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“Very interesting book. Starting from monomers—transition to polymers and then processing by electrospinning in nanofibers. And this is not all; a lot of investigations regarding electrospinning parameters, characterization and applications of nanofibers. Wonderful.”

Dr. Ion Sava

“Petru Poni” Institute of Macromolecular Chemistry, Romania

Conjugated polymer composites with high dielectric constants are being developed by the electronics industry in response to the need for power-grounded decoupling to secure the integrity of high-speed signals and to reduce electromagnetic interference. Electrically conducting polymers are materials that simultaneously possess the physical and chemical properties of organic polymers and the electronic characteristics of metals. Electrospinning is a versatile technique that is used to produce ultrathin continuous fibers with high surface-to-volume and aspect ratios from a variety of materials, including polymers, composites, and ceramics. Combination of electrical properties with good mechanical performance is of particular interest in electroactive polymer technology.

This book covers the general aspects of electrospinning and discusses the fundamental concepts that can be used to produce nanofibers with the help of mathematical models and equations. It also details the methods through which different polymeric structures can be included in conjugated polymers during electrospinning to form composites or blends of conjugated polymer nanofibers.



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