varying concentrations of gelatin and hydrothermally treated for 2 h, (a) 5g/L (b) 0g/L. The principal phases are (a) ZnO and (b) $\text{Zn}_5(\text{NO}_3)_2(\text{OH})_8 \cdot 2\text{H}_2\text{O}$.