

Special Issue

Molecular Research of Biomedical X-ray Fluorescence Imaging (XFI)

Message from the Guest Editor

The use of different techniques for biomedical imaging purposes has been established over many decades. However, there are still several drawbacks, such as a very limited spatial resolution in PET and the fact that longitudinal studies are hard to realize due to the short half-life times of typical radiotracers. A novel imaging modality which can offer several advantages is X-ray fluorescence imaging (XFI), which uses a scanning X-ray pencil beam to excite characteristic X-ray fluorescence photons. XFI offers both a high sensitivity and a high spatial resolution at the same time. XFI-measurements can already be conducted from the single-cell level up to full-body. XFI allows for multiplexing or multi-tracking, respectively. Key applications could be pharmacokinetics or immune cell tracking. With this special issue, we hope to make this promising imaging modality even more compelling. We encourage the submission of articles reporting new applications of XFI or new strategies for the further development of XFI technology, as well as manuscripts focusing on translating this modality into new medical applications in the clinic, which are highly welcome.

Guest Editor

Prof. Dr. Florian Grüner

Institut für Experimentalphysik, University of Hamburg I UHH, Hamburg, Germany

Deadline for manuscript submissions

closed (20 February 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/173410

*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)