Special Issue

Nanomaterials for Energy Storage and Conservation

Message from the Guest Editors

Electrochromic devices (ECDs) have gained significant attention due to their ability to change color or transparency in response to an applied electrical voltage. These devices are commonly built with several key components, including the electrochromic layer, electrodes, ion storage layer and electrolyte layer. Electrochromic devices face challenges in improving switching speed, cycle life, color range, and energy efficiency. Innovations in materials, especially in nanostructuring and hybrid materials, are being pursued to overcome these limitations. Additionally, integration with energy storage technologies, like supercapacitors, is an exciting area of development for creating multifunctional devices. Therefore, it is essential to thoroughly characterize and understand the electrochromic layer, electrodes, and electrolytes during the electrochemical reactions to guide the design of advanced ECDs. Researchers are warmly invited to publish their original research papers or review papers in this Special Issue.

- Electrochromic Layer
- Electrolyte Layer
- Transparent Conductive Layer
- Ion Storage Layer

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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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