Electronic Supplementary Information (ESI) for

Photochemical Deposition of Ag Nanocrystals on Hierarchical ZnO Microspheres and Their Enhanced Gas-sensing Properties

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Figure S1. TEM image of Ag-ZnO-2-2h showing bigger Ag nanoparticles with average diameter of 11.3 nm loaded on ZnO.



Figure S2. Raman spectra of the Ag-ZnO nanocomposites with different Ag loadings: (a) pure ZnO,

(b) Ag-ZnO-1 with 2.4 wt% Ag, (c) Ag-ZnO-2 with 3.6 wt% Ag.



Figure S3. The gas concentration-dependent responses for the Ag-ZnO-2-2h and Ag-ZnO-2-8h sensors to ethanol operated at 350 °C.



Figure S4. The gas concentration-dependent responses for the Ag-ZnO-2-2h sample to formal dehyde operated at 350 $^{\rm o}{\rm C}.$