Improvement of ion adsorption capacitance of activated carbon electrode by mixing mesoporous carbon prepared by spray pyrolysis

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Mesoporous carbons have received much attention as the electrode materials for the application of electrical double layer capacitor due to the advantages of large surface area, tunable pore size, chemically inert and good conductivity. In this work, mesoporous carbon particles (MCPs) were prepared by spray pyrolysis, and they were used as the electrode materials for electrical double-layer capacitors. To improve the capacitance of carbon electrode, in this work, the synthesized MCPs were mixed with commercially-available activated carbon powders (ACPs) with micropores. Finally, the MCP/ACP mixed electrode was found to have improvement in the capacitance.
Keywords: porous carbon, spray pyrolysis, carbon electrode, supercapacitance.