

## Special Issue

# Molecular Design, Synthesis, and Characterization of Photocatalytic Materials

### Message from the Guest Editors

Sustainable development urges us to focus on the design and engineering of materials that are active under solar light illumination. Photocatalytic activity is highly dependent on the intrinsic electronic and structural properties of photocatalysts, such as the shape, surface area, size of the particles, and exposed facets. The electronic properties can be modified by the interaction of an organic molecule/dye with the photocatalyst. At the same time, the structural properties can be tuned by synthesis methods, for instance using organic molecules and polymers to create a porous structure. In this Special Issue, we aim to explore the impact of the electronic and structural properties of photocatalysts on the efficiency of these materials in solar-driven processes. The issue focuses on research at the molecular and mechanistic levels. Papers dealing with energy conversion and air/water decontamination are welcome. We invite researchers working in applied and basic sciences to submit their original works, short communications, and review articles to contribute to this Special Issue.

### Guest Editors

Dr. Taymaz Tabari

Faculty of Chemistry, Jagiellonian University, ul. Gronostajowa 2, 30-387 Kraków, Poland

Dr. Przemysław Labuz

Faculty of Chemistry, Jagiellonian University, ul. Gronostajowa 2, 30-387 Kraków, Poland

### Deadline for manuscript submissions

closed (30 April 2024)



## International Journal of Molecular Sciences

an Open Access Journal  
by MDPI

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/185906](https://mdpi.com/si/185906)

*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)