Special Issue

Synchrotron-Based Techniques for Advanced Studies of Nanostructured Materials

Message from the Guest Editor

Research on materials using synchrotron-based X-ray techniques is expanding rapidly. This Special Issue will focus on synchrotron-based X-ray techniques for nanostructured materials for a variety of applications, including energy, magnetic, and biological applications, among others. We welcome both review articles and original research manuscripts for this Special Issue. Research areas may include, but are not limited to, the following:

- Synchrotron-based technique characterizations of nanostructured materials;
- Emerging photo-, electro-, and photoelectro-nanocatalysts for converting renewable energy into fuels such as hydrogen, ethane, methanol, and ammonia, among others;
- Secondary batteries and supercapacitors for energy storage;
- Energy saving through the use of efficient nanocatalysts and smart materials;
- Synthesis and characterization of advanced nanoscale materials;
- Defect and surface engineering for novel functional materials;
- Surface and interfacial atomic and electronic structures;
- Physicochemical properties of the surfaces and interfaces of hybrid nanostructures;
- Nanostructured materials for magnetic and biological applications.

Guest Editor

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Deadline for manuscript submissions

closed (31 October 2023)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/158361

Nanomaterials
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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
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