chemosensors

MDPI

*Supplementary Information*

# Influence of Positive Ion ($Al^{3+}$, $Sn^{4+}$, and $Sb^{5+}$) Doping on the Basic Resistance and Sensing Performances of ZnO Nanoparticles Based Gas Sensors

**Peng Zhang, Shuang Cao, Ning Sui, Yifeng Xu, Tingting Zhou *, Yuan He * and Tong Zhang**

State Key Laboratory of Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, Changchun 130012, China

* Correspondence: zhoutt@jlu.edu.cn (T.Z.); heyuan@jlu.edu.cn (Y.H.)

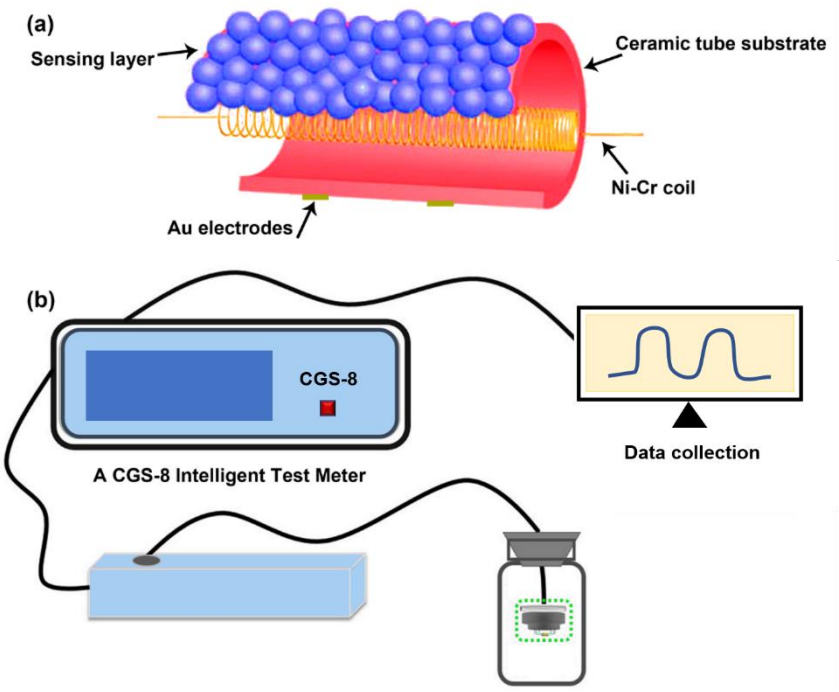


**Figure S1.** Schematic diagram of (**a**) the sensor structure and (**b**) sensing measurement process using CGS–8 Intelligent Test Meter.

