Electronic Supplementary Material (ESI) for CrystEngComm


# Supporting Information

## Self-assembly fabrication of 3D flower-like ZnO hierarchical nanostructures and their gas sensing properties

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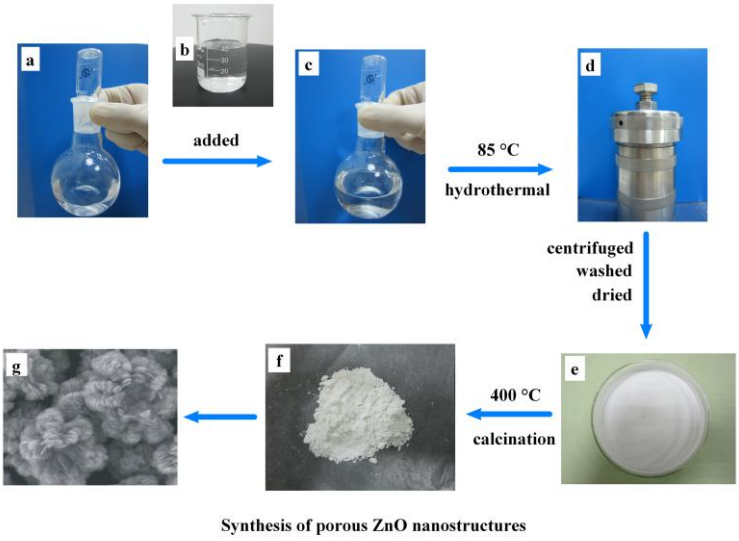


**Scheme S1**. A schematic representation of the synthesis process of the porous ZnO nanostructures: (a) urea and $Zn(NO_3)_2$ was dissolved in distilled water; (b) Pluronic F-127 aqueous solution; (c) mixture of ,urea, $Zn(NO_3)_2$ and Pluronic F-127; (d) the mixture was transferred into a Teflon-lined stainless steel autoclave and kept at 85 °C; (e) the precursor obtained after dried at 60 °C, (f) the product after calcination at 400 °C for 2 h; (g) SEM image of 3D hierarchical ZnO nanostuctures.

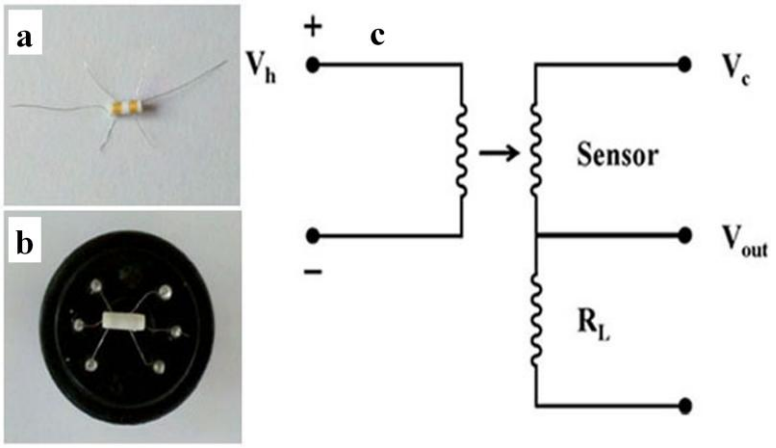


**Fig. S1** Digital photographs of the alumina tube (a), the completed gas sensor (b), and the work principle of gas sensing test (c).

Fig. S1 (c) shows the working principle of gas sensing properties measurement. $R_L$ is a load resistance connected in series to the sensor, $V_h$ is a heating voltage to control the operating temperature, $V_c$ is the circuit voltage of 5 V, and $V_{out}$ is the sensor signal voltage collected by a computer.

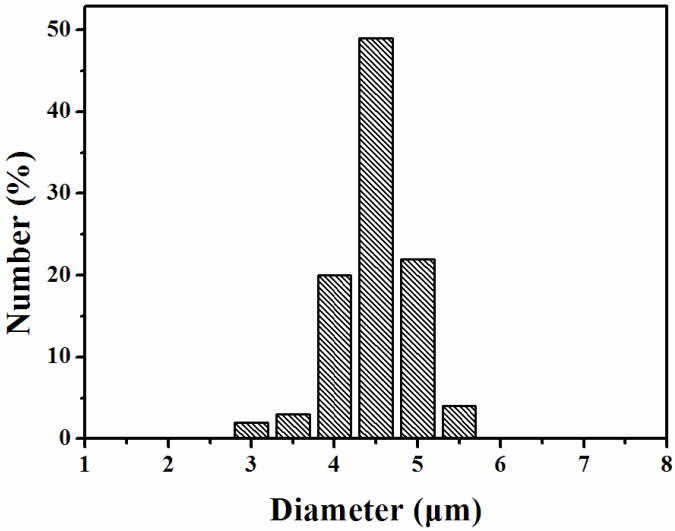


**Fig. S2** Size distribution of the ZnO particles.