

**Atom-Economical Synthesis of ZnO@ZIF-8 Core-Shell  
Heterostructure by Dry Gel Conversion (DGC) Method for  
Enhanced H<sub>2</sub> Sensing Selectivity**

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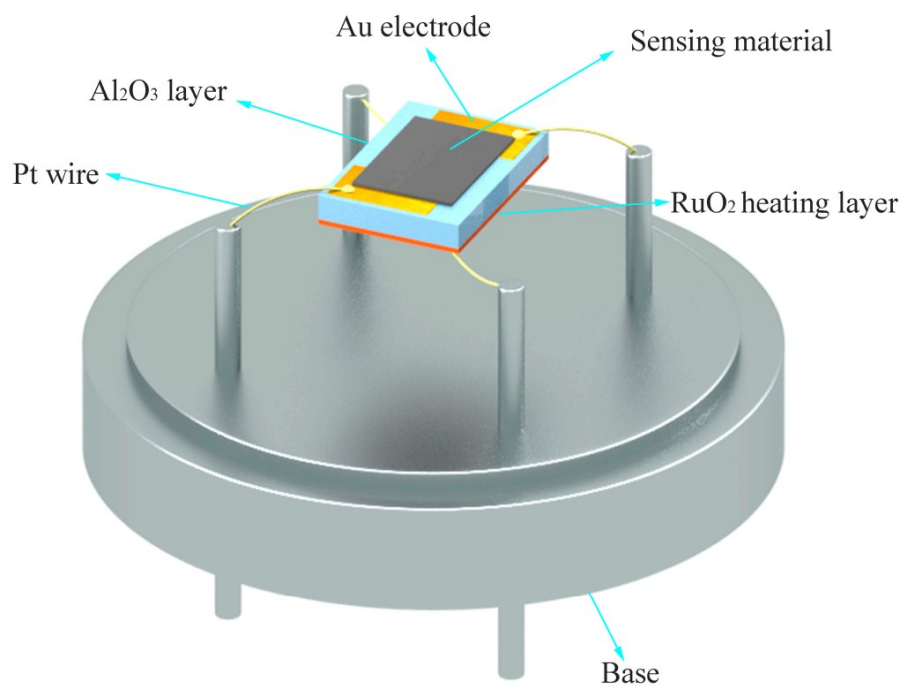


Fig. S1 Schematic diagram of the packaged gas sensor.

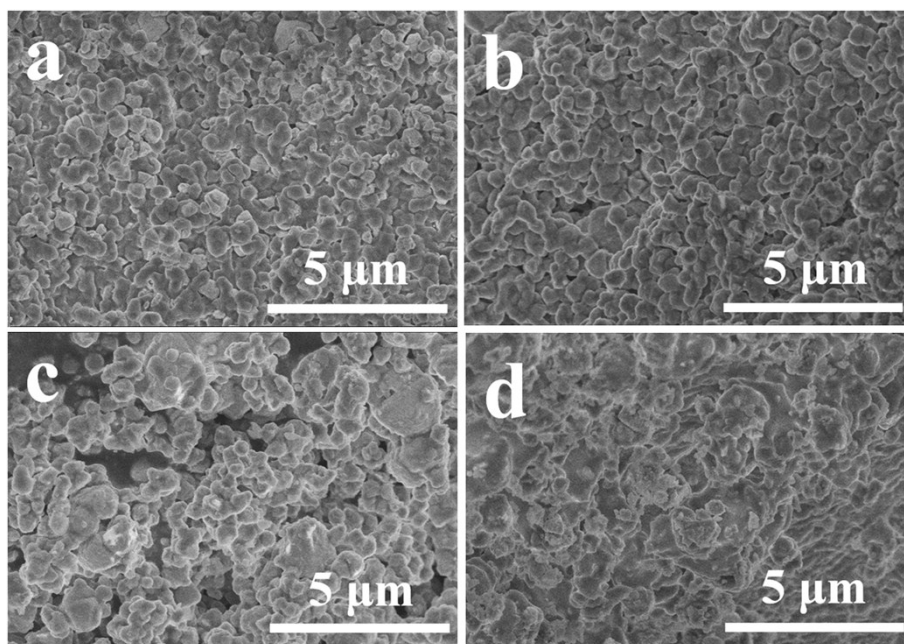


Fig. S2 SEM images of the ZnO@ZIF-8 samples as-synthesized at initial MeIM/ZnO ratio of 0.2 (a), 0.3 (b), 0.4 (c) and 0.75 (d).

