Special Issue

Biomedical Applications of Biodegradable Composites

Message from the Guest Editor

The use of biodegradable composites is increasing in the biomedical space. Composites, by their nature, impart the beneficial properties of the individual components while overcoming their limitations through the synergistic combination of distinctly different materials. However, the potential of biodegradable composites can only be achieved if there is intimate, uninterrupted contact between the reinforcement and matrix phases of the composite and in the case of nanocomposites exfoliation of the nanoparticles. This can, in itself, be difficult to achieve while retaining the biocompatibility of the final construct, as the matrix and reinforcement agent are generally not compatible. Approaches for this can include the following:

Surface treatment
Reactive extrusion
Process optimisation

These composites can be used to overcome shortfalls of traditional materials in a variety of applications such as:

Tissue engineering
Bone repair
Cardiovascular, urinary, and other stents
In-situ controlled release of active pharmaceutical ingredients

Guest Editor

Dr. Declan Devine

Material Research Institute, Athlone Institute of Technology, Dublin Road, Athlone, Co. Westmeath, Ireland

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

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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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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