

Article

Synthesis of Graphene-Oxide-Decorated Porous ZnO Nanosheet Composites and Their Gas Sensing Properties

Jie Li ^{1,2}, Zhen Jin ^{1,2,*}, Yang Chao ², Aijing Wang ², Decai Wang ², Shaohua Chen ^{1,2} and Quan Qian ²

¹ Anhui Advanced Building Materials Engineering Laboratory, Anhui JianZhu University, Hefei 230601, China

² School of Materials and Chemical Engineering, Anhui JianZhu University, Hefei 230601, China

* Correspondence: ftbjin@hotmail.com

The statistical distributions of the length and width of the GO/ZnO nanosheet composites are present in Figure S1. As shown, the average length and width of the GO/ZnO nanosheet composites are 5.0 μm and 3.5 μm , respectively. And, the thickness of the single modified nanosheet is about 15 nm. The particle size of the GO/ZnO nanosheet composites was also examined by Malvern Zetasizer Nano, the result indicate that the average particle size is 5.92 μm , which is consistent with our statistical results.

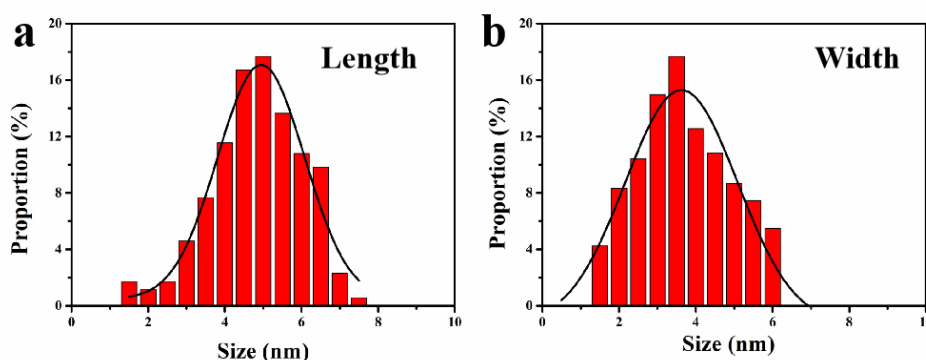


Figure S1. the statistical distributions of the length and width of the GO/ZnO nanosheet composites.

The electrical behavior of GO/ZnO nanosheet composites was investigated, and the corresponding current-voltage (I-V) curves were displayed in Figure S2. It can be seen that the ZnO/GO samples exhibit the typical p-type semiconductor and almost linear characteristics, indicating the ohmic nature of films.

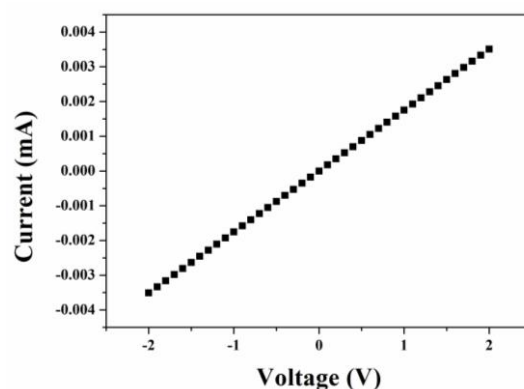


Figure S2. the corresponding current-voltage (I-V) curves of the GO/ZnO nanosheet composites.