Special Issue

Biofilms and Antimicrobials for Biomedical Applications

Message from the Guest Editors

Biofilms remain notoriously difficult to eradicate due to their complex architectures and protective extracellular polymeric substances (EPSs), which can shield microorganisms from conventional therapeutic approaches. This Special Issue aims to spotlight innovative research across materials science, microbiology, and biomedical applications, with a strong emphasis on novel strategies to overcome the challenges posed by biofilm-associated infections. We encourage submissions that explore how novel compound design, advanced drug delivery methods, nanoscale engineering, and integrated biotechnological approaches can direct microbial behavior, enhance antibiotic efficacy, and disrupt biofilm formation.

By integrating perspectives on nanotechnology, drug discovery, microbiology, and biomedical engineering, this Special Issue seeks to foster a deeper understanding of biofilm biology and catalyze the development of next-generation solutions. Ultimately, the insights gained will guide clinical practice toward more effective biofilm prevention and treatment strategies.

Guest Editors

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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.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama
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