



Advanced Bioinspired Nanomaterials with Superwettability

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Message from the Guest Editor

Wettability is one of the important physical and chemical properties of solid surfaces, mainly depending on the surface chemical composition and structures. Among them, surfaces with special wettability are particularly attractive, including superhydrophilic surfaces, superhydrophobic surfaces, superoleophilic surfaces, superoleophobic surfaces, and super-slippery surfaces. A variety of microfabrication techniques have been used to prepare superwetting materials, including photolithography, chemical vapor deposition, electrochemical methods, sol-gel methods, electrospinning, self-assembly, 3D printing, etc. The prepared superwetting materials have been applied in anti-liquid wetting, self-cleaning, oil-water separation, lab-on-a-chip, antifouling, anti-corrosion, etc. The realization of more complicated and subtle superwetting surfaces and more practical applications have many opportunities and challenges.

This Special Issue presents developments of different superwetting surfaces, mainly focusing on their classification and design principles, the relationship between different types of superwettabilities, and the emerging applications of artificial superwetting materials.





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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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