



Investigation of Nanomaterial Properties Using X-ray Probe

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

I am delighted to invite you to contribute your research to a Special Issue focusing on X-ray-based investigations of nano and mesoscale materials.

Nanotechnology developments have focused on "bottom-up" self-assembly, where complex structures grow from molecular-scale components, creating mono-disperse, defect-free crystallites or more complex structures. Scientists from across the globe have been interested in researching novel material platforms. As a result, this effort has revealed new properties of nanoscale organized materials.

We welcome research articles and reviews including the following:

- X-ray diffraction investigations of the microscopic and mesoscopic scale structure of nanomaterials.
- Collective and single-particle excitations in the terahertz dynamic response of materials presenting mesoscale organization.
- Cooperative relaxation phenomena
- Quantum effects and electronic structure in the nanomaterials.
- X-ray imaging of nanomaterials.

Alessandro Cunsolo
Guest Editor





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Editor-in-Chief

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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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