

## Electrochemical Capacitive Behaviour of Multiwalled Carbon Nanotubes Modified with Electropolymeric Films of Nickel Tetraaminophthalocyanine

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### ABSTRACT

Electrochemical capacitive behaviour of the electropolymeric nickel tetra-aminophthalocyanine (poly-NiTAPc) supported on multiwalled carbon nanotube (MWCNT) platform is described. From the data in 1 M H<sub>2</sub>SO<sub>4</sub>, the MWCNT-poly-NiTAPc exhibited superior capacitance (112 mF cm<sup>-2</sup> or 777 F g<sup>-1</sup>). The supercapacitance of the MWCNT-polyNiTAPc was found to be much better in 1 M H<sub>2</sub>SO<sub>4</sub> than in 1 M NaOH medium. Impedance data proved that most of the stored energy of the MWCNT-poly-NiTAPc could be accessible at high frequency (1.6 kHz). The electrode is capable of undergoing continuous charge-discharge process for more than a 1000 cycles without any significant deterioration in the stability.