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Abstract

In the present work, hybrid carbon and silicon carbide (C/SiC) matrix composites containing different SiC mass ratios (5, 10, 20 and 40%) were obtained. From the obtained materials it was possible to evaluate the electrochemical behavior by cyclic voltammetry (VC), in view of the application on double layer supercapacitor electrodes (EDLC). The carbon matrix acts as a conductive substrate together with silicon carbide nanowires that were formed

by interstitial reactions between molten liquid silicon and the porous glassy carbon structure. The morphological characteristics as well as the SiC nanowire formation could be verified by Scanning Electron Microscopy (SEM) equipped with electron gun (FEG) and X-ray diffraction (XRD). **Key words:** carbon, silicon carbide, cyclic voltammetry, supercapacitor and electrochemistry.

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