Special Issue

Applications of Noble Metal Nanoparticles in Biosensing and Bioimaging

Message from the Guest Editor

In the last few decades, noble metal nanoparticles (NMNs), particularly gold and silver, have been widely utilized in the development of novel chemical/biological sensors and bioimaging applications due to their unique physical and chemical properties. With an improved understanding of these particles and their alloy forms, advances in fabrication and synthesis, and the integration of Al technology, new developments in this field are readily anticipated. This Special Issue focuses on the following aspects of NMNs in biosensing and bioimaging:

- The fabrication and synthesis of new NMNs, hybrid particles, and metal alloys and an understanding of their properties;
- A deeper understanding of how NMN particles and variations interact with targeted chemicals or biomolecules and the resulting signal changes;
- Key issues in sensing or imaging measurements, such as data pre-treatment, reproducibility, repeatability, and replicability
- The integration of artificial intelligence in sensor design, data analysis, and interpretation;
- The development of point-of-care devices and new applications in sensing and bioimaging.

We warmly welcome original articles and review submissions

Guest Editor

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Deadline for manuscript submissions

closed (20 October 2023)



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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 nanometerscale 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

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