Special Issue

Electrical Conductivity of Nanostructured Materials

Message from the Guest Editor

Electronic transport in nanostructures is an essential part of nanoscience. Understanding its concepts and methods is vital to the successful design of devices at the nanoscale. Over the past few decades, the electrical conductivity of nanostructured materials has been a topic of active experimental and theoretical study and a vast number of results have been published. The present Special Issue of *Nanomaterials* is aimed at presenting the current state-of-the-art research and technological effort aimed at the control of matter and device fabrication at a small spatial scale, including heterojunctions, two-dimensional atomic layers, nanowires, and quantum dots, as well as self-assembled structures such as one-, two,- and three-dimensional nanoparticle arrangements, the understanding of the underlying physics of electronic conductivity of these nanoscale conducting objects, as well as the developing of novel devices based on such nanostructured conducting systems. We invite authors to contribute original research articles and review articles covering the current progress in this discipline.

Guest Editor

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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