

## Influence of surface chemical characteristics of activated carbon on performances of EDLC

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Electrical double-layer capacitor is a kind of electrochemical energy storage device in which electric charges accumulated as a result of pure electrostatic attraction force and stored on the electrolyte-electrode interface in a form of double layer separated by the electrolyte. Activated carbon with high specific surface area is widely used as the electrode material as electric double-layer capacitance is directly proportional to the accessible surface area of an electrode.

Coconut and coal char based activated carbons with post treatment by different kinds of acid and alkali solution were used as the electrode of double-layer capacitor. In order to control the surface functional groups of activated carbon, heat treatment at different temperature was performed after post treatment. The effect of the surface functional groups on electrochemical performance of the activated carbon electrodes was investigated.