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"*Prof. Mangala Joshi has made a tremendous contribution to this interesting technology space of nanotech-enhanced textiles and is to be congratulated for publishing this excellent resource. Anyone working in textile innovation should read this book, which covers the application of nanotechnology and polymer nanocomposites in textiles in order to enhance a range of performance features from medical (antimicrobial, biodegradable, therapeutics) to physical (mechanical, gas barrier, separation, shape memory) and thermal or electrical (flame retarding, sensing, or energy harvesting).*"

Prof. Darren Martin
The University of Queensland, Australia

"*The publication of this book is very timely. It presents a comprehensive overview of the up-to-date progress in the research and development related to nanotechnology applications in textiles, with a focus on the emerging role of polymer nanocomposites. It will serve as an excellent reference guide to students, researchers, academicians, and scientists working in the area of new materials and modern textiles.*"

Prof. Ashok Misra
Indian Institute of Science, Bangalore

"*Polymer nanocomposite technology offers an excellent opportunity to develop advanced materials with desired functionalities for the textile industry. This book consolidates the knowledge, from the fundamentals to product development, on the application of polymer nanocomposites in textiles. Furthermore, it focuses on electrospinning, which has fascinating applications in the development of advanced nanostructured materials with a wide range of applications, from medical to filtration.*"

Prof. Suprakas Sinha Ray
DST/CSIR National Centre for Nano-Structured Materials, South Africa

In recent times, polymer nanocomposites have attracted a great deal of scientific interest due to their unique advantages over conventional plastic materials, such as superior strength, modulus, thermal stability, thermal and electrical conductivity, and gas barrier. They are finding real and fast-growing applications in wide-ranging fields such as automotive, aerospace, electronics, packaging, and sports. This book focuses on the development of polymer nanocomposites as an advanced material for textile applications, such as fibers, coatings, and nanofibers. It compiles and details cutting-edge research in the science and nanotechnology of textiles with special reference to polymer nanocomposites in the form of invited chapters from scientists and subject experts from various institutes from all over the world. They include authors who are actively involved in the research and development of polymer nanocomposites with a wide range of functions—including antimicrobial, flame-retardant, gas barrier, shape memory, sensor, and energy-scavenging—as well as medical applications, such as tissue engineering and wound dressings, to create a new range of smart and intelligent textiles. Edited by Mangala Joshi, a prominent nanotechnology researcher at the premier Indian Institute of Technology, Delhi, India, this book will appeal to anyone involved in nanotechnology, nanocomposites, advanced materials, polymers, fibers and textiles, and technical textiles.

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