

Supporting Information

Highly Sensitive and Selective Toluene Gas Sensors Based on ZnO Nanoflowers Decorated with Bimetallic AuPt

Huiting Peng ¹, Yiping Liu ¹, Yinfeng Shen ¹, Ling Xu ², Jicun Lu ², Ming Li ¹,

Hong-Liang Lu ^{3,*} and Liming Gao ^{1,*}

1 State Key Laboratory of Metal Matrix Composites, School of Material Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

2 Guanghai Lingang Engineering Application Technology Research and Development (Shanghai) Co, Ltd., Shanghai 201306, China

3 State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Microelectronics, Fudan University, Shanghai 200433, China

** Correspondence: honglianglu@fudan.edu.cn (H.-L.L.); liming.gao@sjtu.edu.cn (L.G.)*

Table S1. The comparison of responses at different concentration of toluene between the newly prepared and previous sensor at 175 °C.

| | | Concentration | | | | |
|-----------------------|--|---------------|------|------|------|-------|
| Response | | (ppm) | 25 | 50 | 75 | 100 |
| Sensors | | | | | | |
| Previous sensor | | | 33.2 | 69.7 | 91.1 | 107.6 |
| Newly prepared sensor | | | 41.3 | 66.8 | 88.1 | 107.0 |

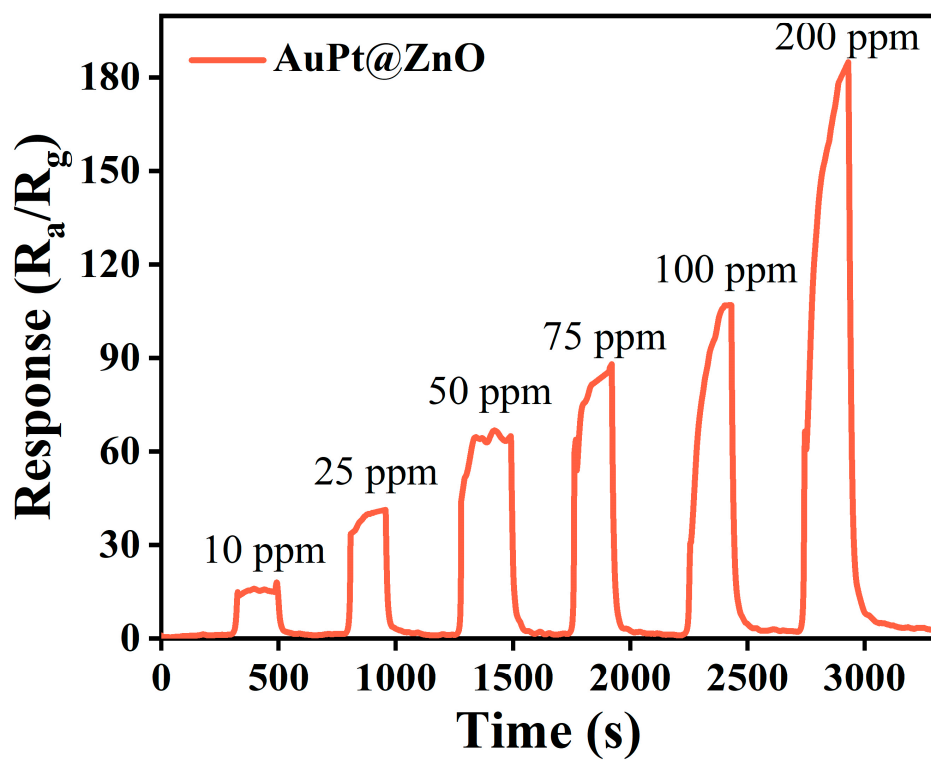


Figure S1. Response curve of reproduced AuPt@ZnO-based sensor at 175 °C towards toluene at the concentration ranging from 10 to 200 ppm.

