Special Issue

Biocompatible and Bioactive Materials for Medical Applications

Message from the Guest Editors

Biomaterials have been used for thousands of years to repair and substitute damaged tissues. However, it is just in the last few decades that the progress in materials science and the continuously improved knowledge on the human body's biology and physiology have allowed us to tackle biologically active materials. Loading a material with biologically active inorganic or organic compounds, drugs, and biological molecules is a very promising strategy to achieve the time-modulated simulation of cells through on-demand and local release. This Special Issue is set to highlight the newest advances and research on third- and fourth-generation biomaterials, including, but not limited to, metals, polymers, bioceramics and glasses, composites, drug-loaded nanomaterials, surface modifications and coatings, and strategies to improve implant biocompatibility. Novel manufacturing techniques, advanced surface characterizations, and biological in vitro validation approaches for the assessment of the in vivo performance of biomaterials are also of great value regarding the discussed topic.

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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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