



Functional Biomaterials and Biomaterial Composites with Antimicrobial Properties

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Message from the Guest Editor

This Special Issue advocates the development of functional biomaterials with antimicrobial properties as the prevalence of antibiotic-resistant pathogens is a serious concern. The subject will cover the potential uses of polymers, copolymers, polymer composites with nanoparticles, and complexes of polymers and natural products. Natural products can stem from plants (e.g., terpenes, polyphenols with low molecular weight, diferuloylmethane (curcumin), essential oils, etc.), animals (arenicins), a group of peptides, chitosan and its derivatives, seroins (low molecular weight proteins produced by *Bombyx mori*), and microorganisms (e.g., aminoglycosides). The topics of interest also include applications of functional biomaterials in medicine, health care, water treatment, and food packaging. The Special Issue also covers the potential use of nanocarriers to improve their pharmacokinetics and reduce toxicity owing to the controlled release of therapeutic agents at the target site.

Keywords

- antimicrobial
- antibiotics
- polymers
- polymer composites
- natural products
- biomaterials
- nano particles





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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.

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