Special Issue

Raman Spectroscopy and Machine Learning in Human Disease

Message from the Guest Editor

Raman spectroscopy (RS) can provide an information on the chemical composition of tested samples at the molecular level and help to track even the smallest changes in the chemical composition of tested tissues and biofluids. Currently, advanced machine learning techniques pave the way for RS to overcome the described problems and become a routinely used approach in clinical practice. This Special Issue of the International Journal of Molecular Sciences focuses on the molecular origin of Raman spectra and RS applications in molecular medicine. Translational studies of RS to real clinical fields are welcomed and may include the application of different RS modalities and different approaches of advanced machine learning techniques for the determination of the presence and severity of human diseases. Potential topics of the Special Issue may include (but are not limited to) conventional RS, surface-enhanced RS, and other RS applications, as well as machine learning methods such as principal component analysis, projection on latent structures, neural networks, decision trees, and their numeral modifications.

Guest Editor

Dr. Ivan Bratchenko Department of Laser and Biotechnical Systems, Samara National Research University, Samara 443086, Russia

Deadline for manuscript submissions

closed (30 April 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/170355

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





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





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)