



Hyperpolarized Molecules for Applications in Chemistry and Biomedicine

Guest Editor:

Dr. Danila Barskiy

1. GSI Helmholtzzentrum für
Schwerionenforschung,
Helmholtz-Institut Mainz, 55128
Mainz, Germany
2. Institut für Physik,
Arbeitsgruppe Quanten-, Atom-
und Neutronenphysik
(QUANTUM), Johannes
Gutenberg-Universität Mainz,
55128 Mainz, Germany

Deadline for manuscript
submissions:

closed (30 November 2023)

Message from the Guest Editor

Dear Colleagues,

Nuclear magnetic resonance spectroscopy (NMR) and imaging (MRI) are among the most powerful analytical tools used to study chemical and biochemical transformations. However, one of the main drawbacks of NMR and MRI is their low sensitivity. Hyperpolarization techniques allow enhancing the NMR signals of various molecules by several orders of magnitude, making possible applications that were previously inaccessible, i.e., monitoring metabolism of small molecules *in vivo*.

Researchers working in the field of hyperpolarized NMR/MRI are invited to contribute original research papers or reviews to this Special Issue of *Molecules*, which will report on the chemistry and physics of hyperpolarization formation, improvements in the detection of hyperpolarized molecules, and applications of hyperpolarized NMR/MRI approaches in chemistry and biomedicine.

Dr. Danila Barskiy
Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

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

Message from the Editor-in-Chief

As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th 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 multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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](#), [MEDLINE](#), [PMC](#), [Reaxys](#), [CaPlus / SciFinder](#), [MarinLit](#), [AGRIS](#), and [other databases](#).

Journal Rank: JCR - Q2 (Chemistry, Multidisciplinary) / CiteScore - Q1 (Chemistry (miscellaneous))

Contact Us

Molecules Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/molecules
molecules@mdpi.com
[X@Molecules_MDPI](#)