Special Issue

Recent Developments in Biomaterials at the Nanoscale: Synthesis, Characterization and Applications

Message from the Guest Editors

Biomaterials (natural or synthetic) at the nanoscale refer to materials that are designed and engineered to interact with biological systems at the nanometer scale. The nanoscale dimension of these materials enables them to interact with biological molecules, cells, and tissues in unique ways, often leading to enhanced performance and capabilities compared to bulk materials. These materials are specifically tailored to have properties and functionalities that make them suitable for various applications in medicine, biology, biophysics, chemistry and materials science. Significant applications are associated with the synthesis and characterization of biomaterials for biomedical purposes, drug delivery and tissue engineering. This Special Issue welcomes contributions in the form of full articles, short communications, or review articles on new results related to the following:

- Characterization and imaging of biological systems and biomaterials at the nanoscale using advanced techniques such as atomic force microscopy, transmission electron microscopy, and scanning probe microscopy;
- Disease diagnosis and innovative therapies;
- Drug delivery;
- Tissue engineering.

Guest Editors

Dr. Stylianos Vasileios Kontomaris

- 1. Faculty of Engineering and Architecture, Metropolitan College, 15125 Athens. Greece
- 2. BioNanoTec LTD, 2043 Nicosia, Cyprus

Dr. Andreas Stylianou

School of Sciences, European University Cyprus, Nicosia, Cyprus

Deadline for manuscript submissions

closed (20 February 2025)



International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/183230

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

