

1. Record Nr.	UNISA996426338903316
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Titolo	Tissue engineering using ceramics and polymers // edited by Aldo R. Boccaccini and Peter X. Ma
Pubbl/distr/stampa	Cambridge, [England] ; ; Waltham, [Massachusetts] : , : Woodhead Publishing, , 2014 ©2014
ISBN	0-85709-716-4
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (743 p.)
Collana	Woodhead Publishing Series in Biomaterials ; ; Number 85
Disciplina	666
Soggetti	Tissue engineering Polymers in medicine Ceramics in medicine Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Tissue Engineering Using Ceramics and Polymers; Copyright; Contents; Contributor contact details; Woodhead Publishing Series in Biomaterials; Foreword; Preface; Part I:General issues: materials; 1: Ceramic biomaterials for tissue engineering; 1.1 Introduction; 1.2 Characteristics of ceramics; 1.3 Microstructure of ceramics; 1.4 Properties of ceramics; 1.5 Processing of ceramics; 1.6 Conclusions and future trends; 1.7 References; 2:Polymeric biomaterials for tissue engineering; 2.1 Introduction; 2.2 Polymeric scaffolds for tissue engineering 2.3 Polymeric scaffolds with controlled release capacity2.4 Conclusions and future trends; 2.5 Acknowledgements; 2.6 References; 3:Bioactive ceramics and glasses for tissue engineering; 3.1 Introduction; 3.2 Scaffolds for tissue engineering; 3.3 Bioactive ceramics; 3.4 Properties of bioactive ceramics; 3.5 Tissue engineering applications of bioactive ceramics; 3.6 Bioactive glasses; 3.7 Preparation and properties of bioactive glasses; 3.8 Bioactive glasses in tissue engineering; 3.9 Bioactive glass-ceramics; 3.10 Bioactive composites; 3.11 Conclusions and future trends; 3.12 References

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5:Nanoscale design in biomineralization for developing new biomaterials for bone tissue engineering (BTE)5.1 Introduction; 5.2 Materials and techniques for nanoscale design; 5.3 Nanoparticles; 5.4 Nanofibers and nanotubes; 5.5 Nanopatterns; 5.6 Drug-delivery systems; 5.7 Nanocomposites; 5.8 Nanogels and injectable systems; 5.9 Surface functionalization and templating; 5.10 Conclusions and future trends; 5.11 Acknowledgement; 5.12 References; 6: Characterisation of cells on biomaterial surfaces and tissue-engineered constructs using microscopy techniques; 6.1 Introduction  
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## Sommario/riassunto

Tissue engineering using ceramics and polymers continues to be an area of strong growth within the scientific community. This second edition comprehensively reviews the latest advances in this area with regard to chapters from the first volume. Chapters in part one provides readers with general information on the materials. Part two looks at the processing, characterisation and modeling of polymers and ceramics. The final set of chapters review the latest research and advances in tissue and organ regeneration using ceramics and polymers. This second edition comprehensively exami

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