

## Special Issue

# Advanced Nanomaterials in High-Performance Optoelectronic Devices

### Message from the Guest Editors

This Special Issue aims to bring together the latest developments at the interface of nanomaterials design, chiroptical engineering, magneto-optics, and plasmon-enhanced functionalities. We seek to highlight fundamental studies and application-driven research that push the boundaries of optoelectronic performance, catalytic efficiency, and light-spin manipulation. This Special Issue welcomes cutting-edge research in areas including, but not limited to, the following:

- Chiroptical nanostructures and chiral light-matter interactions;
- Perovskite-based materials and 2D nanoplatelets for optoelectronics, photodetectors, and catalysis;
- Magneto-optical nanomaterials and spin-photon coupling;
- Plasmonic enhancement of optical, catalytic, and sensing performance;
- Hybrid nanostructures combining plasmonics, chiroptics, nanoclusters, and perovskites;
- In situ/operando optical and magneto-optical characterization;
- Theory and simulations guiding light-matter interaction in nanostructures;
- Nanomaterial-enabled photodetection, energy conversion, and environmental applications.

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### Guest Editors

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### Deadline for manuscript submissions

30 June 2026



## Nanomaterials

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## 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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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### Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

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