



Continuous Carbon Nanofibers

By Sian F. Fennessey

VDM Verlag. Paperback. Condition: New. 142 pages. Dimensions: 8.9in. x 5.9in. x 0.4in. The utilization of materials for the preparation of fibers and textiles began at the beginning of civilization and extended until the 20th century when steam driven machinery revolutionized the mechanical operations of spinning and weaving. Carbon fibers were first produced by Edison in the late 19th century; Edison found that regenerated cellulose (rayon) could be converted into carbon filaments for use in incandescent lamps. Electrospinning was first patented in 1902; electrospinning is a fiber spinning technique that relies on electrostatic forces to produce fibers in the nanometer to micron diameter range. The electrospinning process of fiber production is examined in regards to the preparation of continuous Polyacrylonitrile (PAN) nanofibers with the purpose of preparing carbon nanofibers for the reinforcement of thin films and nanocomposites. The mechanical properties and reinforcing behavior of nanofibers are expected to differ significantly from their conventional counterparts; the strength of a carbon filament increases as the diameter decreases. The research should be especially useful to beginning and experienced researchers in the field of nanomaterials. This item ships from multiple locations. Your book may arrive from Roseburg, OR, La Vergne, TN. Paperback.



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