materials

an Open Access Journal by MDPI

IMPACT FACTOR 3.4

Indexed in: PubMed

CITESCORE 5.2

Articular Cartilage Replacement Materials

Guest Editors:

Dr. Ana Paula Serro

Dr. Celio G. Figueiredo-Pina

Dr. Ana Catarina Branco

Deadline for manuscript submissions:
20 June 2024

Message from the Guest Editors

Dear Colleagues,

Articular cartilaginous tissue damages caused by trauma and various pathologies can induce the development of osteoarthritis. The prevalence of this disease has grown significantly with an increase in life expectancy and obesity. To overcome this problem, there are currently several approaches, from physiotherapy treatments and medication, to alleviate symptoms associated with the replacement of the damaged tissue, depending on its state. In a more invasive approach, the natural joint is completely removed and replaced with artificial materials (e.g. chrome–cobalt alloys, stainless steel, titanium alloys, ultrahigh-molecular-weight polyethylene, alumina, and delta ceramics). In this case, the area of damaged cartilage is replaced with natural cartilage from the patient or donor, or with an artificial material (usually a hydrogel due to its similarity with the cartilage). Reconstruction of natural tissue has also been attempted using the most varied scaffold structures. This Special Issue therefore aims to collate recent research work related to the development and performance of materials used for replacing natural articular cartilage.

materials

IMPACT FACTOR 3.4 | Indexed in: PubMed | CITESCORE 5.2

an Open Access Journal by MDPI

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

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.

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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
𝕏@Materials_Mdpi