**Abstract**

The present study deals with green synthesis of copper nanoparticles by using leaf extract of AzadirachtaIndica. It acts as reducing as well as capping agent for the nanoparticles. PAni –Cu (polyaniline copper) composite was then prepared by in-situ mechanical, microwave and interfacial methods of polymerization using Cu nanoparticles as addition agent. The obtained polymers were then characterized by UV - Visible, FT - IR, XRD and SEM. The effect of copper on the structure and property of polyaniline was studied showing an excellent in its property compared to the polymer.