

For RSC Advances

**Graphene oxide nanosheet decorated with zinc oxide nanoflower,
silver and titanium dioxide NPs: Fabrication, characterization, DNA
interaction, and antibacterial activity**

Nagi El-Shafai,^{ab} Mohamed El-Khouly,^{*c,d} Maged El-Kemary,^{bc} Mohamed
Ramadan,^a Ibrahim Eldesoukey,^e and Mamdouh Masoud^a

^a Department of Chemistry, Faculty of Science, Alexandria University, Egypt

^b Institute of Nanoscience and Nanotechnology, Kafrelsheikh University, Kafr El-Sheikh
33516, Egypt

^c Chemistry department, Faculty of Science, Kafrelsheikh University, Egypt

^d Institute of Basic and Applied Sciences, Egypt-Japan Institute of Science and Technology,
Alexandria, Egypt

^e Bacteriology, Mycology and Immunology department, Faculty of Veterinary Medicine, Kafr
El-Sheikh University 33516, Egypt

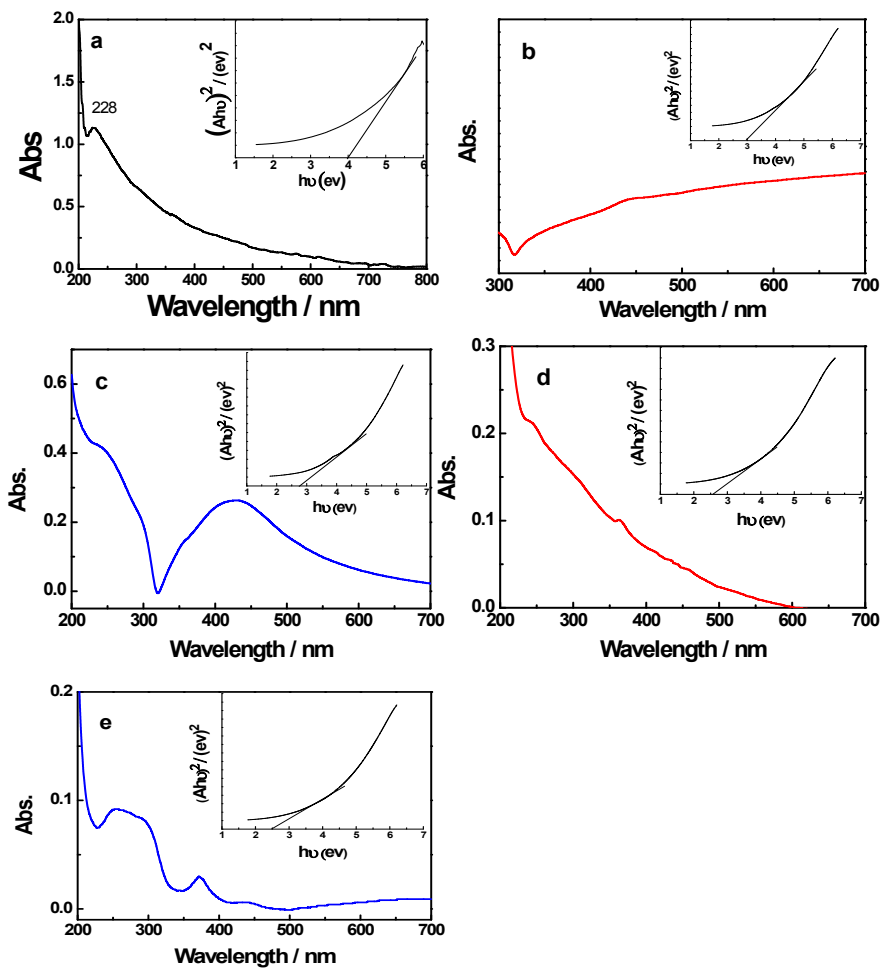


Fig. S1 UV-vis spectra and energy gap of GO (a) GO-CuO (b), CuO (c), GO-CuO@ZnO (d) and ZnO (e).

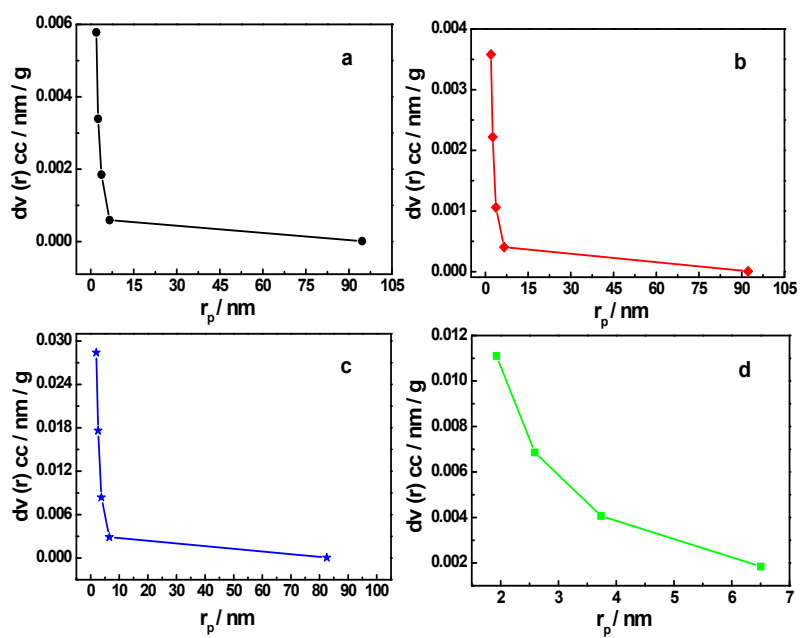


Fig. S2. BJH Pore size distribution of Ag (a) GO-Ag (b) GO-TiO₂@ZnO (c), and GO-Ag-TiO₂@ZnO (d) nanocomposites.