Biomimetic, Bioresponsive, and Bioactive Materials: An Introduction to Integrating Materials with Tissues
Matteo Santin (Editor), Gary J. Phillips (Editor)

Hardcover ISBN: 978-0-470-05671-4 April 2012 $111.25

DESCRIPTION

The accessible introduction to biomaterials and their applications in tissue replacement, medical devices, and more

Molecular and cell biology is being increasingly integrated into the search for high-performance biomaterials and biomedical devices, transforming a formerly engineering- and materials science–based field into a truly interdisciplinary area of investigation. Biomimetic, Bioresponsive, and Bioactive Materials presents a comprehensive introduction to biomaterials, discussing how they are selected, designed, and modified for integration with living tissue and how they can be utilized in the development of medical devices, orthopedics, and other related areas.

Examining the physico chemical properties of widely used biomaterials and their uses in different clinical fields, the book explores applications including soft and hard tissue replacement; biointeractive metals, polymers, and ceramics; and in vitro, in vivo, and ex vivo biocompatibility tests and clinical trials. The book critically assesses the clinical level of research in the field, not only presenting proven research, but also positing new avenues of exploration.

Biomimetic, Bioresponsive, and Bioactive Materials contains everything needed to get a firm grasp on materials science, fast. Written in an accessible style and including practice questions that test comprehension of the material covered in each chapter, the book is an invaluable tool for students as well as professionals new to the field.
ABOUT THE AUTHOR

Matteo Santin is Professor of Tissue Regeneration in the School of Pharmacy and Biomolecular Studies at the University of Brighton.

Gary J. Phillips is Principal Research Fellow in the School of Pharmacy and Biomolecular Sciences at the University of Brighton.

For additional product details, please visit https://www.wiley.com/en-us