

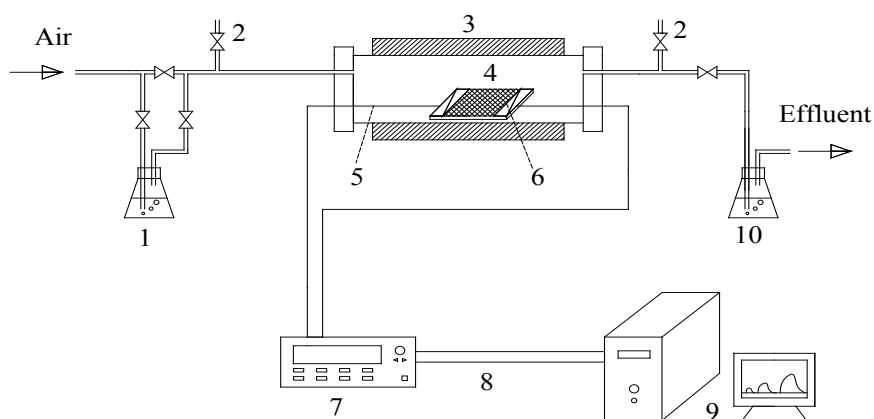
Electronic Supplementary Information

Fabrication of ZnO nanorod-assembled multishelled hollow spheres and enhanced performance in gas sensor

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1-HCHO solution, 2- Sample valve, 3-Tube furnace, 4-Sensing film, 5-Pt wire
6-Ag paste, 7-Keithley 2601 sourcemeter, 8-GPID card, 9-PC, 10-KMnO₄+H₂SO₄

Figure S1 Schematic illustration of the sensor setup.

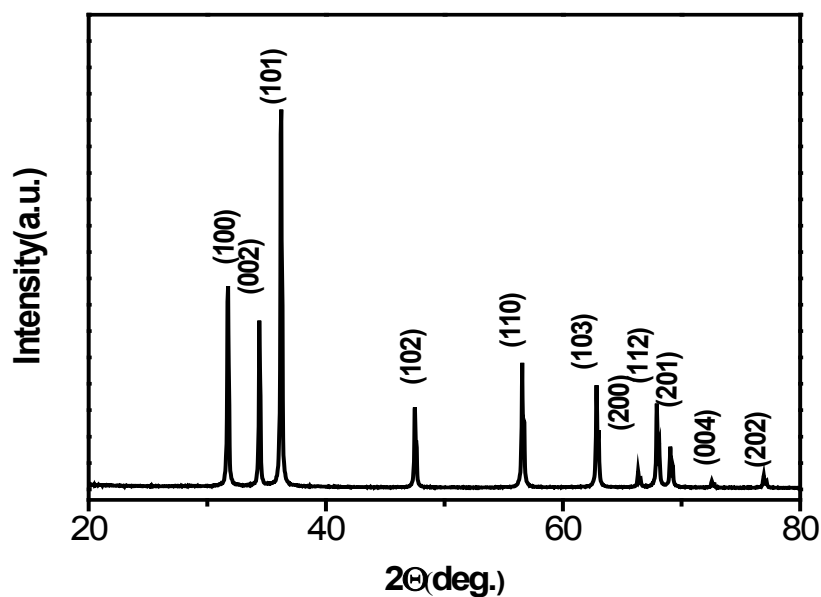


Figure S2 XRD pattern of synthesized products.

