

Special Issue

Advances in Microscopy and Spectroscopy Techniques Applied to Nanomaterials

Message from the Guest Editor

The study of nanomaterials involves more and more powerful techniques to decipher their physical and chemical properties exhibiting new behavior at the nanometer scale. The most widespread examples are fullerenes, nanotubes, one-atom-thick 2D materials and thin nanostructured films on surfaces. In particular, the exploration of these substances has been made possible with great success using microscopy and spectroscopy techniques, the most popular being SEM, TEM, SPM, light-matter interaction probes such as Raman scattering, optical and infrared absorption, luminescence spectroscopy, X-ray photoelectron spectroscopy and many others. The modeling of nanostructures has also undergone a rapid impetus parallel to technical advances, and is crucial to predict and simulate the properties of nanomaterials. This Special Issue is devoted to the advancement of the abovementioned techniques for the investigation of various nanomaterials encompassing quantum dots or nanoparticles, biomaterials, composites, pigments, chalcogenides, carbon allotropes, nanowires, nanotubes and 2D materials for applications in photonics, nanomedicine, environment, energy storage, catalysis and sensors.

Guest Editor

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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.

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