

Abstract

In this research work both FeO NPs and bimetallic oxides nanoparticles (FeO/Zn) were synthesized by using Green Synthesis technique. In which Eucalyptus leaf extract was used as reducing agent. The prepared samples were characterized by X-ray diffraction (XRD), Scanning Electron Microscopy (SEM) and UV Visible spectroscopy (UV visible). XRD and SEM are used to study the structural and morphological properties of bimetallic oxides nanoparticles respectively. And UV visible was used to study the optical properties and band gap of FeO/Zn nanoparticles. XRD analysis confirmed the formation of bimetallic oxides FeO/Zn NPs with decreasing size due to increase in doping of Zn. SEM analysis also confirmed the results obtained from the XRD. UV visible revealed that the formation of FeO/Zn nanoparticles. FeO NPs and FeO/Zn NPs were then used to degrade methylene blue MB in aqueous solution. Only 55% of MB was removed from aqueous solution using FeO NPs, while 90% of MB was removed using FeO/Zn NPs.