

Synthesis and D.C. Conductivity Measurements of Polyaniline/CopperOxide Nanocomposites

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Abstract : The Polyaniline / Copper Oxide(PANI / CuO) nanocomposite was prepared by solution mixing of prepared Polyaniline and copper Oxide in Dimethyl sulfoxide (DMSO). The synthesis involved the formation of dark green colored Polyaniline-Copper Oxide nanocomposite. The synthesized polymer nano composites were characterized by XRD, FTIR, SEM and UV-Visible Spectroscopy. The characteristic peaks in XRD, FTIR and UV-Visible spectra confirmed the presence of CuO in the polymer structure. SEM analysis revealed formation of PANI/CuO nano composite The D.C. conductivity measurements were performed using two probe method for various temperatures.

Keywords : polyaniline/copper oxide (PANI/CuO) nanocomposite, XRD, SEM, FTIRand DC- conductivity, UV-visible spectra

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