



Synthesis and Applications of Novel Dental Implant Materials

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Deadline for manuscript
submissions:

closed (30 November 2022)

Message from the Guest Editors

Dear Colleagues,

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.

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Message from the Editor-in-Chief

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