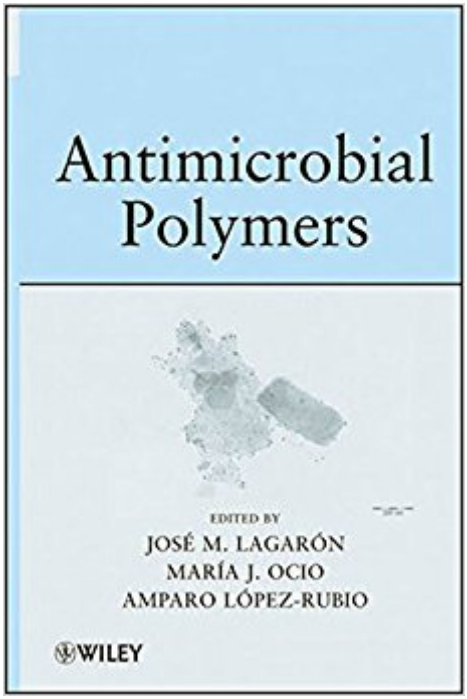
Antimicrobial Polymers



Synopsis

The pioneering guide on the design, processing, and testing of antimicrobial plastic materials and coatings The manifestation of harmful microbes in plastic materials used in medical devices and drugs, water purification systems, hospital equipment, textiles, and food packaging pose alarming health threats to consumers by exposing them to many serious infectious diseases. As a result, high demand for intensifying efforts in the R&D of antimicrobial polymers has placed heavy reliance on both academia and industry to find viable solutions for producing safer plastic materials. To assist researchers and students in this endeavor, Antimicrobial Polymers explores coupling contaminant-deterring biocides and plasticsÃ¢â ¬â •focusing particular attention on natural biocides and the nanofabrication of biocides. Each chapter is devoted to addressing a key technology employed to impart antimicrobial behavior to polymers, including chemical modification of the polymers themselves. A host of relevant topics, such as regulatory matters, human safety, and environmental risks are covered to help lend depth to the book's vital subject matter. In addition, Antimicrobial Polymers: Discusses the design, processing, and testing of antimicrobial plastic materials Covers interdisciplinary areas of chemistry and microbiology Includes applications in food packaging, medical devices, nanotechnology, and coatings Details regulations from the U.S. (FDA and EPA) and EU as well as human safety and environmental concerns Achieving cleaner and more effective methods for improving the infection-fighting properties of versatile and necessary plastic materials is a goal that stretches across many scientific fields. Antimicrobial Polymers combines all of this information into one volume, exposing readers to preventive strategies that harbor vast potential for making exposure to polymeric products and surfaces a far less risky undertaking in the future.

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Customer Reviews

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