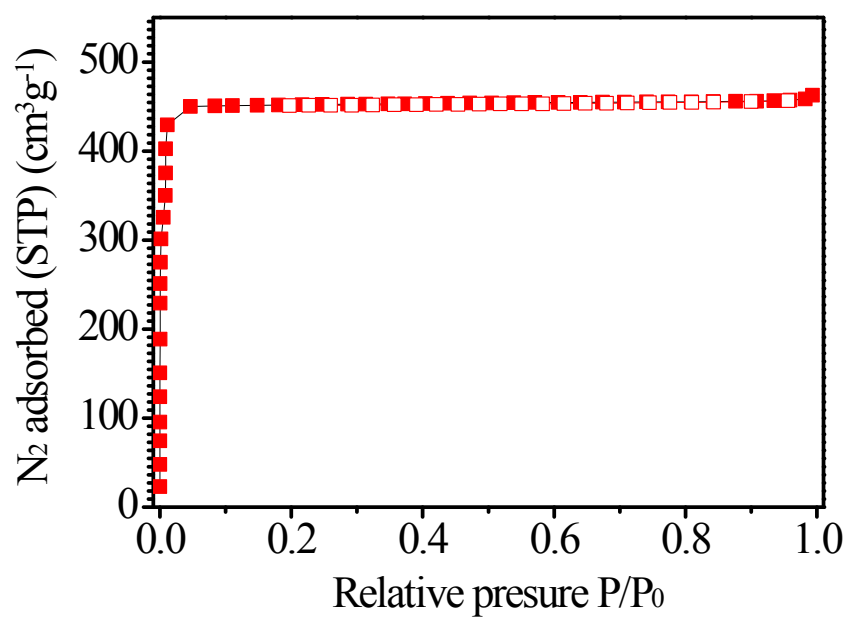


Fig. S3 N<sub>2</sub> sorption isotherms of as-synthesized ZIF-8.

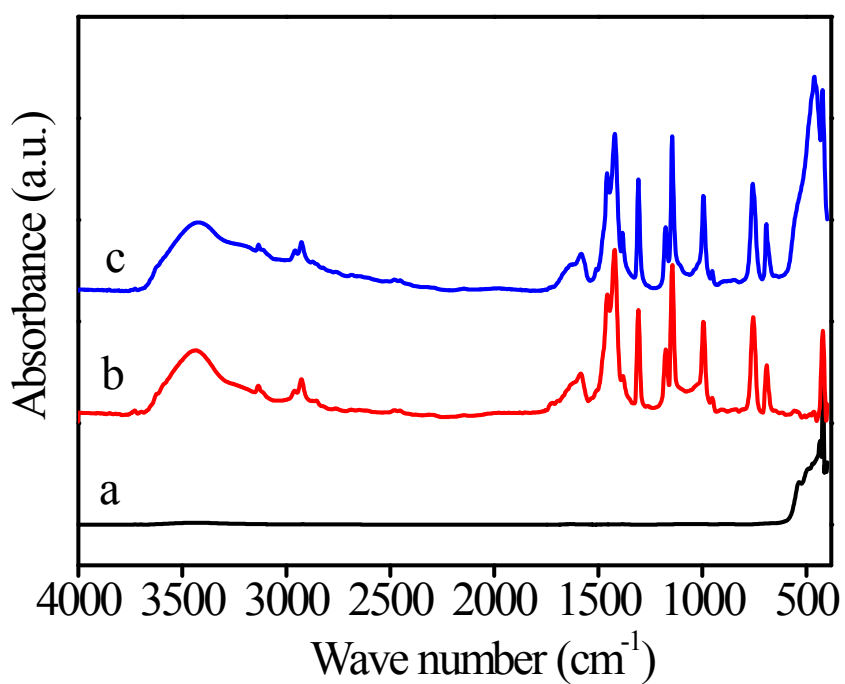


Fig. S4 FT-IR spectras of ZnO (a), ZnO@ZIF-8 (b) and ZIF-8 (d).

ZnO@ZIF-8 was synthesized with initial MeIM/ZnO ratio of 0.2.