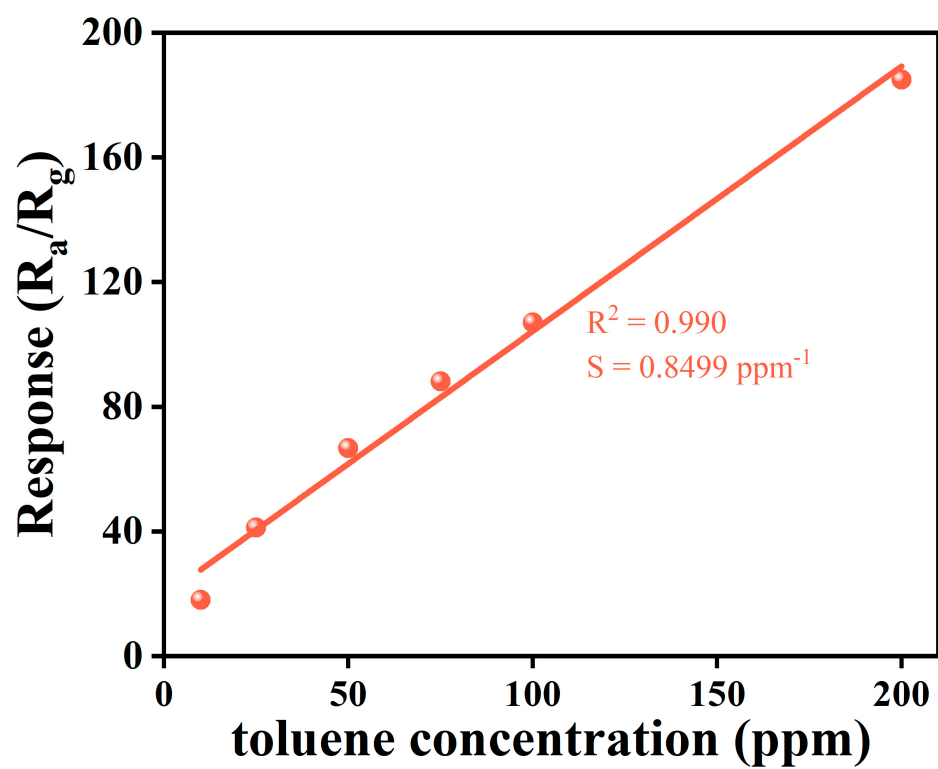


Figure S2. Fit curves of the response of the reproduced AuPt@ZnO-based sensor versus toluene concentration at 175 °C.

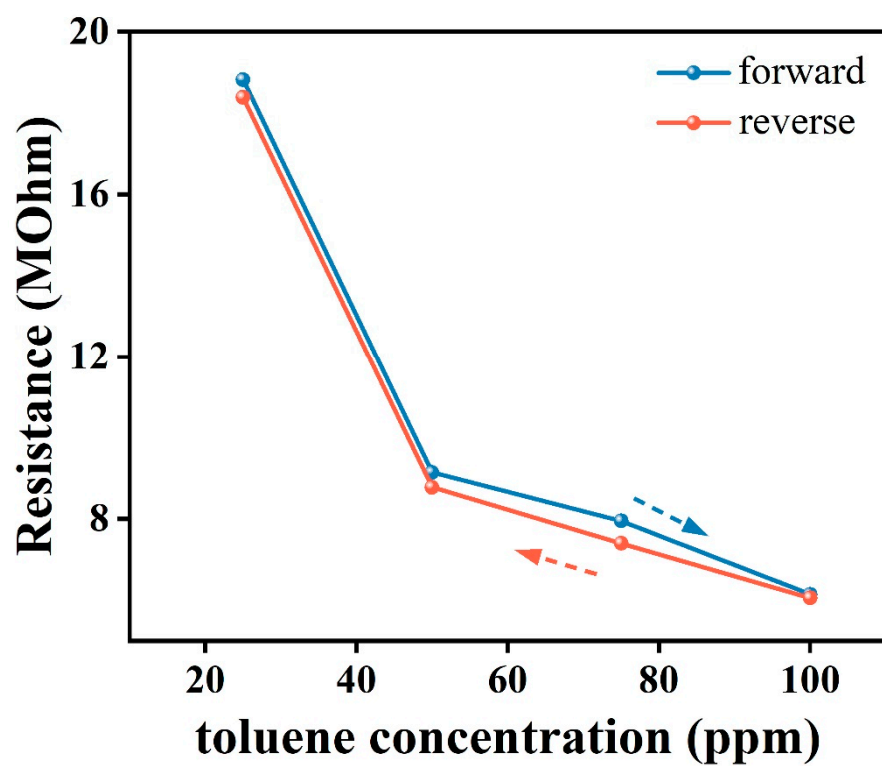


Figure S3. Hysteresis characteristics of the AuPt@ZnO-based sensor.