



Mechanics, Electrical and Optical Properties of Nano-Thin Films

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Message from the Guest Editors

Dear Colleagues,

The integration demand of multifunctional properties in thin films is challenging; for example, the mechanisms that operate during material deformation make stretchability and conductivity fundamentally difficult properties to combine. Thus, innovative solutions enabling the production of unexpected optical, mechanical and electrical functions are required. In this Special Issue we would invite authors to contribute with their innovative contributions on thin films based on nanomaterials that demonstrate electrical and optical tunability under mechanical stress, including self-organization of conductive nanostructures with the strain, and hybrid nanocomposite thin films with recoverable control of the electrical and optical properties by mechanical actuation. Potential methods include but are not limited to layer-by-layer assembly, buckled nanostructures, hybrid nanoarchitectures and controlled disposition of nanoparticles.

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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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