

Electrospun Poly(acrylonitrile-co-methyl methacrylate) Nanofibers Using As Supercapacitors.

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Abstract

PAN has been widely known as an excellent precursor and successfully used in electrospinning for the preparation of carbon fibers. PAN has many advantages that are a high melting point and high degree of molecular orientation [1, 2]. Therefore, in order to make electrochemical double-layer capacitors, also called supercapacitors, acrylonitrile (AN) and methyl methacrylate (MMA) were chosen as materials of copolymer. PAN is employed for making the carbon nanofibers and PMMA is used for making pores on the carbon nanofiber surface. PMMA is considered as a polymer with good elongation performance and entirely thermal decomposable polymer that is decomposed at temperatures between 250 - 400 °C [3]. Poly(AN-co-MMA) copolymer was prepared by dispersion polymerization and , after carbon nanofibers are fabricated by electrospinning, supercapacitor is manufactured through carbonization.

References

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Figures

