

Special Issue

Application and Molecular Mechanisms of Microwaves for Materials Processing

Message from the Guest Editor

The main aim of the Special Issue "Application and Molecular Mechanisms of Microwaves for Materials Processing" is to promote new theoretical, experimental, and computational research as well as new designs and developments of devices used to process, characterize, or develop new materials using a microwave field. The main topics of this Special Issue are: using microwaves for molecular material synthesis; microwave-induced effects on the molecular structure of materials; microwave-related physical chemistry and chemical physics; characteristics of plasmas created by microwave radiation; processing, characterization, or synthesis of materials using a microwave field. This Special Issue also focuses on employing advanced nanomaterials characterization techniques such as terahertz time-domain spectroscopy (THz-TDS) or other microwave characterization techniques, IR-VIS-UV optical emission spectroscopy (OES), photoacoustic spectroscopy (PAS), FT-IR or Raman spectroscopy, TEM, SEM, XRD, and XPS to understand the interaction between microwaves and matter.

Guest Editor

Dr. Valentin Craciun

National Institute for Lasers, Plasma and Radiation Physics, RO-077125 Magurele, Ilfov, Romania

Deadline for manuscript submissions

30 August 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/233970

*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](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)