

Title (en)
MESOPOROUS CARBON MATERIAL FOR ENERGY STORAGE

Title (de)
MESOPORÖSE KOHLENSTOFFMATERIALIEN FÜR ENERGIESPEICHERUNG

Title (fr)
MATÉRIAU À BASE DE CARBONE À MÉSOPORES POUR STOCKAGE D'ÉNERGIE

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Abstract (en)
[origin: WO2010091352A2] A mesoporous carbon material formed on an electrode surface in an energy storage device, and a method of forming the same are disclosed. The mesoporous carbon material acts as a high surface area ion intercalation medium for the energy storage device, and is made up of CVD-deposited carbon fullerene "onions" and carbon nanotubes (CNTs) that are interconnected in a fullerene/CNT hybrid matrix. The fullerene/CNT hybrid matrix is a high porosity material that is capable of retaining lithium ions in concentrations useful for storing significant quantities of electrical energy. The method, according to one embodiment, includes vaporizing a high molecular weight hydrocarbon precursor and directing the vapor onto a conductive substrate to form a mesoporous carbon material thereon.

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