**Abstract**

In recent years to improve the opto-electronic properties of metal oxides, metal nanoparticles are used as nanocomposites. Ag-ZnO nanocomposites were synthesized by wet chemical synthesis. Many studies have found that the presence of Ag nanoparticles is beneficial to improve Ultra violet emission of Zinc oxide. The SEM micrograph image reveals spherical shape nanocomposites with uniform distribution of grain size. The EDAX spectrum confirms the presence of Ag, Zn and O elements dispersed energy corresponding to 1.7keV, 2.1keV, 13.3keV respectively. The UV-Visible spectrum exhibits the single and well defined absorption band at 350 nm. Photoluminescence spectra exhibit UV emission at 378 nm and green emission at 555 nm. The band gap diagram of the possible emission mechanism was discussed. The doping of Ag into ZnO enhances the photocatalytic activity which results to be a promising material for green emissive optical devices.