Nanofiber Structures for Medical Biotextiles

Biotextiles as medical implants: 2. Nanofiber structures for medical biotextiles (Woodhead Publishing Series in Textiles) by Terry Pratchett

4.6 out of 5

Language	: English
File size	: 2182 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 74 pages

Woodhead Publishing in Textiles

This book focuses on the fabrication, characterization, and applications of nanofiber structures for advanced medical biotextiles. It provides a comprehensive overview of the field, from the basics of nanofiber fabrication to the latest advances in functionalization and applications.

The book is divided into four parts:

1. Part 1: to nanofibers and their applications in medical biotextiles
2. Part 2: Fabrication of nanofiber structures
3. Part 3: Characterization of nanofiber structures
4. Part 4: Applications of nanofiber structures in medical biotextiles

Part 1 provides a general overview of nanofibers and their applications in medical biotextiles. It discusses the different types of nanofibers, their properties, and their advantages and disadvantages for medical applications.

Part 2 covers the various methods for fabricating nanofiber structures. It discusses the electrospinning, melt blowing, and self-assembly techniques, as well as the different parameters that affect the morphology and properties of the nanofibers.

Part 3 discusses the different characterization techniques that can be used to study the morphology, structure, and properties of nanofiber structures. It covers the optical, electron microscopy, and spectroscopic techniques, as well as the mechanical and thermal characterization techniques.

Part 4 discusses the various applications of nanofiber structures in medical biotextiles. It covers the use of nanofibers for wound healing, drug delivery, tissue engineering, and other medical applications.

This book is a valuable resource for researchers, engineers, and clinicians who are interested in the development and application of nanofiber structures for medical biotextiles.

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Author

Dr. Russell M. Rajabi is a Professor in the Department of Biomedical Engineering at the University of California, Irvine. He is the Director of the Center for Biomaterials and Tissue Engineering and the Co-Director of the Center for Advanced Tissue Engineering and Therapeutics.

Dr. Rajabi's research interests focus on the development of nanofiber-based biomaterials for tissue engineering and regenerative medicine. He has published over 150 journal articles and holds over 20 patents in this field.

Publisher

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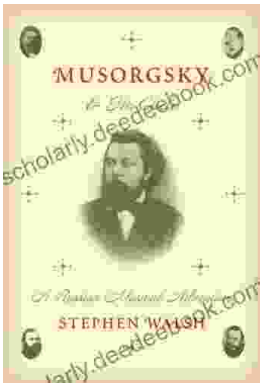

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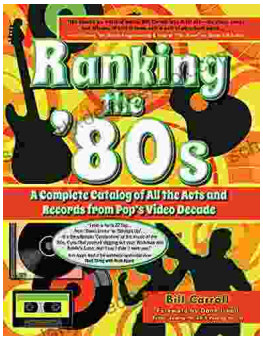

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