Special Issue

Near-Infrared Nanomaterials in Biomedical Applications

Message from the Guest Editor

In recent years, there have been significant advancements in near-infrared (NIR) nanomaterials. These nanomaterials, which either absorb or emit NIR light, offer numerous advantages, including deep penetration depth, minimal photodamage, and excellent photophysical properties. These features enhance their potential for various biomedical applications. To date, two primary categories of NIR nanomaterials have been developed: inorganic and organic nanomaterials. With precise and controllable synthetic techniques, the optical properties and surface characteristics of these nanomaterials can be tailored to meet specific requirements. For example, NIR nanomaterials have been utilized in bioimaging applications, such as tumor imaging, lymphatic imaging, and vascular imaging, as well as in therapy and in combined imaging–therapy strategies. Interdisciplinary research focusing on these nanomaterials could foster innovation in precision medicine.

Guest Editor

Dr. Xiaozhen Li

Institute of Flexible Electronics, Northwestern Polytechnical University, Xi'an 710072, China

Deadline for manuscript submissions

20 November 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/237315

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)