Special Issue

Novel Ceramic Composite Biomaterials Used in the Orthopedic Field and Interest of the National Registers in Total Joint Arthroplasties

Message from the Guest Editors

Joint replacement surgeries have changed the quality of life for a lot of patients suffering from advanced degenerative joint disease. Ceramics have been used as an alternative to metal-on-polyethylene for hip and knee arthroplasty since the 1970s. In the field of arthroplasty surgery, we have individuated two possible subjects of investigation, which have, however, some connections: the evolution of the ceramic bearing in joint replacement up to the development of new composites and the rule of the national registers as an important resource for the quality of the implanted medical devices and implant surveillance. The aim of this Special Issue is therefore twofold. In the first part of the journal, we resume the different steps of ceramic bearing, which have allowed the development of new composites used for hips, knees and other joints. In the second part of the issue, we intend to feature a critical contribution on the improvement of the data, in order to better understand the outcomes of joint replacement.

Guest Editors

Dr. Domenico Tigani

Director of Orthopaedics Department Maggiore Hospital, Largo Nigrisoli 2, 40100 Bologna, Italy

Prof. Dr. Saverio Affatato

Laboratorio di Tecnologia Medica, IRCCS – Istituto Ortopedico Rizzoli, Via di Barbiano 1/10, 40136 Bologna, Italy

Deadline for manuscript submissions

closed (31 March 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/50580

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

mdpi.com/journal/materials

Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

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.

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

MDPI