

## Special Issue

# Chemical and Biotechnological Strategies to Tailor the Properties of Biomaterials

### Message from the Guest Editors

Biomaterials play a critical role in modern medicine, particularly in applications such as tissue engineering, regenerative medicine, drug delivery, and medical implants. The ability to tailor the properties of biomaterials to meet specific biomedical needs is key to advancing these fields. This SI aims to bring together cutting-edge research and reviews on innovative approaches for modifying biomaterials to enhance their properties for diverse biomedical applications. Emphasizing both chemical and biotechnological methods, this SI will cover topics such as the functionalization of biomaterials for improved biocompatibility, mechanical properties, and controlled degradation rates, as well as the design of stimuli-responsive, nanostructured, and hybrid biomaterials. It will explore sustainable and green chemistry approaches, advanced characterization techniques, and translational challenges in clinical settings. The goal is to provide a comprehensive overview of the latest advancements in biomaterial modification, bridging the gap between fundamental science and practical applications in drug delivery, tissue engineering, and regenerative medicine.

### Guest Editors

Dr. Eduardo García-Junceda

Departamento de Química Bio-Orgánica, Instituto de Química Orgánica General, Consejo Superior de Investigaciones Científicas, 28006 Madrid, Spain

Dr. Julia Revuelta

Departamento de Química Bio-Orgánica, Instituto de Química Orgánica General (IQOG-CSIC), CSIC, Juan de la Cierva 3, 28006 Madrid, Spain

### Deadline for manuscript submissions

20 November 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/219577](https://mdpi.com/si/219577)

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

[mdpi.com/journal/  
ijms](https://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



[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)



## About the Journal

### 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)