

Special Issue

Synthesis, Properties and Applications of Alloy Materials

Message from the Guest Editors

Metallic materials or alloys have been studied and continuously developed since the iron age for their use in various kinds of applications, such as structural, electrical, magnetic, thermal and biomedical applications. Fracture toughness, strength, ductility, thermal conductivity, thermal stability, corrosion resistance, electrical conductivity, magnetic coercivity, and magnetic hysteresis are prominent examples of alloy properties, which are essential for various kinds of applications. While these properties are intimately connected to the alloys' internal structure, the structure in turn is a result of their synthesis and processing, including casting, sintering, additive manufacturing, etc. In this Special Issue, we invite articles that focus on the processing–structure–property relationships in alloys for their applications in various sectors, such as transport, energy and biomedical sectors. The articles will cover various topics ranging from, but not limited to, alloy synthesis, processing routes, microstructure, phase transformation, detailed characterization, and their physical and mechanical properties.

Guest Editors

Dr. Vishal Soni

Department of Materials Science and Engineering, University of North Texas, Denton, TX 76203, USA

Dr. Mayur Pole

Department of Materials Science and Engineering, University of North Texas, Denton, TX 76203, USA

Deadline for manuscript submissions

20 January 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 8.1
Indexed in PubMed



mdpi.com/si/163224

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

mdpi.com/journal/

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





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 8.1
Indexed in PubMed



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

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 (Inorganic Chemistry)