

## 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.

---

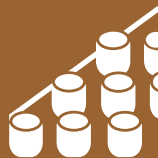
### Guest Editor

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](https://mdpi.com/si/15196)

*Materials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[materials@mdpi.com](mailto:materials@mdpi.com)

[mdpi.com/journal/  
materials](https://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](https://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)