Special Issue

Nanomanufacturing Using Ion Beam Technology

Message from the Guest Editors

This Special Issue of *Nanomaterials* is dedicated to exploring niche and emerging applications of FIB systems. We invite contributions that highlight innovative uses of FIB technology, such as ion implantation for quantum technologies, material property modification (e.g., phase change and stress), selective etching and deposition for nanoelectronics, ion beam-based nanometrology, and other cutting-edge techniques. Our aim is to showcase the versatility and capabilities of FIB systems, fostering broader adoption across research and industry. We also hope that these contributions will drive further improvements in FIB technology itself, from system upgrades to the development of new capabilities. Leading research groups working on non-conventional FIB applications are especially encouraged to submit their work. We look forward to receiving your contributions, which will provide a comprehensive overview of FIB technology and inspire new research avenues.

Guest Editors

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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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