Biomaterials Science: An Introduction To Materials In Medicine, Second Edition
Synopsis

The second edition of this bestselling title provides the most up-to-date comprehensive review of all aspects of biomaterials science by providing a balanced, insightful approach to learning biomaterials. This reference integrates a historical perspective of materials engineering principles with biological interactions of biomaterials. Also provided within are regulatory and ethical issues in addition to future directions of the field, and a state-of-the-art update of medical and biotechnological applications. All aspects of biomaterials science are thoroughly addressed, from tissue engineering to cochlear prostheses and drug delivery systems. Over 80 contributors from academia, government and industry detail the principles of cell biology, immunology, and pathology. Focus within pertains to the clinical uses of biomaterials as components in implants, devices, and artificial organs. This reference also touches upon their uses in biotechnology as well as the characterization of the physical, chemical, biochemical and surface properties of these materials.

- Provides comprehensive coverage of principles and applications of all classes of biomaterials
- Integrates concepts of biomaterials science and biological interactions with clinical science and societal issues including law, regulation, and ethics
- Discusses successes and failures of biomaterials applications in clinical medicine and the future directions of the field
- Cover the broad spectrum of biomaterial compositions including polymers, metals, ceramics, glasses, carbons, natural materials, and composites

Endorsed by the Society for Biomaterials

Book Information

Hardcover: 864 pages
Language: English
ISBN-10: 0125824637
Product Dimensions: 11.2 x 8.7 x 1.6 inches
Shipping Weight: 5.8 pounds
Average Customer Review: 3.9 out of 5 stars See all reviews (16 customer reviews)
Best Sellers Rank: #120,321 in Books (See Top 100 in Books) #6 in Books > Textbooks > Medicine & Health Sciences > Medicine > Biotechnology #12 in Books > Textbooks > Medicine & Health Sciences > Alternative Medicine > Osteopathy #14 in Books > Science & Math > Biological Sciences > Biophysics

Customer Reviews
I must agree, it is probably not the easiest book, you can pick up and read. It is voluminous, information is very dry, might be difficult to 'make notes' from this book. It may not be structured the way, you might normally find in most of the textbook. But having said that the information is compiled with great care and extraordinary detail. It contains the cutting edge information you can find out about biomaterials. For example, each section made up of 10-15 pages is purely written straight out of the latest journal articles. It is definitely the best reference you can find for biomaterials, but if this is your main textbook, it might be a little hard for beginners with no background in material science to understand the concept right away. I was personally surprised to see that biomaterials is such an extensively branch in biomedical engineering and there is lot of scope. I think this book will help you realize that!!!

This book is widely used for grad-level biomaterials courses and for a good reason: it is a compilation of the forefronts of biomaterials research, including chapters written by well-regarded experts in the field. Any biomaterials researcher can look through the list of contributors and tell you that almost every single one listed is a big name when it comes to biomaterials conferences. As such, the material is presented in a way that will benefit someone who’s reading it for background or reference to projects in academic research/industrial R&D. This is a very heavy book materials-wise, and is NOT for anyone who is looking to have an easy, leisurely nighttime read. The topics may seem disconnected for the unprepared. For example, out of the entire “Types of Biomaterials” unit, there are individual chapters on hydrogels, metallic biomaterials, inorganic biomaterials, etc that took up maybe a good 200 pages, and it’s almost difficult to go from one chapter to the next in one sitting and take it on like you would a textbook. For more of a structured textbook, you may want to refer to a book by Temenoff and Mikos published recently. Instead, this book is more of a fixture in the reference shelf of any biomaterials researcher. It is one that you pick up and read a few chapters out of depending on what you’re planning on running experiments and furthering the field of. If you treat this book more as a reference book than a textbook, then you will find the reasons why it deserves 5 stars.

Textbook is good and comprehensive, but the index and organization leaves a lot to be desired. If I were to buy this again I would definitely try to get the electronic version—I expect it would be searchable so the poor index wouldn’t be a hindrance.

plethora of information in this book! Professor suggested it as more of a reference book and it
makes sense considering its enormous size. Definitely well organized and contained lots of information for any BME folk!

It's hard to cover EVERYTHING related to biomaterials in one book, but the topics that are covered in this book are done so in detail. I don’t really like how the book is pretty much a collection of works, but I understand how this allows each topic to be covered by an expert in that field. Overall, I find this book to be very useful in all of my classes.

Not a product for the new biomaterialist. Recommended for persons in the field or planning to enter the field. Chapters are complete, concise and detailed allowing for quick analysis. The book is organized very cleanly and permits one to use either as a reference or as an in depth reference on the subject. Solid for use in lab.

This is a great text that sums up the body’s response to biomaterials. It has good introductory sections to materials science issues, tissue engineering, and immunology.

Yes, I selected that I hate this book. I found that despite my efforts, the information was not coherent unless I consulted other resources. The internet and many specialized books helped to understand the authors explanations. What was frustrated was that no topic was fully covered. For example, there are separate sections (about a paragraph) describing innate and adaptive immunity. After these sections are new sections of the same things, only reinforcing what was said previously. WTF? I feel like half this book was copied and pasted from other sources. Good job writing a book, even better job of writing a poorly constructed book. Buy this book if you must, it is by no means going to hinder your learning, just don’t expect it to be a easy read. This review is from a student. Background in organic chemistry. Specialization in rheology and polymer chemistry. (maybe i'm being bitter because my biology skills aren't exactly adept) whatev, I hate this book

Download to continue reading...
