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Sommario/riassunto

The technique of electrospinning is a unique way to produce nanofibers. Unlike conventional fiber spinning techniques such as melt-, wet-, and dry-spinning, which are capable of producing fibers with diameters in the micrometer range, electrospinning can produce fibers with diameters in the nanometer range that result in an enormous amount of surface area in a small volume. These very fine fibers can be fabricated at a relatively low cost and in large quantity from a variety of materials (including natural polymers such as cellulose, synthetic polymers such as polystyrene, carbon/graphite, and ceramics) to provide chemical robustness while also being biologically inert. This book discusses the bioseparation applications of nanofiber membranes, including fabrication techniques and properties for the electrospun nanofibers, chemical modification of the membrane fibers, and purification of biological products by size-based and adsorptive mechanisms.
