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Nanobubbles and Their Applications

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Message from the Guest Editors

The stable existence of nanobubbles/ micropancakes may have significant effects on many important processes such as protein folding, peptide self-assembly, boundary slip, and activities of electrochemical reactions. Also, in recent years, nanobubbles have been widely used in water treatment, aquaculture, agricultural cultivation, health preservation, mineral flotation, and many other fields. However, the fundamental question, why the surface and bulk nanobubbles could exist stably, is still under the way because the paradox of a short lifetime predicted by the Epstein-Plesset theory and the observed long lifetime of nanobubbles in water is not yet been resolved. Moreover, many mechanism of nanobubbles used in various applications, for example, aggregation states in different solutions, biological effects, and interfacial properties, are need further exploitation.

In the present Special Issue, we have invited contributions from leading groups in the field with the aim of giving a balanced view of the current state-of-the-art in this discipline.



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Special Issue



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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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