

Special Issue

Next-Generation Biomaterials and Digital Innovations for Maxillofacial Reconstruction and Regeneration

Message from the Guest Editors

Advances in maxillofacial biomaterials and digital technologies are rapidly transforming clinical practice in oral and maxillofacial surgery. This Special Issue focuses on the new generation of materials, biologics, and technology-integrated solutions that are reshaping reconstruction, regeneration, and functional rehabilitation in the craniofacial region. The goal is to highlight breakthroughs that enhance predictability, safety, and long-term outcomes in both hard and soft tissue management. This issue encompasses innovations across a wide spectrum of applications, including but not limited to, the following:

- Next-generation materials for maxillofacial reconstruction;
- Implantable devices optimized for craniofacial bone biology;
- Biologic approaches and growth factor-integrated systems;
- Soft-tissue fillers designed specifically for facial esthetics and functional restoration;
- Digital navigation systems and augmented-reality-assisted surgical workflows;
- Robotics and automation in maxillofacial surgery;
- Nanotechnology-based enhancements for osseointegration and wound healing;
- Smart materials incorporating sensors, controlled-release systems, or bio-responsive behaviors.

Guest Editors

Prof. Dr. Byoung-Eun Yang

Dr. Soo-Hwan Byun

Dr. Sang-Yoon Park

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Journal of Functional Biomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jfb@mdpi.com

mdpi.com/journal/jfb





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About the Journal

Message from the Editor-in-Chief

The biomaterials field is one of the largest and fastest growing research areas both in the scientific community and in the industrial one. Biomaterials are the result of collaborations between different disciplines: chemistry, medicine, pharmacology, engineering and biology. The objective of this collaboration is to lead to the implementation of new devices to restore form and human body functions. The mission of the *Journal of Functional Biomaterials (JFB)* is to focus attention on physico-chemical characteristics and their importance in the interactions between biomaterials and living tissues. *JFB* seeks to publish studies on the preparation, performance and use of biomaterials in biomedical devices, as well as regarding their behavior in physiological environments. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama

School of Engineering and Materials Science, Queen Mary University of London, London, UK

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