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Designed Scaffolds; 5. Discussion; References; CHAPTER 5 Engineered Ca-Si Based Ceramics for Skeletaltissue Reconstruction; 1. Introduction; 2. Ca-Si Based Bioactive Glass and Glass-Ceramics; 3. Ca-Si Based Binary Oxide System Bioactive Ceramics; 4. Ca-Si-Mg Bioactive Ceramics; 5. Future Trends. References; CHAPTER 6 Calcium Phosphate-Based Materials for Boneregenerative Medicine; 1. Introduction

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Sommario/riassunto

The aim of ""Biomaterials for Bone Regenerative Medicine"" is to review extensively the latest developments in Biomaterials and their application to bone regeneration in vivo. Indeed, research on biomaterials and their novel applications is essential because of the health issues related to the aging population. A wide range of worldwide investigations is being undertaken by eminent scholars in order to develop further innovative materials for next-generation applications. In future, it is expected that a tissue engineering approach, associating novel biomaterials with stem cells, will be avail

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Sommario/riassunto	The Method of Lines (MOL) is a versatile approach to obtaining numerical solutions to partial differential equations (PDEs) as they appear in dynamic and static problems. This method, popular in science and engineering, essentially reduces PDEs to a set of ordinary differential equations that can be integrated using standard numerical integration methods. Its significant advantage is that the analysis algorithms follow the physical wave propagation and are therefore efficient. This is because the fields on the discretisation lines are described by generalised transmission line (GTL) equations.