

Special Issue

Calcium Phosphate and Bioglass Materials for Bone Implant Applications

Message from the Guest Editors

At present, many research labs focus their works on improving the osseointegration of bone implants by modifying the surface of prosthetic alloys with bioactive coatings made of calcium phosphate or bioglass. These coatings support the bone cells' growth at the surface of the implant, promoting the formation of an intimate link with the surrounding bone tissues. Several methods can be used to synthesize bioactive coatings on prosthetic alloys such as plasma spraying, magnetron sputtering, pulsed laser-deposition, electrophoretic deposition or electrodeposition. Particularly, the low-temperature processes can be used to add organic components (polymers, proteins, drugs, etc.) inside the prosthetic coatings in order to enhance the biological and mechanical properties of the biomaterials. The topics of interest include but are not limited to:

- Calcium phosphate coatings for bone implant applications;
- Bioglass coatings for bone implant applications;
- Functionalization of biomaterials;
- Bone implants with enhanced biological properties;
- Bone implants with enhanced mechanical properties.

Guest Editors

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About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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