

## Special Issue

# Next-Generation Photoactive Nanomaterials

### Message from the Guest Editor

We invite you to contribute to this Special Issue focused on the latest advances in light-sensitive engineered nanomaterials, including inorganic and hybrid systems. The aim is to highlight innovative theoretical and experimental results on the synthesis, modification, and characterization of photoactive nanomaterials, as well as their structural and functional properties. Topics include light–material interactions and applications in environmental remediation, energy conversion, fine chemicals, and biomedical fields. Key research areas cover photocatalytic processes in gas and liquid phases for air and water purification, solar-driven reactions for depollution and energy production (e.g.,  $H_2$  generation, solar cells), and studies on reactive oxygen species ( $\cdot OH$ ,  $\cdot O_2$ ,  $H_2O_2$ ,  $^1O_2$ ) formation under UV, visible, and solar irradiation. Additionally, we welcome work on nano-photosensitizers used in light-assisted therapies and antimicrobial applications driven by ROS photogeneration. This Special Issue accepts high-quality original research articles and reviews featuring cutting-edge approaches to photoactive nanomaterials.

### Guest Editor

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### Deadline for manuscript submissions

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## 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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