

Special Issue

Biomedical Applications of Infrared and Raman Spectroscopy

Message from the Guest Editors

Infrared and Raman spectroscopy have been gaining interest as tools to address complex problems in biomedicine. The basis for this is that both infrared and Raman techniques are capable of providing particulars of the morphology and chemical composition of cells, tissues, and other biomaterials, in a fast non-destructive way, but are also able to scrutinize fine details of the structures adopted by their constituting molecules. Since diseases and other pathological anomalies lead to chemical and structural changes at the molecular level, vibrational spectra can be used as sensitive phenotypic markers of the diseases. At present, with the handiness of high-throughput and sensitive instruments for Raman and infrared microspectroscopic imaging, reliable fiber-optical probes for in vivo applications, and powerful analytical methods based on multivariate analysis, all conditions exist for infrared and Raman spectroscopy to gain prominence in the biomedical field. Research articles on both technical developments and applications of infrared and Raman spectroscopy to biomedical problems are welcome, as are review articles and perspectives from experts in the field.

Guest Editors

Prof. Dr. Rui Fausto

Department of Chemistry, Coimbra Chemistry Center (CQC-IMS),
University of Coimbra, 3004-535 Coimbra, Portugal

Prof. Dr. Gulce Ogruc Ildiz

1. Department of Chemistry, Coimbra Chemistry Center, University of
Coimbra, Coimbra, Portugal
2. Faculty of Sciences & Letters, Department of Physics, Istanbul Kultur
University, Istanbul, Turkey

Deadline for manuscript submissions

closed (15 March 2021)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/38087

Molecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
molecules@mdpi.com

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





Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).