**ABSTRACT**

Nanotechnology is gaining tremendous impetus in the present century due toits capability of modulating metals into their nanosize. Research in nanotechnologyhighlights the possibility of green chemistry pathway to produce technologicallyimportant nanomaterials. The present study deals withgreen synthesis of coppernanoparticles by using leaf extract of AzadirachtaIndica.It acts as reducing as well ascapping agent for the nanoparticles. PANI –Cu (polyaniline copper) composite wasthen prepared by in-situ microwave assisted method of polymerization using Cunanoparticles as addition agent .The obtained polymer were then characterized by UV- Visible ,FI - IR , XRD and SEM. The effect of copper on the structure and propertyof polyaniline was studied showing an excellent in its property compared to thepolymer.