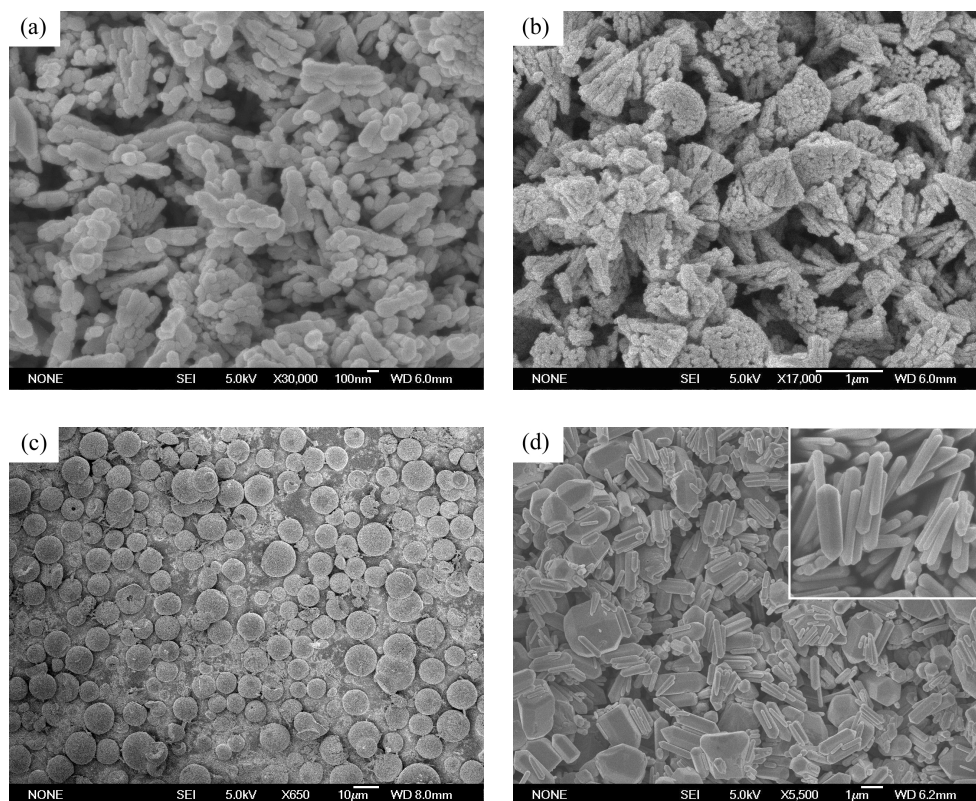


Figure S3 The products synthesized in mixed ternary solvents (EG, ethanol and water) without adding PEO-PPO-PEO copolymer by varying the volume ratio of solvents: (a) 4 mL water, 6 mL ethanol and 60 mL ethylene glycol, (b) 7.5 mL water, 2.5 mL ethanol and 60 mL ethylene glycol, (c) 10 mL water, 10 mL ethanol and 50 mL ethylene glycol and (d) 18 mL water, 12 mL ethanol and 40 mL ethylene glycol.

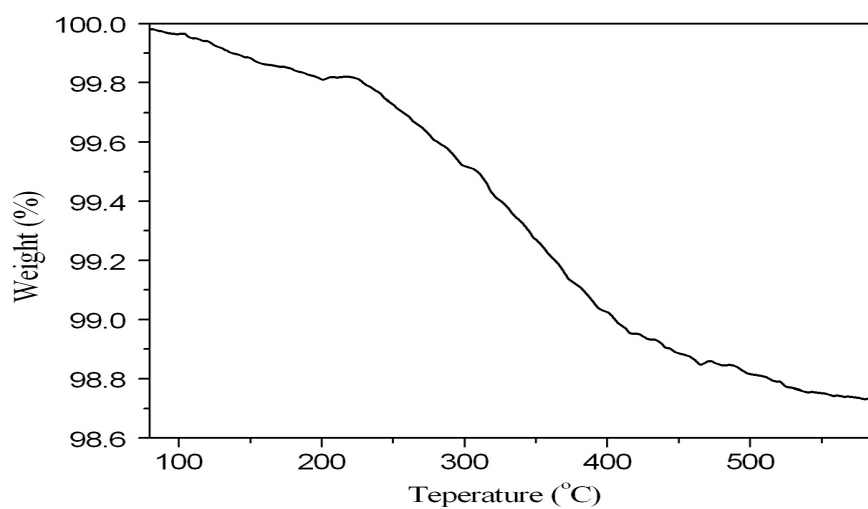


Figure S4 TGA analysis of PEO-PPO-PEO copolymer bonded ZnO capsules. The weight loss

steps between 200 and 300 °C is attributed to the pyrolysis of the copolymer and the PEG block, and the second weight loss higher than 340 °C corresponds to the decomposition of the residue polymer especially the PPG block.

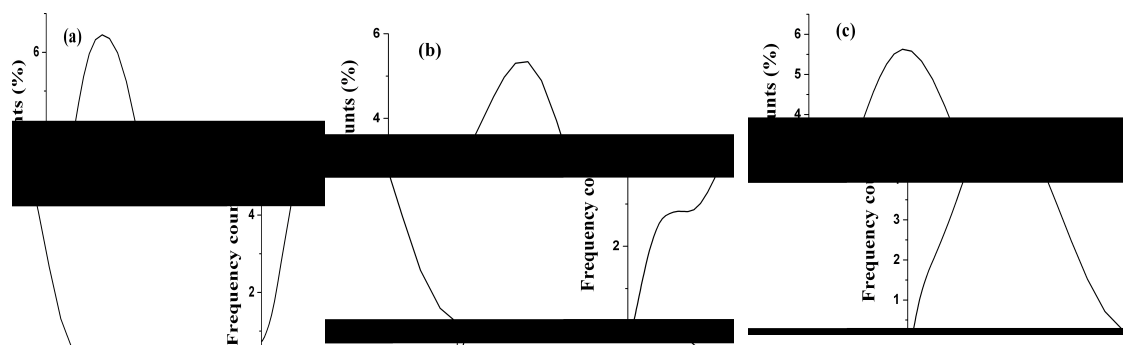


Figure S5 Size distribution histograms of the particles obtained with different react time (a) 50 min, (b) 6 h and (c) 12 h.