

Special Issue

Microstructural Design, Properties and Biomedical Applications of Alloys

Message from the Guest Editors

Biomaterials are used for diagnosing, treating, repairing or replacing damaged tissues and further enhancing the function of organisms, thus improving the quality of life of the patient. Bone implant materials are an important part of biomedical materials, and about 70% - 80% of implants are made of biomedical alloys. The most representative biomedical alloys are stainless steels, cobalt (Co)-chromium (Cr) alloys, and titanium (Ti) and its alloys for their applications in artificial hip joints, bone plates, spinal fixation rods, cardiovascular applications (stents), catheters, MRI, dental applications. These representative biomedical alloys can be processed via conventional melting and alloying as well as 3D additive manufacturing. The articles presented in this Special Issue will cover various topics, ranging from but not limited to the microstructural design of alloys, their processing, detailed characterization, mechanical properties, corrosion resistance, and biocompatibility and functionality. We invite you to contribute to this Special Issue by submitting papers on your best research activities.

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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.

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