Record Nr. UNINA9910788144903321 Biomedical textiles for orthopaedic and surgical applications: Titolo fundamentals, applications and tissue engineering // edited by Todd Blair Amsterdam, Netherlands:,: Woodhead Publishing,, 2015 Pubbl/distr/stampa ©2015 **ISBN** 1-78242-026-6 Descrizione fisica 1 online resource (212 p.) Woodhead Publishing Series in Biomaterials;; Number 93 Collana Disciplina 610.28 Soggetti Biomedical materials - Therapeutic use Biomedical engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Front Cover; Biomedical Textiles for Orthopaedic and Surgical Applications: Fundamentals, Applications and Tissue Engineering: Copyright: Contents: List of contributors: Woodhead Publishing Series in Biomaterials; Chapter 1: Biomechanical testing and the development of silk-based textiles for regenerative medicine and surgery; 1.1. Introduction; 1.2. Current landscape; 1.3. A new paradigm: Compliance Matching and Material Property Led Engineering Technologies: 1.3.1. Phase 1: Understanding natural tissue; 1.3.2. Phase 2: Comparison with current solutions 1.3.3. Phase 3: Novel compliance-matched solutions 1.3.4. Importance of sample quantity and quality; 1.3.5. Mechanical testing; 1.3.6. Thermal testing; 1.3.7. Optical testing; 1.4. CoMMPLETe case study: Rotator cuff tendons; 1.4.1. CoMMPLETe phase 1: Understanding rotator cuff properties; 1.4.2. CoMMPLETe phase 2: Comparison with existing patches; 1.5. Future trends and applications; 1.5.1. CoMMPLETe phase 3: Developing silk-based solutions; 1.6. Conclusions; 1.7. Sources of further information and advice; Websites; Acknowledgements; References

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