Special Issue

Advanced Dielectric Materials for Multifunctional Energy Storage Applications

Message from the Guest Editor

Dielectric materials have emerged as critical components in capacitive energy storage systems due to their high power density, fast response times, and long operational lifespans, and recent advancements in material engineering have enabled the development of novel dielectric materials that go beyond conventional performance metrics, incorporating additional functionalities. This Special Issue focuses on recent developments in novel dielectric systems, with particular emphasis on organic–inorganic hybrid dielectrics and ferroic materials. Organic–inorganic hybrids offer a unique combination of mechanical flexibility, processability, and thermal/electrical performance by integrating the advantages of both organic and inorganic components. Dielectric materials, including ferroelectrics and multiferroics, present promising opportunities for high energy density and tunable functionalities, making them attractive for smart energy storage systems.

- structure–property relationships
- multifunctionality
- interface engineering
- scalable processing methods for next-generation energy storage technologies and their practical integration into devices

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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