



*materials*



an Open Access Journal by MDPI

## Surface Topography and Design of Scaffolds and Implant Biomaterials for Tissue Engineering Applications

Guest Editors:

**Dr. Anthi Ranella**

Institute of Electronic Structure and Laser, FORTH, Heraklio, Greece

**Dr. Phaneë Manganas**

Ultrafast Laser Micro- and Nano-Processing (ULMNP) Group, IESL-FORTH, Heraklion, Greece

Deadline for manuscript submissions:

**closed (20 May 2022)**

### Message from the Guest Editors

This Special Issue on “Surface Topography and Design of Scaffolds and Implant Biomaterials for Tissue Engineering Applications” will address advances in tissue engineering and biomaterials science, including fabrication technologies, modeling of the fabricated constructs, and hypothesis-driven design of biomaterials and models for implant manufacturing. The emphasis of this issue is on the relationship between biomaterials structure and function, the effect of surface topography on cell responses, as well as the interaction of implant/scaffold surface energy with cell/tissue functionality and regeneration. Original manuscripts are also solicited on biomaterial surface structure in relation to biocompatibility, protein adsorption, and/or antimicrobial properties. Articles and reviews dealing with the topography-, chemistry- and surface energy-related mechanobiological mechanisms, the design and fabrication of implants/scaffolds with defined chemistry and topographical patterns at the micro- and nanoscale, and the study of the underlying effects of physicochemical cues on cell survival, adhesion, proliferation, migration, and differentiation are also very welcome.



[mdpi.com/si/37905](https://mdpi.com/si/37905)

**Special** issue



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

## Contact Us

Materials Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)