

Special Issue

Synthesis and Applications of Near-Infrared (NIR) Organic Fluorophores

Message from the Guest Editors

Dear Colleague, Near-infrared (NIR) fluorophores are indispensable for applications in bioimaging, biosensing, and therapeutics. The long wavelengths allow deeper tissue penetration with minimal photon damage, both of which are urgently needed for biological studies and medical treatments. In the clinic, several NIR fluorophores have been approved or under trial by the US Food and Drug Administration (FDA), including indocyanine (ICG) and methylene blue (MB). In biological research, a variety of NIR fluorophores are commercially available and ready for conjugation with biomolecules for targeting purposes. With the imaging technique, NIR fluorophores and probes have been in a great position for high imaging resolution; however, challenges remain to the design and synthesis of optimized structures that meet the need of fast-revolving microscopy technology. To date, many NIR fluorophores have been designed and synthesized with spectacular properties, such as large stock shifts, high quantum yields, biocompatibility, water solubility, two-photon cross-sections, and energy transfer potentials.

Guest Editors

Dr. Yuanwei Zhang

Department of Chemistry and Environmental Science, College of Science and Liberal Arts, New Jersey Institute of Technology, 323 Martin Luther King Jr. Blvd., Newark, NJ 07102, USA

Dr. Ling Huang

College of chemistry, Nankai University, Tianjin, China

Deadline for manuscript submissions

closed (31 August 2023)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 10.3
Indexed in PubMed



mdpi.com/si/112873

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 10.3
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 30th 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 15.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).