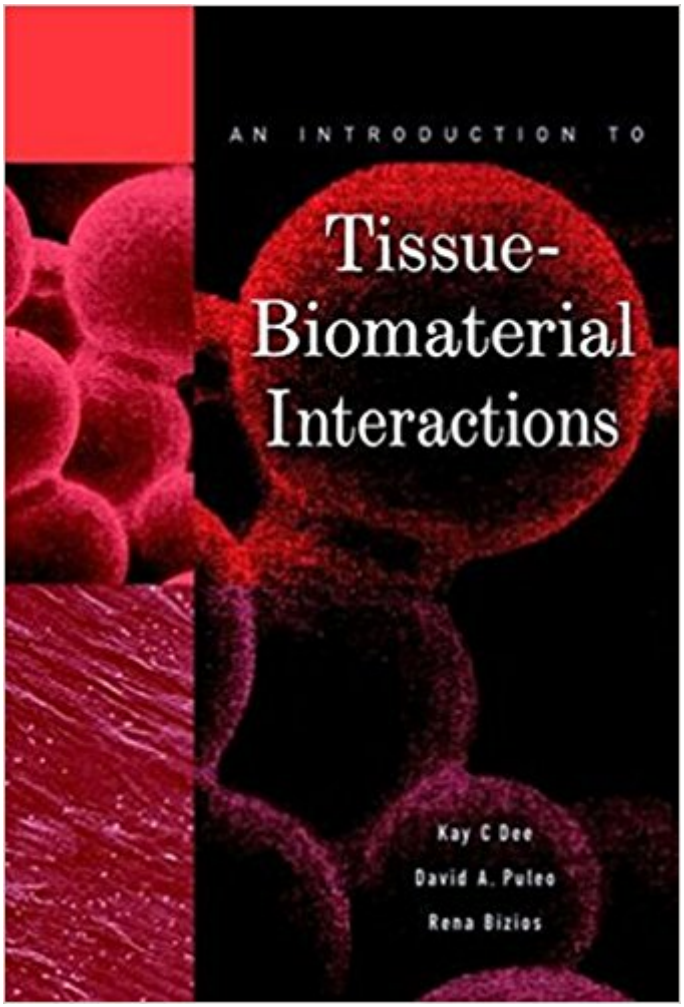
An Introduction To Tissue-Biomaterial Interactions



Synopsis

An Introduction to Tissue-Biomaterial Interactions acquaints an undergraduate audience with the fundamental biological processes that influence these sophisticated, cutting-edge procedures. Chapters one through three provide more detail about the molecular-level events that happen at the tissue-implant interface, while chapters four through ten explore selected material, biological, and physiological consequences of these events. The importance of the bodyÃ¢â ¬â„¢s wound-healing response is emphasized throughout. Specific topics covered include:Structure and properties of biomaterials Proteins Protein-surface interactions Blood-biomaterial interactions Inflammation and infection The immune system Biomaterial responses to implantation Biomaterial surface engineering Intimal hyperplasia and osseointegration as examples of tissue-biomaterial interactions The text also provides extensive coverage of the three pertinent interfaces between the body and the biomaterial, between the body and the living cells, and between the cells and the biomaterial that are critical in the development of tissue-engineered products that incorporate living cells within a biomaterial matrix. Ideal for a one-semester, biomedical engineering course, An Introduction to Tissue-Biomaterial Interactions provides a solid framework for understanding todayÃ¢â ¬â„¢s and tomorrowÃ¢â ¬â„¢s implantable biomedical devices.

Book Information

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Customer Reviews

"...well illustrated with a glossary, end-chapter summaries, and references...materials, scientists, medical device designers and manufacturers, corrosion researchers and practitioners, surgeons,

and clinicians will profit from reading this book." (CORROSION, February 2006) "Ã¢â ¬Â¦a concise, topical, and not overly technical hardboundÃ¢â ¬Â¦the strengths of this book are its crisp information and condensed summaries. The jewels of this book are the diagrams and tables." (Annals of Biomedical Engineering, Issue 31:11) "...delivers precisely what the authors intended...excellent book...great introduction...nicely complements existing texts..." (Advanced Materials, Vol 16(4), 17 Feb 2004) "This text would be of great use for faculty teaching courses on tissue-biomaterial interactions." (IEEE Engineering in Medicine and Biology, May/ June 2003) "...a pleasure to read...highly recommendable..." (Biomateria.com) "...excellent attention to detailÃ¢â ¬Â¦recommended for graduate students, faculty and researchers, and bioengineers and physicians." (Choice, Vol. 40, No. 6, February 2003)

Anybody who's ever picked a scab off their knee to see what's underneath, who's wondered why a small papercut can bleed so much, or who's wondered how an embedded splinter can cause so much pain and swelling, will hopefully find this book informative. The interactions of tissues or blood with biomaterials or medical devices is an area of crucial importance to many medical technologies. The macroscopic, tissue-level events (bone resorption or growth, blood clotting, fibrous tissue encapsulation, etc.) that often determine the success or failure of medical devices or implants are, ultimately, derived from cellular- and molecular-level interactions with the tissue-implant interface. Tissue engineering, a rapidly-growing field of research and development, seeks to control the functions and assembly of living cells. A thorough understanding of fundamental biological mechanisms by which the human body reacts to foreign surfaces, cells, and molecules, is a crucial prerequisite for advanced study in tissue engineering as well as for the continued development of tissue-engineered products.

I sent it back because it took it forever to get here and when it did I realized it was not the original! Very poor quality pictures, not worth $90!

Great product. Looks new as expected and arrived just in time for school.

Brand nee, and delivered within a day.

"...excellent attention to detail...recommended for graduate students, faculty and researchers, and bioengineers and physicians." (Choice, Vol. 40, No. 6, February 2003)

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