

Synthesis of ZnO Hollow Microspheres and Analysis of Their Gas Sensing Properties for *n*-Butanol

Shichao Wang, Gaoqun Qiao, Xiaoyan Chen, Xinzhen Wang * and Hongzhi Cui

School of Materials Science and Engineering, Shandong University of Science and Technology, Qingdao 266590, Shandong, China; 201983100034@sdust.edu.cn (S.W.); 201983100022@sdust.edu.cn (G.Q.); 201882100003@sdust.edu.cn (X.C.); hongzhicui@sdust.edu.cn (H.C.)

* Correspondence: xzawang@sdust.edu.cn

Characterization of ZnO hollow microspheres

The crystal structures of the synthesized samples were analyzed using x-ray diffraction (XRD) in the 2θ range of 20° – 80° at a scan of $4^{\circ} \text{ min}^{-1}$ using monochromatic Cu K_{α} radiation ($\lambda = 0.154 \text{ nm}$, $V = 40 \text{ kV}$, $I = 50 \text{ mA}$, Rigaku D/Max2500PC, Japan). The surface characteristics of the samples were examined by a high-resolution field emission scanning electron microscope (FESEM, FEI Nova NanoSEM 450, USA). High-resolution transmission electron microscopy (HRTEM, JEOL JEM 2100F) was used to characterize the morphology and inner structure of the samples. The specific surface areas of the samples were characterized by N_2 adsorption-desorption (JW-BK 122W, JWGB, China) at 77 K.

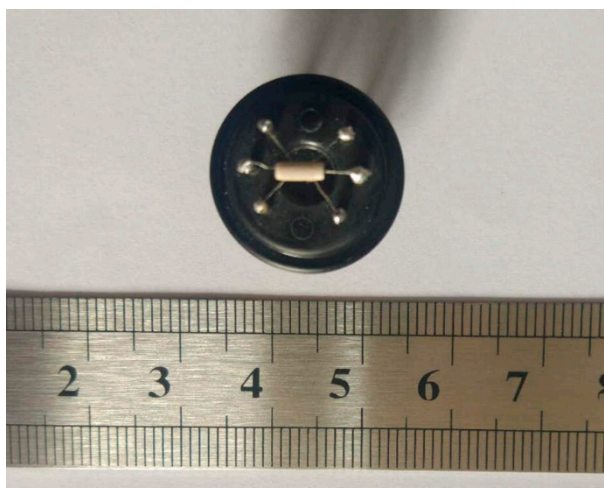


Figure S1. Photograph of the gas sensor.

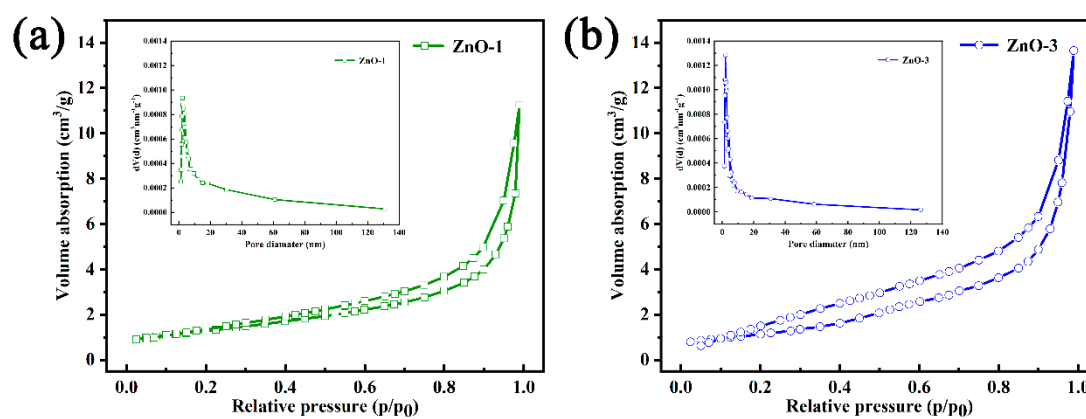


Figure S2. Nitrogen adsorption and desorption isotherm of ZnO-1 (a) and ZnO-3 (b) (the insets are pore size distribution).

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