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(57) Abstract :

The present investigation deals with synthesis of polypyrrole thin films by simple and cost effective chemical deposition method at room temperature. The solution containing monomer pyrrole, ammonium persulphate and sulphuric acid was used for deposition of polypyrrole thin film on to stainless steel substrates. The stainless steel substrates were immersed in above solution for 1-24 hr. at room temperature to get deposition of polypyrrole on stainless steel. The supercapacitive properties of these chemically deposited polypyrrole thin films were tested in sulphuric acid electrolyte using cyclic voltammetry (CV) technique. The maximum value of specific capacitance 515 Fg⁻¹ was achieved at scan rate 50 mVs⁻¹ and good cyclability beyond 5,000 cycles with 83% stability.

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