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Collana	Lecture Notes in Bioengineering, , 2195-271X
Disciplina	620.11
Soggetti	Biomedical engineering Biomaterials Chemical engineering Systems biology Biological systems Biomedical Engineering and Bioengineering Industrial Chemistry/Chemical Engineering Systems Biology
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part I: Nanomaterials Engineering -- Part II: Nanomaterials Engineering -- Part III: Applications of Bionanomaterials.
Sommario/riassunto	This book reports on multidisciplinary research focusing on the analysis, synthesis and design of bionanomaterials. It merges the biophysicists', the biochemists' and bioengineers' perspectives, covering the study of the basic properties of materials and their interaction with biological systems, the development of new devices for medical purposes such as implantable systems, and new algorithms and methods for modeling the mechanical, physical or biological properties of biomaterials. The different chapters, which are based on selected contributions presented at the second edition of BIONAM, held on October 4-7, 2016, in Salerno, Italy, cover both basic and applied

research. This includes novel synthetic strategies for nanomaterials, as well as the implementation of bio- and smart materials for pharmacological and medical purposes (e.g. drug delivery, implantable systems), environmental applications, and many others. The book provides a broad audience of academic and professionals with a comprehensive, timely snapshot of the field of biomaterials. Besides offering a set of innovative theories together with the necessary practical tools for their implementation, it also highlights current challenges in the field, thus fostering new discussions and possible future collaborations between groups with different backgrounds.

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