**Abstract**

Solar energy plays a vital type of renewable energy because of its environmental friendliness and the potential for high power conversion efficiency in solar energy harvesting devices. Dye-sensitized solar cells (DSSCs) are gaining considerable interest as alternatives to the semiconductor-based thin film solar cells. Natural dye sensitized solar cells are becoming promising candidates for replacing synthetic dyes. Graphene oxide exhibits impressive photoelectric properties, large surface area, high charge-carrier mobility, high conductance and fast electron transfer.These great features offer graphene oxide as most promising materials for various potential applications. Nickel Oxide are of particular interest because of its good electro-catalytic properties, low toxicity and low cost, which makes them suitable for photo-anode in dye sensitized solar cells. In the present work,a hybrid material consisting of nickel oxide nanoparticles anchored onto the nitrogen doped graphene oxide sheets are prepared by chemical precipitation method. The structural and morphological of the prepared nanocomposites areinvestigated by X-Ray diffraction analysis and electron microscopy (FE-SEM). The presence of functional groups in the synthesized nanocomposites are studied by Fourier transform infrared spectroscopy(FT-IR). The electrochemical activity of the prepared nanocomposites is investigated by cyclic voltammetry (CV).The prepared nanocomposites are suitable for dye sensitized solar cell applications.