



## Synthesis and Applications of Nanomaterial-Based Probes for Bio-Imaging

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### Message from the Guest Editors

Nanomaterial-based probes have greatly contributed to bio-imaging in basic life science and clinical research. Bio-imaging is crucial to see what is happening inside the cell and body at the molecular level, leading to an indispensable modality in life sciences and medical sciences. Bio-imaging uses a variety of imaging techniques, such as magnetic resonance (MR), positron emission tomography (PET), ultrasonic imaging, and optical (fluorescence/bioluminescence/Raman), which employ imaging probes to target and detect molecular and cellular dynamics in a living system. In the clinical field, nanomaterial-based bio-imaging plays a crucial role in cancer diagnosis and treatment. To date, bio-imaging has been improved not only by the development of imaging probes, but also by the development of imaging techniques. This Special Issue focusses on recent advances and future prospects in the area of bio-imaging probes and their synthetic techniques. This Issue will contain research communications, papers, and reviews in chemical, biological, and biomedical studies, regarding the synthesis and application of nanomaterial-based probes for bio-imaging.





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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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