Special Issue

4th Dimensional Additive Biofabrication:- Crafting Bio-Functionality from Biomaterials, Cell Biology and Biofabrication Technologies

Message from the Guest Editor

Recent advances in additive biofabrication present new opportunities to create structures that can reproduce functional components of failing tissue/organ systems. These synthetic tissue constructs (STCs) require balanced integration of scaffold and functional materials, fabrication processes, and biomolecular and cellular components to reproduce desired functionality in the engineered product.

In particular, translation of STCs to clinical outcomes requires transition of cellular, biomaterial and/or biofabrication processing from two-dimensional systems to three-dimensional systems in which structural and functional elements are more reflective of the native (in vivo) tissue systems for which the STCs are being constructed.

This Special Edition of Materials deals with key aspects of additive biofabrication technologies that facilitate engineering of multimodal, multimaterial and multifunctional STCs towards multi-order complex "synthetic" biofunctionality of enhanced compliance with native tissue function.

Guest Editor

Prof. Dr. Robert Michail Ivan Kapsa
University of Wollongong, Innovation Campus, Wollongong, Australia

Deadline for manuscript submissions

closed (31 May 2019)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/15196

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

MDPI

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)