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| Collana | Pergamon materials series ; ; v. 4 |
| Altri autori (Persone) | ElicesManuel |
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| Formato | Materiale a stampa |
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| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Front Cover; Structural Biological Materials: Design and Structure-Property Relationships; Copyright Page; Series Preface; Acknowledgements; List of Contributors; Introduction; Contents; PART 1: GENERAL CONCEPTS; Chapter 1. Structure-Property Relationships in Biological Materials; Chapter 2. Design and Function of Structural Biological Materials; PART 2: HARD TISSUE ENGINEERING; Chapter 3. Structure and Mechanical Properties of Bone; PART 3: SOFT TISSUE ENGINEERING; Chapter 4. Structure-Properties of Soft Tissues. Articular Cartilage Chapter 5. Bioartificial Implants: Design and Tissue EngineeringChapter 6. Mechanical Characterisation of Tendons in Vitro; Chapter 7. Biomimicking Materials with Smart Polymers; PART 4: ENGINEERING WITH FIBERS; Chapter 8. Biological Fibrous Materials; Chapter 9. Computer Model for the Mechanical Properties of Fibers; Chapter 10. Silk Fibers: Origins, Nature and Consequences of Structure; Chapter 11. Modeling of the Stress-Strain Behaviour of Spider Dragline; Glossary; Subject Index |
| Sommario/riassunto | The ongoing process of bio-evolution has produced materials which are perfectly adapted to fulfil a specific functional role. The natural world provides us with a multitude of examples of materials with |

durability, strength, mechanisms of programmed self-assembly and biodegradability. The materials industry has sought to observe and appreciate the relationship between structure, properties and function of these biological materials. A multidisciplinary approach, building on recent advances at the forefront of physics, chemistry and molecular biology, has been successful in produc
