# ABSTRACT

Conducting polymer viz., polyaniline and polypyrrole films have been synthesized using the electropolymerization technique and are characterized using XRD, AFM, dc conductivity measurements, FTIR and cyclic voltammetry. The conducting polymer films are used to synthesize type I and type II supercapacitor. In order to develop the type I supercapacitor a new technique of syntheses of polyaniline known as interfacial polymerization is employed. This technique yields polyaniline in the nanofiber form. The nanofiber so formed have been characterized using PL spectroscopy, UV Vis Spectroscopy , XRD and Four Probe set up for conductivity measurement. The nanofiber electrodes are then employed to design a type I supercapacitor. The Charge-discharge characteristics reveal the fact that the Polyaniline nanofiber supercapacitor can be placed between the type I and type II supercapacitors.