Special Issue

Laser-Matter Interaction for Nanostructuration and Characterization: From Fundamentals to Sensing and Energy Applications

Message from the Guest Editors

Recently, laser technology for nanoscale material synthesis and processing has seen an enormous development. The use of lasers has opened up new possibilities for material nanoprocessing because of a wide variety of nanostructures which can be obtained due to laser–matter interaction phenomena and controlling the laser process parameters. In addition, laser-based nanofabrication approaches can take advantage of local processing down to the micrometer and even sub-micrometer range, minimized thermal damage to the substrate and neighboring regions, non-contact nature, non-planar processing, and the possibility to combine it with other types of processing steps. Furthermore, nanomaterial development was accompanied by nanodevice fabrication, including, at present, the most investigated organic electronics devices, optical sensors, gas sensors, magnetic sensors, and non-enzymatic electrochemical biosensors. For this Special Issue, we invite researchers to submit original research articles, letters, as well as review and prospective view articles on laser-matter interaction for nanostructuration and characterization.

Guest Editors

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Deadline for manuscript submissions

closed (15 March 2024)

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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

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