

Electrospun Alumina Nanofibers using Composite AIP/PVP Solutions

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Alumina nanofibers were prepared by sol-gel method and electrospinning process. The electrospinning solution was prepared by mixing aluminum isopropoxide(AIP) in ethanol refluxed in the presence of acid catalyst and PVP/ethanol polymer solution. The as-spun fibers were dried at 80oC and then calcined at 800 oC and 1200 oC for 2h. Alumina nanofibers were characterized using TGA, SEM, XRD and FT-IR analysis. The results show that α -alumina nanofibers were formed with fiber diameter in the range of 102~378 nm.