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Advanced Biomaterials and Coatings

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Message from the Guest Editors

Dear Colleagues,

The ageing of the worldwide population requires the continuous development of advanced biomaterials and coatings by academic and industrial research. Inside the body, the implanted materials need specific biological, chemical, and mechanical properties for a good interaction with the surrounding tissues. Specifically, orthopaedic and dental surgeries need bone implants with enhanced properties and an extended lifespan. To reach this objective, 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 bone cell 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.
In that framework, this Special Issue aims to present the latest developments in this field.

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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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