

Special Issue

Plasma-Enabled Synthesis of Nanostructured Surfaces and Nanoparticles

Message from the Guest Editors

Thin film transistors for microelectronic devices, for example, have been produced thanks to the advances in plasma technology. Also, arc discharge techniques are well suited for production of ultrahard coatings and nanomaterials with extreme properties. In addition, design of flexible electronic devices, sensors, as well as the growth of amorphous or nanocrystalline photovoltaic materials can be assisted by means of magnetized plasmas. Plasma nanoprocessing can also address the optimization of new devices aimed to energy applications such as supercapacitors and catalysis. Besides, ion-enhanced surface modifications by low-temperature plasmas constitute clean, environmental-friendly techniques. Finally, plasma for biomedical applications is a new research line. Surface tailoring with cold atmospheric plasmas is adequate to process nanostructured biomaterials to control adhesion of proteins or cells. The present Special Issue, which is focused on plasma nanosynthesis and processing, welcomes contributions that merge plasma technologies with the multidisciplinary field of nanoscience.

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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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