

Au@In₂O₃ core-shell composites: metal-semiconductor heterostructure for gas sensing applications

Xiaowei Li, Jiangyang Liu, Hang Guo, Xin Zhou, Chen Wang, Peng Sun,* Xiaolong Hu, and
Geyu Lu*

State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and

Engineering, Jilin University, Changchun, 130012, People's Republic of China. Fax: +86 431

85167808; Tel: +86 431 85167808; E-mail: spmaster2008@163.com, luyg@jlu.edu.cn

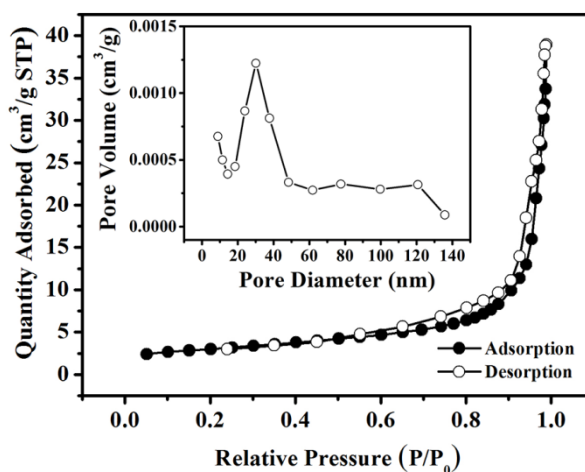


Fig. S1† The N₂ adsorption-desorption isotherms and corresponding pore size distribution curve (inset) of Au@In₂O₃ composites.

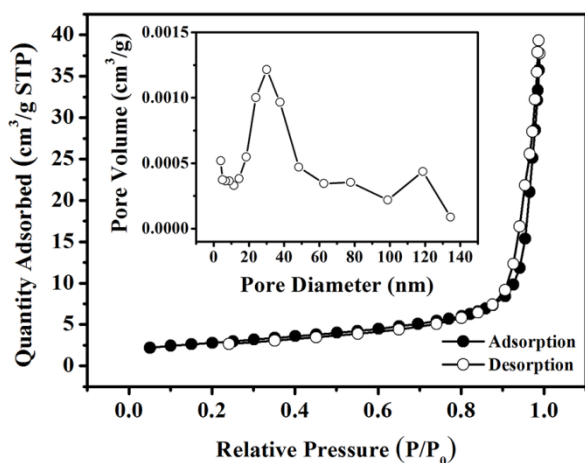


Fig. S2† The N₂ adsorption-desorption isotherms and corresponding pore size distribution curve (inset) of pure In₂O₃ sample.

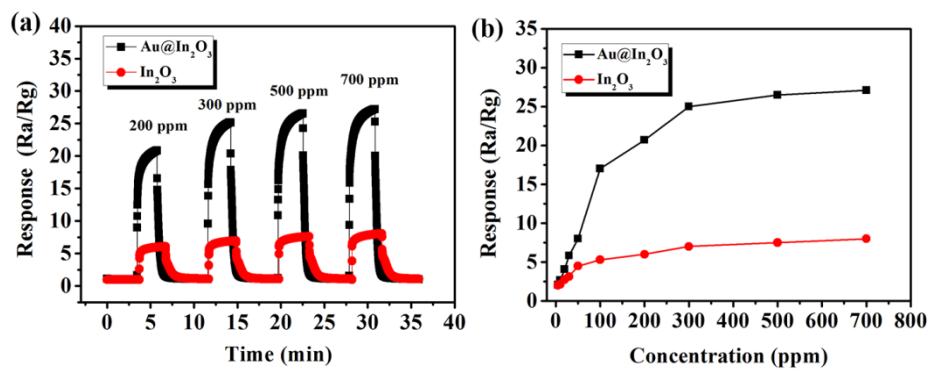


Fig. S3† (a) Response curves of the sensors when orderly exposed to high-concentration HCHO (b) Response of the sensors versus the varying formaldehyde concentration.

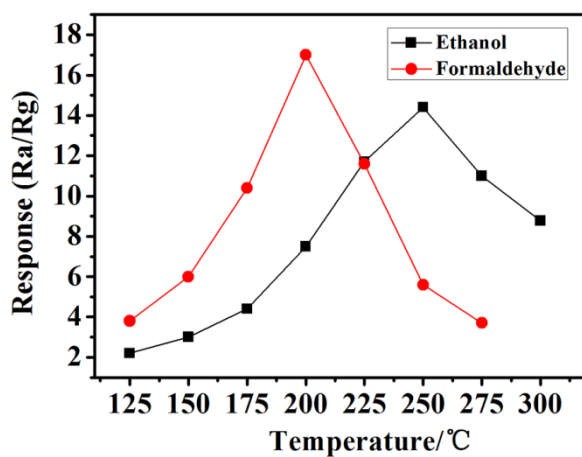


Fig. S4† Responses of the sensor to 100 ppm formaldehyde and ethanol as a function of operating temperature.