

Glass/Ceramic Coatings for Biomaterials and Biomedical Applications

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Message from the Guest Editor

Dear Colleagues,

Biomaterials have revolutionized the field of healthcare and opened the path to personalized treatment and therapeutic methods never thought of before their invention. This aim of this Special Issue is to give a concise overview of current research on the development, testing, and use of glass/ceramic coatings on various substrates for biomedical applications. It will cover the following topics:

- recent developments in bioactive and hierarchical coatings on 3D porous scaffolds, joint prostheses, metallic substrates for orthopedic fixation, meshes and sutures for wound healing, ocular implants, and percutaneous devices;
- processes for the preparation of bioactive glass/ceramic coatings, including but not limited to additive manufacturing, physical vapor deposition (PVD), chemical vapor deposition (CVD), plasma-enhanced chemical vapor deposition (PE-CVD), and sol-gel;
- understanding the degradation mechanisms of bioactive coatings both in vitro and in vivo;
- computer modeling and simulations to predict coating properties and performance in contact with living tissues and in simulated environments.



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Guest Editor

Special Issue

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Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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