

Activation of carbon fiber prepared from coal extract (HPC) by electro-spinning method  
and its EDLC characteristics

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Hyper Call (HPC), which is ash-free coal obtained by heat extraction of coal, is soluble in an organic solvent such as pyridine and becomes a viscous solution showing conductivity, a fibrous carbon fiber precursor can be prepared. Carbon fibers carbonized by heat treatment mainly have micropores, and those which show about 1000 m<sup>2</sup>/g without activation treatment are also recognized. As a result of evaluating the capacitor (EDLC) characteristics using this as an electrode, the capacitance exceeding 300F/g was confirmed despite the specific surface area in the sulfuric acid aqueous solution (40 % H<sub>2</sub>SO<sub>4</sub>) being about 500m<sup>2</sup>/g. In spite of not having a large specific surface area, since a high capacitance was obtained, it attempted to increase the specific surface area by activation treatment to improve the capacitance. In the sample whose specific surface area increased to 1500m<sup>2</sup>/g, the capacitance was improved from 300 F/g to 500 F/g under the condition of 100 mA/g.