# Self-assembly of ZnO nanoparticles into hollow microspheres via a facile solvothermal route and their application as gas sensor†

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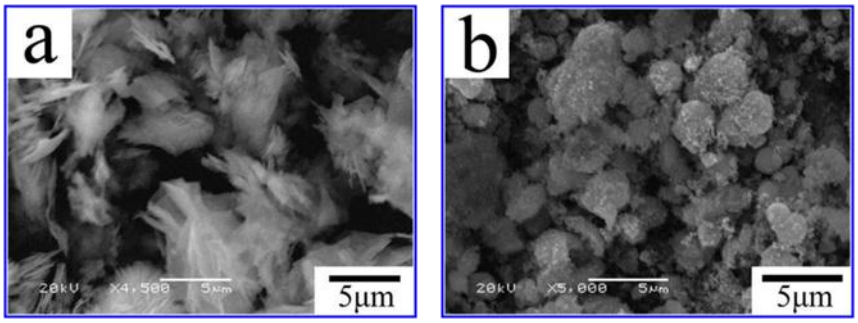


**Figure S1**. SEM images of the ZnO products obtained from the comparative experiments for different solvents at 180°C: (a) distilled water, and (b) absolute ethanol.

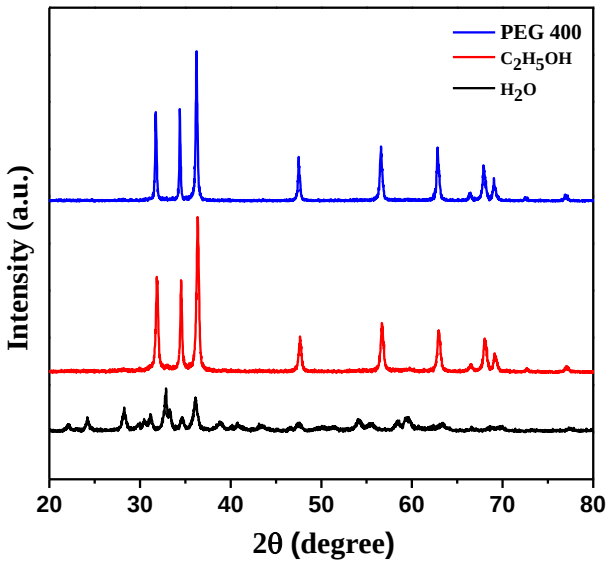


**Figure S2**. XRD patterns of the ZnO products for different solvents at 180°C.

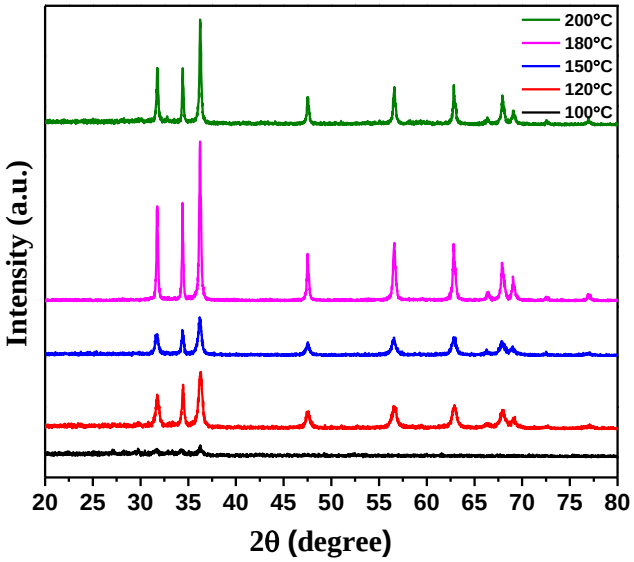


**Figure S3.** XRD patterns of the ZnO products prepared at different temperatures.

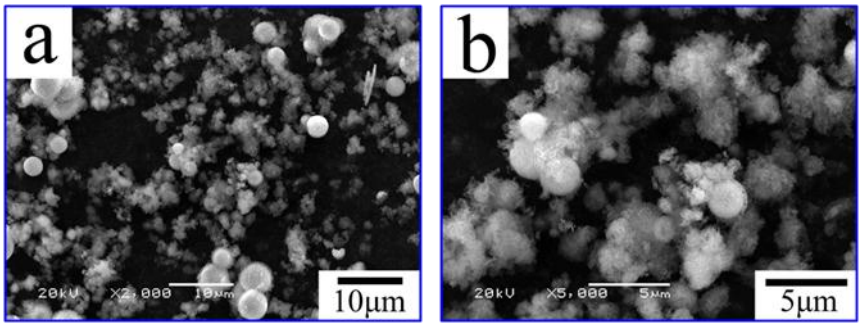


**Figure S4**. SEM images of the ZnO products prepared at 180 °C for 3h: (a) a low-magnification SEM image; (b) a high-magnification SEM image.

