Special Issue

Ceramic Dental Implants: Concept, Fabrication, Mechanical and Biological Properties

Message from the Guest Editors

The global dental implants market is expected to reach $5.9 billion by 2028. Currently, zirconia materials are a particular focus of the most influential dental implant companies around the world, which are producing zirconia dental implants. In comparison with titanium alloy implants, zirconia dental implants are better at avoiding bacterial biofilm accumulation and do not have the drawbacks of corrosion and allergic reactions, and further provide aesthetic value. However, the mechanical properties mismatch between zirconia and jawbone can highlight the typical problems of bone–implant contact and jaw osteonecrosis. Promising solutions to minimize these effects could improve antibacterial self-defense conditions and avoid future peri-implantitis. Moreover, 3D-printing techniques are gaining interest in association with ceramic dental implants designed as tailored surfaces and structural solutions. According to the potential of ceramics in dental applications, the present Special Issue serves to analyze comprehensive solutions in dental ceramics, mainly focused on zirconia dental implants or ceramic composites solutions.

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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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