Special Issue

Radiation Technology in Nanomaterials

Message from the Guest Editors

This Special Issue focuses on 'Radiation Technology in Nanomaterials', delving into the multifaceted realm of radiation sciences, which intersects with nanotechnology. This publication showcases the extensive applications and innovations in manipulating nanomaterials through radiation exposure. This fusion of disciplines merges the intricate principles of radiation physics and chemistry with the intricate domain of nanoscience. By harnessing various forms of radiation, including gamma rays, X-rays, and electron beams, scientists may wield precise control over nanomaterial properties such as size, structure, and composition. Among these methods, gamma radiation stands out as a powerful tool, facilitating the synthesis of nanomaterials, particularly metal nanoparticles. This interdisciplinary landscape is perpetually evolving, exploring novel radiation-based techniques to engineer nanomaterials, diversifying their properties, functionalities, and applications. The synthesis of nanomaterials using radiation-based methods contributes to an expanding array of applications.

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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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