Special Issue

Isotopes Labeled Nanoparticles

Message from the Guest Editors

Radionuclides with specific emission properties can be incorporated into nanoparticles (NPs) and used for radionuclide therapy and radio-imaging. The advantage of NPs is their potential for containing several radioactive atoms within a single carrier. NPs can deliver radionuclides using either passive or active targeting strategy. The passive targeting accumulation of NPs takes place in nonspecific ways through enlarged gap junctions in tumor endothelial cells. This type of targeting, which enables macromolecules to selectively accumulate in the tumor tissue, is called enhanced permeation and retention. Target specificity is achieved through hybrid NPs produced by conjugating NPs with tumor-specific biomolecules. Recently, there has been a growing interest in the use of radionuclide-labeled NPs to directly deliver corpuscular radiation to the tumor; thus, such technology using NPs is called nanobrachytherapy. In this perspective, radioactive NPs could represent a promising alternative to current brachytherapy methods with outstanding results compared to conventional brachytherapy.

Guest Editors

Prof. Dr. Aleksander Bilewicz

Institute of Nuclear Chemistry and Technology, Warsaw, Warsaw, Poland

Dr. Penelope Bouziotis

Radiochemical Studies Laboratory, Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety, National Center for Scientific Research "Demokritos, Athens, Greece

Deadline for manuscript submissions

closed (20 March 2021)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/44626

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

mdpi.com/journal/nanomaterials

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/journal/nanomaterials

MDPI

About the Journal

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)