Research on Designing New Supercapacitors

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ABSTRACT

The electrode materials for supercapacitors must be stable and with high specific surface so that better energy density and power density can be achieved. In previous studies, graphite with deposited carbon nanotubes was used as electrodes and moderate results were obtained. In this research, bamboo-charcoal electrode was used instead of graphite because of its higher specific surface. Different processes have been tried and, by comparing the conductivity of the electrodes themselves and the shapes of the cyclic voltammograms of the supercapacitors, it was found that bamboo electrodes baked at 750°C with deposited CNTs had much better performance than graphite electrodes with deposited CNTs .

Keywords : Barmboo charcoal、supercapacitor、carbon nanotube、porous、electrophoretic deposition、cyclic voltammograms

Table of Contents

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