

## Preparation of Polystyrene-based Carbon Fibers by Electrospinning

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In this work, carbon fibers were prepared by polystyrene-based carbon precursor. Styrene and trimethylolpropane triacrylate were used as a monomer and a cross-linking agent, respectively. The fibers were prepared by electrospinning methods. The diameter distribution, morphologies and thermal properties of the fibers were investigated. From the results, the diameter of electrospun fibers was predominantly influenced by the concentration of the polymer and applied voltage. The average diameter of the fibers was increased with increasing the polymer concentration up to 25 wt.%. It was also found that the fibers with uniform diameter distribution and fine diameter could be achieved at 18 kV input voltage and 15 cm TCD.