Special Issue

The Effect of Graphene on Cancer

Message from the Guest Editor

Graphene, a two-dimensional carbon nanomaterial with unique physicochemical properties, has been widely explored for biomedical applications, including tumor treatment. Graphene anticancer applications are mainly focused on, but not limited to, analysis of direct interaction with tumor cells and development of drug delivery strategies. Graphene and related materials show direct antitumor effects through different mechanisms, including direct plasma membrane damage and mitochondria destabilization. Moreover, versatile capability to conjugate different active compounds to graphene-related materials makes it a promising nanomaterial for different strategies that affect cancer cell physiology, including cell proliferation, migration, and stimulation of angiogenesis. Due to its two-dimensional structure, graphene can serve as a nanoplatform for active compounds like bioactive peptides, drugs, and receptor ligands. Depending on the size of the flakes, graphene can be effectively taken up into cancer cells or strongly adhere to cell surfaces, having high retention at the place of administration, which makes it promising for the limitation of toxicity for healthy tissues.

Guest Editor

Dr. Mateusz Wierzbicki
Warsaw University of Life Sciences, Warsaw, Poland

Deadline for manuscript submissions

closed (31 December 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/29640

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)