



Optical Nanotechnology for Biomedical Application

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Message from the Guest Editors

The synergy of nanotechnology with photonics, or nanophotonics, has recently attracted considerable attention due to the wide frontier applications in the field of biomedicine. With the unique photophysical and photochemical properties, various optical nanotechnologies have been developed for efficient cancer screening and therapy.

This Special Issue invites contributions in the form of original research articles and review articles. The key topics of this Special Issue include but are not limited to the principles, technologies, devices and systems, such as:

- Optical nanobiosensing technologies, including surface-enhanced Raman spectroscopy, fluorescence, chemiluminescence, luminescence, photoacoustic imaging;
- Optical nanotherapeutic technologies, such as photodynamic therapy, photothermal therapy, photoimmunotherapy and light-triggered drug delivery;
- Synthesis and biomedical applications of photoresponsive nanomaterials and nanoprobes
- Cancer liquid biopsy based on nanophotonic technology;
- Photo-driven nanotheranostics;
- Biomedical applications based on nanophotonic devices.





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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.

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