

Special Issue

Biomedical Applications of Cerium-Doped Materials and Nanoceria

Message from the Guest Editors

The development of new biomaterial-based strategies to accelerate the repair and regeneration processes of human tissues is of utmost importance in tissue engineering approaches. In this regard, cerium-based biomaterials and nanomaterials have recently attracted great attention due to their suitable and highly interesting biological properties, including their anti-oxidant, anti-inflammatory, and antibacterial activities. As a result, there is evidence that the incorporation of cerium oxide nanoparticles (nanoceria) into implantable biomaterials and scaffolds can contribute to improving the healing processes of different hard and soft tissues. This Special Issue will cover the latest advances related to the production, characterization, and potential clinical use of cerium-based biomaterials, including new synthesis methods, tissue-engineering scaffolds and nanoparticles, drug delivery systems, diagnostic labelling and probing, cell-material and tissue-material interactions, advanced therapies (e.g., cancer treatment), and toxicological issues.

Guest Editors

Dr. Francesco Baino

Institute of Materials Physics and Engineering, Department of Applied Science and Technology, Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Turin, Italy

Dr. Saeid Kargozar

School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Deadline for manuscript submissions

closed (30 September 2020)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/24183

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 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).