Supporting information:

TGA analysis of ZnO/Ag₂O/Co₃O₄ nanoparticles:

It has been measured and presented here the thermogravimetric study of prepared sample. Figure S1 shows the thermogravimetric analysis (TGA) of the as-synthesized $ZnO/Ag_2O/Co_3O_4$ nanoparticles. In case of the as-prepared $ZnO/Ag_2O/Co_3O_4$ NPs, high rate of mass loss has occurred in the temperature range due to the evaporation of the water absorbed on the surface of the products. At higher temperatures, weight loss continues up to 400°C, which is not the case for the calcined $ZnO/Ag_2O/Co_3O_4$ NPs. In the latter specimens, the mass loss ends at about 400°C which is due to the decomposition of Ag(OH), $Co(OH)_3$, $Zn(OH)_2$. From the TGA curves, shown in Figure S1, indicates the quality improvement of the $ZnO/Ag_2O/Co_3O_4$ NPs after calcination process at 400°C.

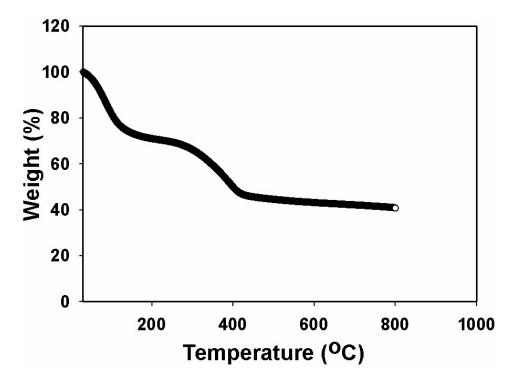


Fig. S1. The thermogravimetric analysis (TGA) of as prepared ZnO/Ag₂O/Co₃O₄ nanoparticles.