ZnO is wide band gap semiconductor (3.3 eV) that has interesting optoelectronic properties. When doped with different materials its physical properties such as light absorption or electrical conductivity can be modified. It has been proved that dip coating sol-gel deposition technique can produce high quality ZnO thin films reducing fabrication costs as compared with more sophisticated techniques. On the other hand it is well known that graphene has unique properties such as Hall effect, high electrical conductivity, thermal conductivity, among others.

In the present work the incorporation of graphene into zinc oxide thin films deposited by dip coating sol-gel is studied. Prior the deposition of the films, 0.1 mg of graphene synthesized by the modified Hummer method, was added into the sol-gel precursor solution. The films were then deposited by the dip coating technique with five immersions for each sample. The effect of annealing temperature (100-400 °C) on the properties of the ZnO-Graphene thin films was analyzed. The samples were structurally characterized by X-Ray diffraction. Optical properties of the films were determined by UV-Vis spectroscopy. Scanning electron microscopy was used to evaluate surface morphology of the films. The chemical composition was obtained by energy dispersive x-ray spectroscopy. Results are discussed as a function of annealing temperature.

**Keywords:** ZnO, Graphene, Annealing

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