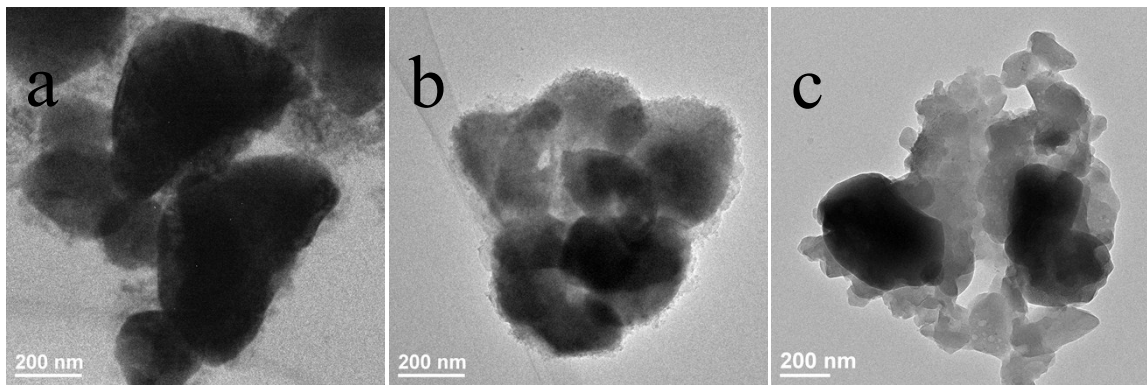


Fig. S5 TEM images of ZnO@ZIF-8-0.2 (a), ZnO@ZIF-8-0.4 (b) and ZnO@ZIF-8-0.75 (c).

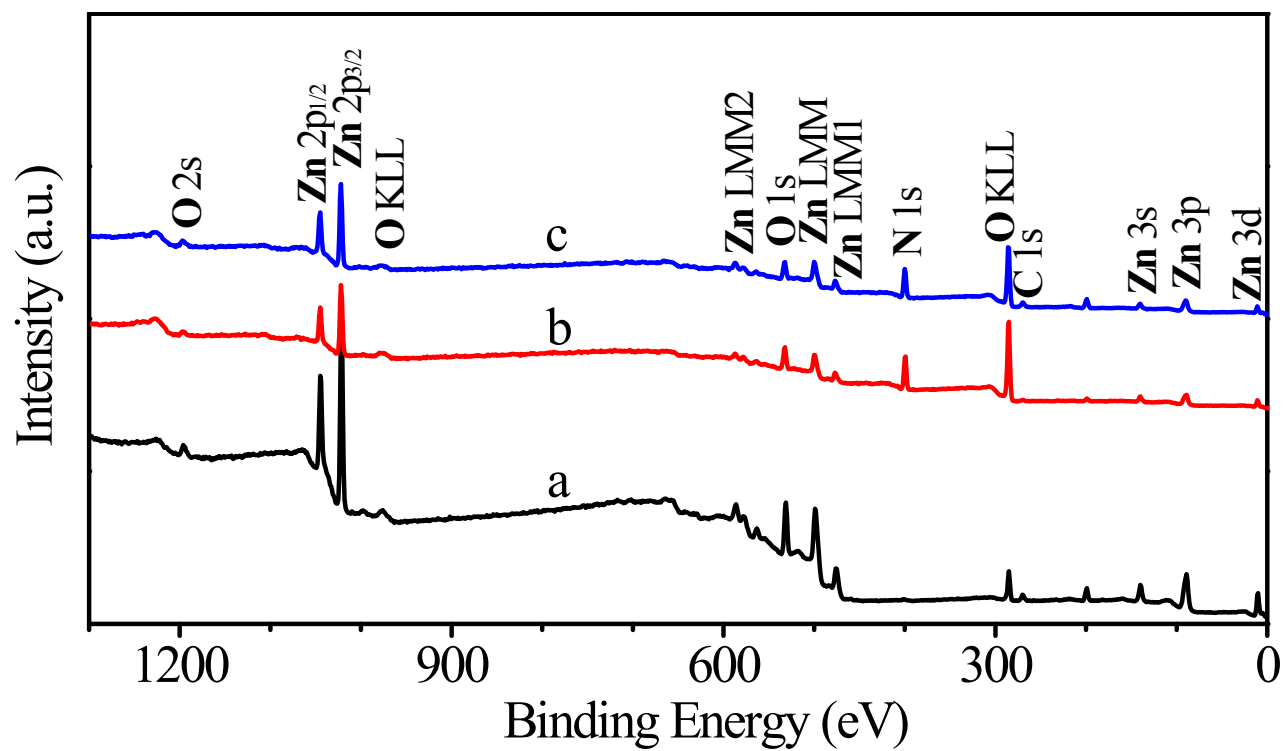


Fig. S6 XPS spectra of ZnO (a), ZIF-8 (b) and ZnO@ZIF-8 (c). ZnO@ZIF-8 was referred to ZnO@ZIF-8-0.2.