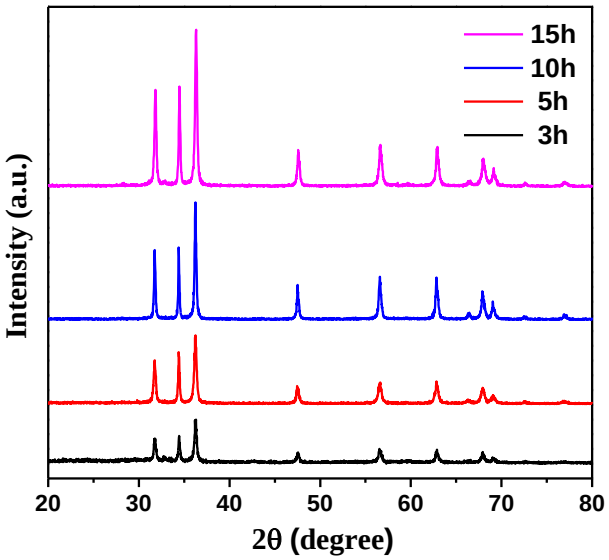


**Figure S5.** XRD patterns of the ZnO hollow spheres reacted for different times at 180ºC.

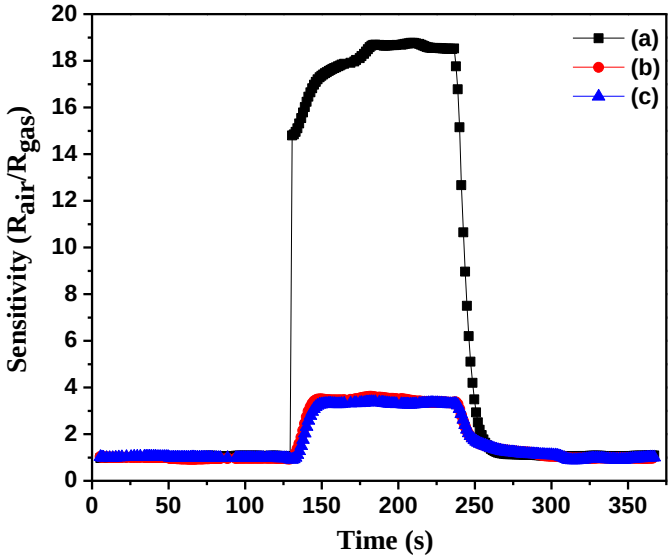


**Figure S6**. Response-recovery curves of ZnO products for different solvents exposed to ethanol gas of 100 ppm at 320ºC: (a) PEG 400, (b) absolute ethanol, and (c) distilled water.

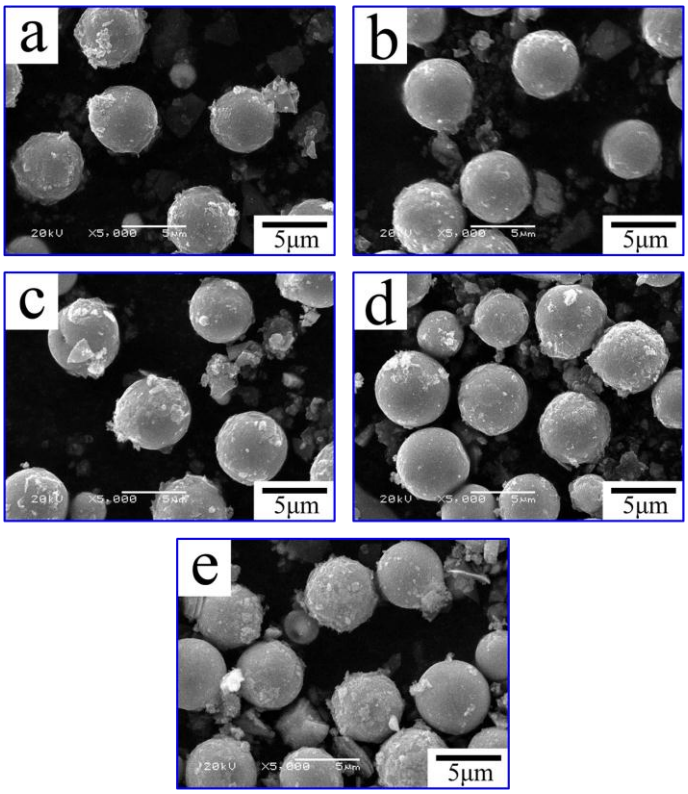


**Figure S7**. SEM images of the ZnO products at five different annealing temperature zones: (a) 220ºC, (b) 270ºC, (c) 320ºC, (d) 370ºC, and (e) 420ºC.