Biomaterials: A Basic Introduction

Qizhi Chen, George Thouas
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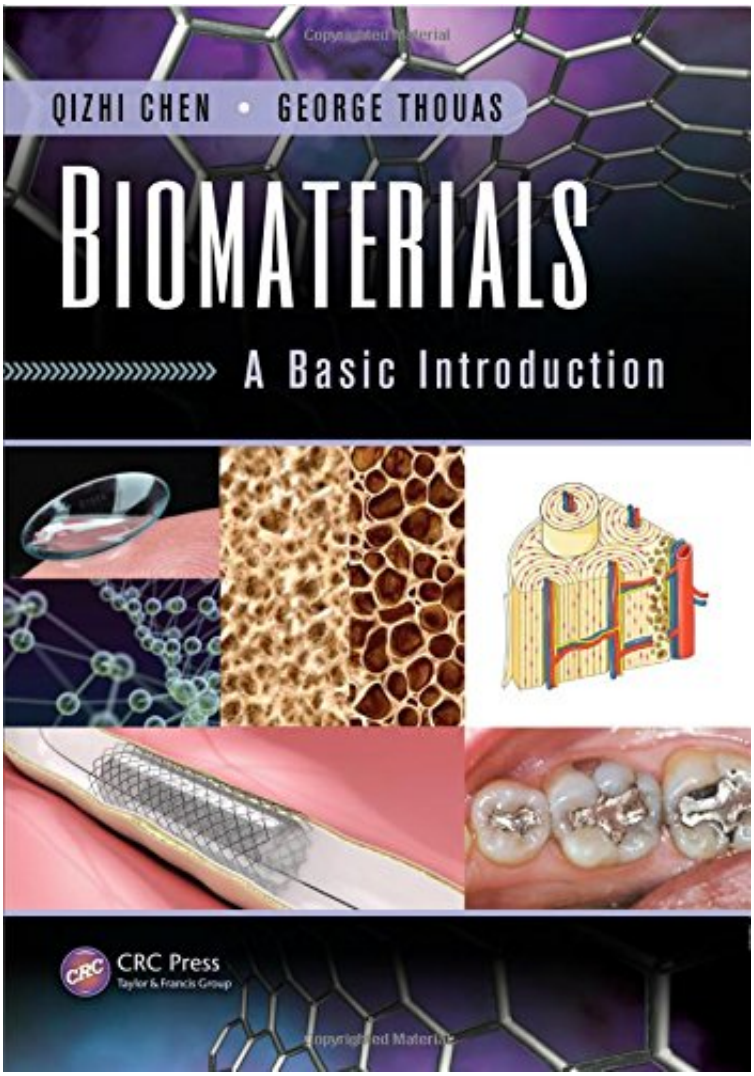

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Qizhi Chen, George Thouas : Biomaterials: A Basic Introduction before purchasing it in order to gage whether or not it would be worth my time, and all praised Biomaterials: A Basic Introduction:

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Explores Biomedical Science from a Unique Perspective Biomaterials: A Basic Introduction is a definitive resource for students entering biomedical or bioengineering disciplines. This text offers a detailed exploration of engineering and materials science, and examines the boundary and relationship between the two. Based on the authors course lecture notes and many years of research, it presents students with the knowledge needed to select and design

biomaterials used in medical devices. Placing special emphasis on metallic, ceramic, polymeric, and composite biomaterials, it explains the difference between materials science and materials engineering, introduces basic concepts and principles, and analyzes the critically important properties of biomaterials. Explains Complex Theories Using Aspects of Daily Life This text provides an appropriate balance between depth and broadness of coverage, and offers an understanding of the most important concepts and principles to students from a wide academic spectrum. It delivers the science of biomaterials in laymen terms, from a material standpoint, as well as a clinical applications point of view. It equips students majoring in materials science/engineering with knowledge on the fundamentals of how biomaterials behave at a biological level, and provides students majoring in medicine with information that is generally unavailable in traditional medical courses. The authors incorporate learning objectives at the beginning of each chapter, as well as chapter highlights, problems, and exercises at the end of each chapter. In addition, they present objectives, suggested activities, and reference material for further reading. Contains an overview of medical science vis--vis materials science, describes anatomy, histology, and cell biology Highlights health issues and diseases where biomaterials can easily find medical applications Presents knowledge of the relationship between the biomaterials and the living body Evaluates medical devices and looks into their respective regulations Biomaterials: A Basic Introduction contains an overview of basic biomaterials and concepts, and is written for upper-division students in the US/Canada, and second-level students in universities worldwide.

"Very comprehensive The text is easy to read and ideal as an introductory text."Anthony McGoron, Florida International University, Miami, USA "This textbook provides a logically structured approach to understanding biomaterial applications. The diagrams, pictures, and examples allow the reader to easily understand this complex topic."Peter Wawrow, St. Clair College, Windsor, Ontario, Canada "This book is the most complete and thorough textbook on biomaterials I have had the chance to evaluate/read. It covers the basics of materials science and provide important insights on all the aspects relevant to the biomaterials field. Topics are presented and described in an accessible fashion, making this piece of work a valuable textbook for undergraduate (but also graduate) courses."Fabio Variola, University of Ottawa, Ontario, CanadaAbout the AuthorQi-Zhi Chen earned her PhD in biomaterials from Imperial College London in 2007. She was previously an academic at Monash University. She was also formerly with the National Heart and Lung Institute London and the University of Cambridge. She has produced more than 100 peer-reviewed journal articles and book chapters. Dr. Chens research interests broadly cover polymeric, ceramic, metallic, and composite biomaterials for application in biomedical engineering. Her teaching interests include physics and various topics of materials science and engineering, in addition to biomaterials. George Thouas graduated with a masters degree in biomedical sciences at Monash University, Melbourne, where he also earned his PhD in the same area in 2006. As an academic researcher, he specialized in developmental biology and reproductivemedicine, with a focus on cellular metabolism and mitochondrial function. He has also spent a major part of his career working in bioengineering research, enabling interdisciplinary projects in bioreactor design, medical devices, and novel biomaterials, with applications in tissue engineering and regeneration. Dr. Thouas has produced more than 50 publications, including peer-reviewed journal articles, book chapters, patents, and conference proceedings.