

Electrochemical Modification of Carbon Fiber electrode and its Application to Capacitor

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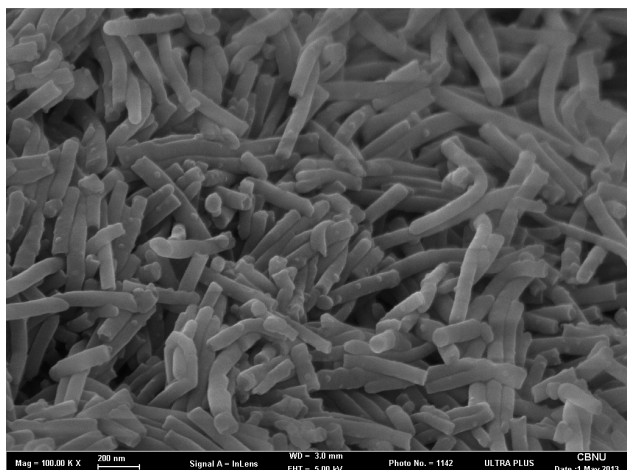
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Electrochemical capacitor (EC) has required increasing energy density and maintaining continuity of high power density and high operating voltage. Because of these characteristics, EC has been studied to assist battery, particularly in high power need application like start up of electric vehicles.

Carbon materials are interesting material for electrochemical capacitor and other electrochemical fields owing to their unique physicochemical properties, high conductivity, and low cost, especially carbon nano fiber has some good characteristics. High performance of carbon nano fiber can be expected because of exists of many edge sites and its excellent performance, low electrical resistivity, good thermal and electrical conductivity. In addition, Hollow type carbon nano fiber can be expected lager surface area more than commercial carbon nano fiber.

The carbon nano fiber was synthesized by liquid phase carbonization in anodic porous alumina template. This anodic porous alumina template is a promising candidate for starting materials of nanofabrication.

In this study, carbon nano fiber was synthesized by liquid phase carbonization in anodic porous alumina template, and analyzed to know their electrochemical properties as electrode material.



Reference

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