

Spinning carbon nanotube fibers

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Individual carbon nanotubes (CNTs) possess excellent mechanical, electrical, and thermal properties, but the real-world application of CNTs has been limited. One key route to their successful application is to assemble them into a macroscopic structure. CNT fiber is the most promising macroscopic assembly of CNTs. The presentation consists of three sections. In the first section, three main technologies to spin CNT fibers are introduced: forest spinning, wet spinning, and direct spinning. Second, the research on wet spinning method is presented in detail. Especially, the research on the dissolution of CNTs in chlorosulfonic acid is discussed. Finally, key challenges in the spinning of CNT fiber and the future research direction is provided.