Special Issue

Nanophotonics: Plasmons, Lasers and Photonic Devices

Message from the Guest Editor

Nanophotonics is at the forefront of optical research, enabling precise manipulation of light at the nanoscale through electromagnetic field enhancement. This enhancement is vital for non-classical light emission, which is essential for developing functional nanodevices. Nano-objects and metamaterials improve excitation and emission phenomena, aiding applications in intra-cavity sensing, signal processing, and super-resolution imaging. Additionally, emitting light with specific properties—such as polarization, spin, and orbital angular momentum—opens new avenues in spin–orbit interaction research. Fundamental phenomena are explored as nano-objects support feedback modes, enabling spaser operation and parity–time (PT) symmetric designs, including perfect lasers and coherent absorbers. Active metamaterials seeded with laser dyes enhance light, ensure synchronization, and promote extreme light–matter interactions. This Special Issue invites cutting-edge research and reviews on advancements in nanophotonics, encouraging contributions on theoretical models, experimental studies, and innovative applications to inspire future research directions.

Guest Editor

Dr. Mária Csete

Department of Optics and Quantum Electronics, University of Szeged, H-6720 Szeged, Hungary

Deadline for manuscript submissions

10 February 2026

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/223973

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

mdpi.com/journal/nanomaterials

MDPI

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)