

Special Issue

Biomaterials for Bone Tissue Regeneration 2020

Message from the Guest Editor

Bone tissue engineering aims to improve bone tissue regeneration through the synergy of cells, signals, and scaffolds. Biomaterials such as polymers, ceramics, metals, and their composites can function as delivery carriers or scaffolds for cells and growth factors. To accelerate normal bone healing, researchers have developed injectable formulations for minimally invasive applications and novel carriers for sustained local delivery of cytokines. Further, in the case of large bone defects, a 3D-printed bone scaffold combined with cells or growth factors can be applied as a bone graft substitute. Therefore, there is a need to advance mechanical properties and biocompatibility for bone biomaterials to promote cell adhesion, growth and differentiation, vascularization, and bone-tissue formation. This Special Issue addresses the properties and applications of novel biomaterials to enhance bone regeneration. Submitted manuscripts may include in vitro and in vivo studies of biomaterials and controlled clinical trials. It is my great pleasure to invite you to submit a manuscript for this Special Issue. Full research articles, short communications, and reviews are all welcome.

Guest Editor

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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