Nanotechnology has attracted attention of textile and polymer scientists and has been playing extraordinary role over the past few decades in the functional finishing of different textile materials. Nanoparticles due to their diverse functions have not only imparted flame retardant, UV-blocking, water repellent, self-cleaning, and antimicrobial properties to the textiles, but also have greater affinity for fabrics leading to an increase in durability of the functions. This book emphasizes recent approaches and strategies that are currently at operation to functionalize both natural and synthetic textile materials using diverse nanoparticles and their composites with polymers. The book concludes by paying attention towards removal of toxic chemicals using state-of-the-art nano-adsorbents.

Main Topics

1. Textile dyeing using metallic nanoparticles
2. Metal oxide nanoparticles for multifunctional finishing
3. New approaches to produce UV protective textiles
4. Polymeric nanocomposites for antimicrobial finishing
5. Self-cleaning of textiles using advanced nanoparticles
6. Silver nanoparticles in dyeing and finishing applications
7. Zinc Oxide – prospects in textile industry
8. Titanium dioxide: Next generation photo-catalysts
9. Textile effluent using chitosan nanocomposites
10. Recent advances in remediation of textile effluents using nano-catalysts

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