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Synthesis and Electrochemical Characterization of Liquid Phase Exfoliated Graphene Flakes JULIANNA RICHIE, JACOB HUFFSTUTLER, MILINDA WASALA, ANDREW WINCHESTER, SUJOY GHOSH, SWASTIK KAR, SAIKAT TALAPATRA, None — We will present our results on synthesis and characterization of few-layer graphene nanoflakes obtained from bulk graphite in isopropanol alcohol (IPA) using Liquid-phase exfoliation technique. Results of sample characterization using ultraviolet-visible (UV-VIS) spectroscopy, transmission electron microscopy (TEM), cyclic voltammetry (CV), electrical impedance spectroscopy (EIS), and galvanostatic charge-discharge will be presented. Potential use of these materials as electric double-layer capacitor (EDLC) electrodes were investigated using 6M KOH as electrolyte. We found that these devices possess specific capacitance values as high as 23F/g at a 1 mV scan rate. Several other parameters related to the EDLC performances will be presented in detail.

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None

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