Special Issue

Materials and Modelling of Implantable Biomedical Devices

Message from the Guest Editors

The study and modeling of implantable devices imply more complex analysis considerations than others referring to other types of conventional engineering systems. In fact, placing an implant in contact with living tissue through an interface introduces some unpredictability in its biomechanical and biological behavior. Although there have been significant scientific advances in the study of implantable systems, several problems continue to be recorded, especially those related to fixation, which is important in load transfer mechanisms because they precede their early failure. Thus, the design, materials and new emerging technologies that can be applied in the development of implantable biosystems must be modeled and studied, aiming for better and more adequate surgical procedures. There is potential in the development of new concepts, including artificial intelligence, which will allow, in the near future, to have intelligent implantable systems. As guest editors, we propose that you submit your research concerning the analysis of biomaterials and numerical and experimental modeling of implantable biomedical systems.

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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.

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