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Nanostructured 2D Ti3C2/NiO composite material as electrode for supercapacitors applications

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Cost-effectiveness and environmentally friendly nature of the transition metal oxides are some motivating factors for their exploration for use as energy storage devices applications when compared to other electrode materials. This work reports the successful synthesis of Ti3C2/NiO nanocomposite for application as supercapacitor electrodes. The as-synthesized material was characterized by various techniques such as, Raman spectroscopy, BET, SEM, TEM and XRD to ascertain the morphological and structural nature of the material. Electrochemical characterization of the composite material performed in a three-electrode configuration using 6 M KOH electrolyte reveals high specific capacity and excellent cycling stability with satisfactory capacity retention for over 2000 cycle.

Apply to be
 considered for a student
   award (Yes / No)?

yes

Level for award
 (Hons, MSc,
   PhD, N/A)?

PhD

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