

ABSTRACT

In this Research, Pure and Mg-doped Zinc Oxide nanostructures were synthesized by Hydrothermal Method. The methods and solvents used in the synthesis of nano-structures do affect the properties of grown material. The exploration of the effects of various solvents in a hydrothermal synthesis approach on structural and optical properties of Mg-doped ZnO nano-structures is performed in this work. The concentration of Mg which is used in this doping is from (0% - 5%). The Structural and Optical Properties were examined by Scanning Electron Microscope (SEM) and UV Visible Spectroscopy. By increasing the Concentration of Mg in Mg doped ZnO nano-structures, particle size is decreased and band gap can be tuned.