

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Electrospinning of native cellulose from nonvolatile solvent system SHANSHAN XU, AIHUA HE, CHARLES C. HAN, Institute of Chemistry, CAS — Electrospinning of cellulose in a highly efficient RTIL of 1-allyl-3-methylimidazolium chloride (AMIMCl) was investigated. It was found that the introduction of co-solvent dimethyl sulfoxide (DMSO) contributed to a continuous jet. The problems lying in nonvolatility and the high ionic strength of the RTIL were successfully resolved using a rotating copper-wire drum as a collector and solidifying the jet under high relative humidity. The water vapor played an important role in leading to “skin formation” which helped to stabilize the fibrous morphology, and finally smooth ultra-thin regenerated cellulose fibers were obtained

Aihua He

Date submitted: 29 Nov 2008

Electronic form version 1.4