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Synthesis, Optical Characterization And Electrochemical Properties Of $Cd_{(1-X)}Ni_{(X)}$ S/ Reduced Graphene Oxide Nanocomposites

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Abstract: $Cd_{(1-x)}Ni_{(x)}S$/rGO Composites were synthesized through reflux method. The prepared composite materials were subjected to study the structural, functional groups and transformation of GO to rGO by X- ray diffractometer (XRD), Fourier transform infrared (FTIR) and Raman spectrometer. The presence of elements, binding energies and the transformation were studied by X- ray photoelectron spectroscopy. Thermal properties of as synthesized materials were analyzed by thermogravimetric analysis. An introduction of Ni ions into CdS/rGO composites results increase in integral area and current, which is analyzed by cyclic voltammetry. This composite will be useful in future optoelectronics and energy storage applications.
Keywords: $Cd_{(1-x)}Ni_{(x)}S$/rGO, composites, Reflux method, Optical properties, Electrochemical property.

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