

Activated Carbon from KOH Activation of Pitch-based Carbon Microspheres by Electrospray Technique as Supercapacitor Electrode Material

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Activated carbon was prepared from petroleum residue for the application of supercapacitors. The pitch-based carbon microspheres were fabricated by electrospray technique. The as-sprayed spheres were stabilized at 335 °C in air, followed by carbonized at 900°C in N₂ atmosphere. Carbonized carbon microspheres were activated by KOH at 900°C in N₂ atmosphere. Polymers and silica nanoparticles can also be added during electrospray process as soft template and hard template, respectively, for creating mesopores in the structure. Activated carbon microspheres can be applied as electrode materials in supercapacitors.

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