

Special Issue

Synthetic and Biological-Derived Hydroxyapatite Implant Coatings

Message from the Guest Editors

HA is a well-known bioceramic which possesses a close chemical and structural resemblance to the mineral composition of bones and teeth of vertebrates. Despite their favorable bone regeneration properties, HA ceramics are very brittle, and this restricts their usage in high load-bearing applications. To overcome this drawback, HA can be applied as a coating on either metallic or polymeric implants, aiming to significantly improve the implant's overall performance by harmoniously combining the excellent bioactivity of the ceramic with the mechanical advantages of the substrate implants. In particular, the topics of interest of this Special Issue include, but are not limited to:

Synthetic and biological-derived HA coatings for orthopedic and dental implants;

Drug delivery;

Composite HA-based coatings;

Doping of synthetic and biological-derived HA coatings;

Alternative methods for the deposition of synthetic and biological-derived HA coatings;

Biofunctional assessment of synthetic and biological-derived HA coatings.

Guest Editors

Dr. Liviu Duta

National Institute for Laser, Plasma and Radiation Physics, RO-077125 Magurele, Romania

Prof. Dr. Faik Nüzhet Oktar

Marmara University, Faculty of Engineering, Bioengineering Department, Istanbul, Turkey; Nanotechnology and Biomaterial Research and Implementation Centre, Istanbul, Turkey

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
coatings@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

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