

Facile Microwave-assisted Synthesis of Mesoporous RGO@(Co,Mn)3O4 Nanocomposite for Electrochemical Application

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Microwave irradiation was used to synthesize mesoporous RGO@(Co,Mn)3O4 oxide nanosheets as an active electrode material. The as-prepared electrode showed a high capacitance of 953 F g⁻¹ at 1 A g⁻¹ in a 6 M KOH electrolyte solution. Moreover, it has a good specific retention of 76.7% and high Coulombic efficiency of 98.3% after 2000 charge-discharge cycles. It also exhibited an energy density of 76.2 Wh kg⁻¹ at a power density of 720 W kg⁻¹. Through this study, a rapid and facile synthesis of RGO@(Co,Mn)3O4 electrode had showed a very promising result for supercapacitor application.