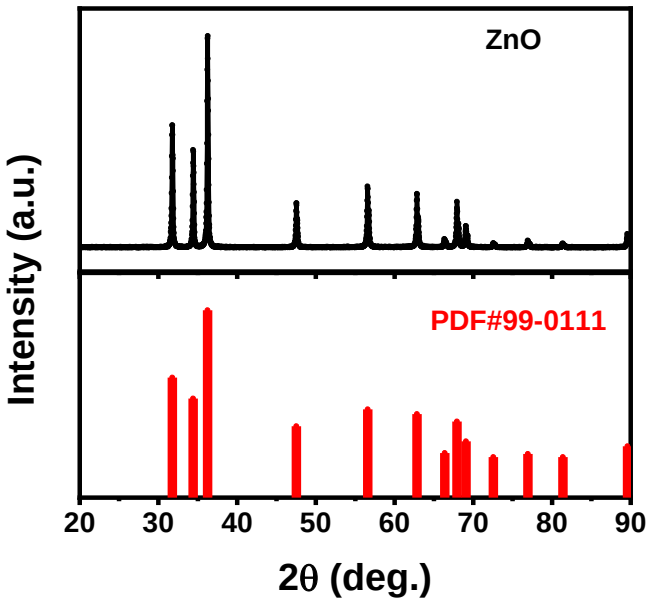


**Figure S2.** XRD spectrum of ZnO NPs prepared by the sol-gel method.

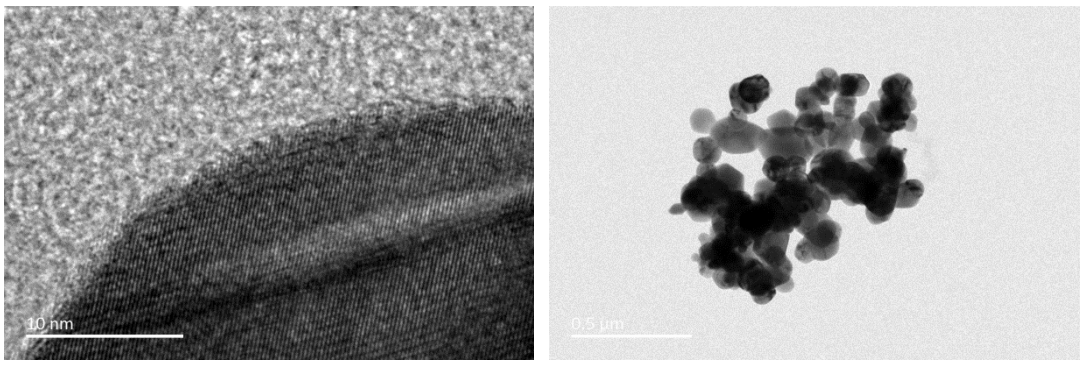


**Figure S3.** HRTEM and TEM images of Sn0.5-ZnO.

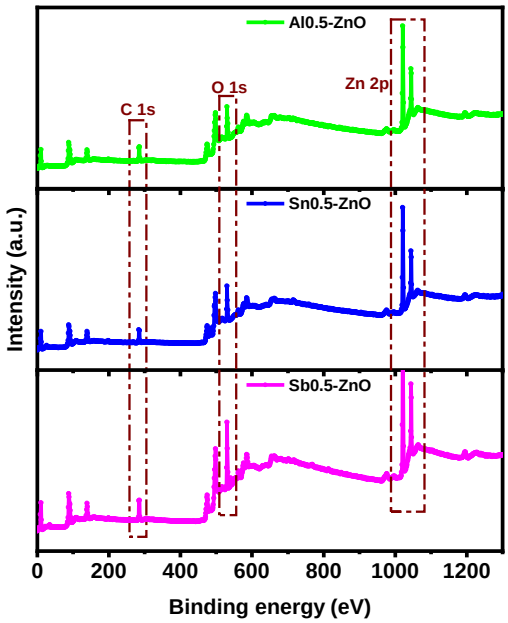


**Figure S4.** XPS survey spectra of Al0.5-ZnO, Sn0.5-ZnO and Sb0.5-ZnO.

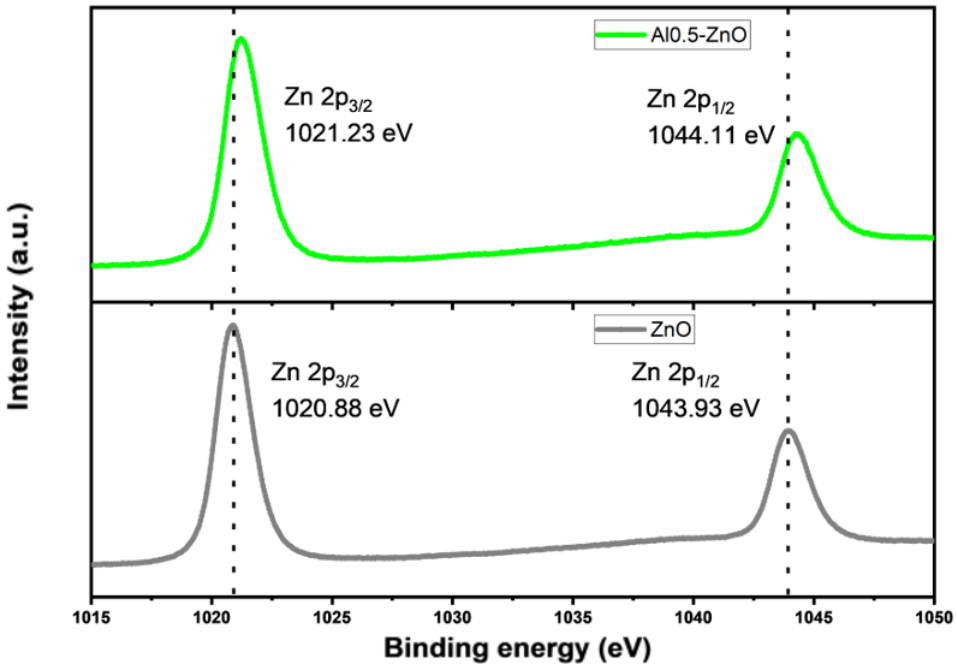


**Figure S5.** Zn 2p XPS survey spectra of Al0.5-ZnO and ZnO.

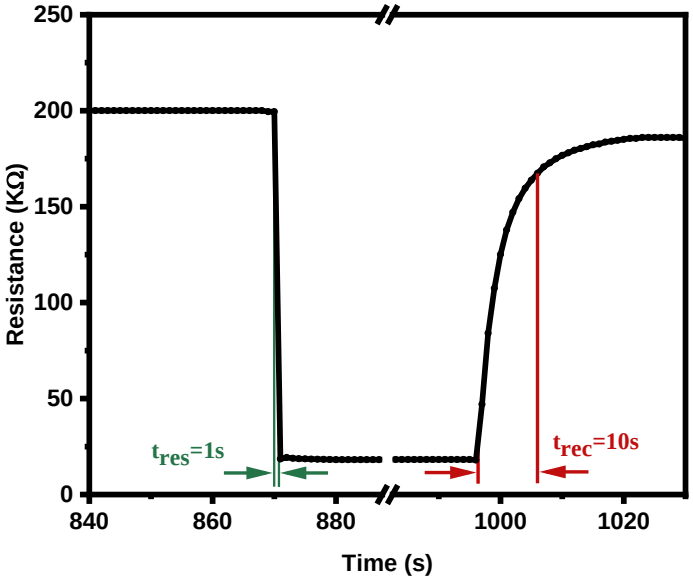


**Figure S6.** The response and recover curve of sensors based on Sn0.5-ZnO to 100 ppm acetone at 270 °C.

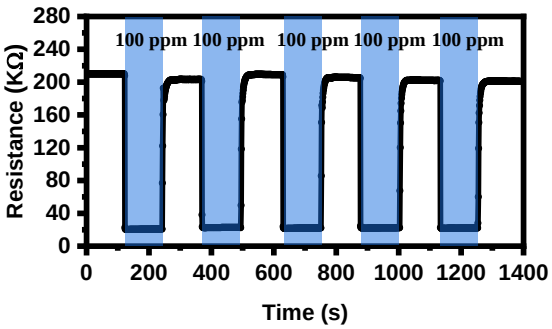


**Figure S7.** The resistance change of sensors based on Sn0.5-ZnO when the sensor was exposed to 100 ppm acetone.