

Special Issue

Functional Coatings with Nanostructures: Synthesis, Characterizations and Applications

Message from the Guest Editors

Coatings are a kind of material with important research value and broad applications which play multifunctional roles (such as anti-corrosion, anti-oxidation, anti-static radiation, high-temperature resistance, good appearance, etc.) on the surface of objects. With the rapid development of science and technology, the functions and properties of traditional coatings struggle to meet the needs of military, medical, construction and other fields. Therefore, it is urgent to develop functional coatings to improve and enhance coating performances. According to previous studies, the performances of coatings have been significantly improved and enhanced by introducing either nanoparticles or nanostructures into the systems, and such coatings have been widely used in anti-corrosion, antifiing, antibacterial, anti-oxidation, superhydrophobic and other fields. This Special Issue aims to cover the latest research in the synthesis, preparation, characterization and application of functional coatings containing nanostructures or nanoparticles. Original research articles and reviews are welcomed.

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.

Editor-in-Chief

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