

Special Issue

Synthesis and Applications of Novel Dental Implant Materials

Message from the Guest Editors

The increase in dental implantology and advances in technology have spearheaded new research into titanium, new metal alloys with low elastic modulus values, new alloys with improved osseointegration or bactericidal capacity, ceramics, composites, and polymers, in addition to surface modifications to increase the long-term success of such materials. In addition, new manufacturing technologies, sintering, lasers, new machining methods, etc., have allowed us to obtain dental implants with better mechanical characteristics, more suitable topographies, improved biological behaviors and with properties that prevent bacterial colonization. Furthermore, such advancements have been crucial in achieving the design of materials that are more biomimetic of bone and soft tissues.

Notable examples of recent advances in materials science, in addition to the advent of new materials with improved properties, also include bioactive materials, osteoinductive and osteoconductive materials, as well as biofunctionalized implants with organic molecules, proteins or peptides anchored on the implant surface.

Guest Editors

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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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