# Special Issue

# Nanoscale Perspectives and Research Frontiers for Perovskite Solar Cells

## Message from the Guest Editor

Examining perovskite solar cells from a nanoscale perspective involves a detailed investigation into the atomic and electronic configuration and nanoscale morphology of the materials, as well as the critical interfaces between various layers within a cell. Moreover, nanoscale research has revealed the potential of perovskite solar cells for flexible and wearable electronics, owing to their lightweight nature and flexibility. State-of-the-art characterization techniques, including scanning probe microscopy and X-ray photoelectron spectroscopy, etc., are being utilized to dive into the morphology, defect distribution, and charge carrier dynamics at the nanoscale. Taken as a whole, these nanoscale approaches provide profound understanding of the mechanisms underpinning perovskite solar cells, thereby steering the development of more efficient and reliable perovskite-based photovoltaic technologies. This Special Issue is focused on overcoming the obstacles faced by perovskite solar cells, ensuring stability and improving reproducibility and performance.

## Guest Editor

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## Deadline for manuscript submissions

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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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