Special Issue

Advanced Nanomaterials for Biosensing Applications

Message from the Guest Editors

The field of nanotechnology has ushered in a new era of innovation with the advent of sophisticated materials such as goldene, MXene family, Borophene, multifunctional nanogels, quantum dots, piezoelectric and triboelectric materials, DNA origami, covalent organic frameworks, metal-organic frameworks, nanozymes, porous nnaomaterials, etc.
These emergence of these nanomaterial based biosensors signifies a paradigm shift, offering faster response time, multiplexing capabilities, miniaturization, unparalleled sensitivity, selectivity, and accuracy in (bio)analyte detection. In electrochemical transducers, nanomaterials serves as an immobilization matrix, facilitating enhanced loading of biological elements such as aptamers, enzymes, antibodies, nucleic acids) owing to their unique surface functionalization capabilities/properties and higher surface-to-volume ratio.

In light of these advancements, this Special Issue aims to to showcase recent breakthrough in nanomateraials based sensing platforms, fabrication techniques, sensing methodologies for detecting different biomolecules, (bio) analytes, and microorganisms.

Guest Editors

Dr. Ashish Kalkal

Nanostructured System Laboratory, University College London, London, UK

Dr. Sumit Kumar

Department of Research & Innovations, Division of Research & Development, Lovely Professional University, Punjab, India

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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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