Special Issue

Functional Materials Promote Triboelectric Nanogenerator toward High Performance and Multifunction

Message from the Guest Editor

In the past years, triboelectric nanogenerators have been widely studied for their advantages of easy design/manufacturing, small size, and flexibility in energy harvesting and environmental monitoring. However, reaching high performance for practical applications is still a huge challenge, as is integrating multiple functions into a single TENG device, especially for those with different or even opposite requirements in electrical properties. This Special Issue aims to cover the recent research progress of TENGs by presenting, in detail, their incorporation of various functional materials such as magnetic materials, ferroelectric materials, semi-conducitong materials, dielectric materials, and so on. It discusses their key roles in promoting operating principles, integration concepts, and performance enhancement strategies, with a focus on their theoretical innovation, structural simplification, function expansion, system integration, and performance improvement. In the present Special Issue, we welcome contributions from any groups in the field with the aim of giving a balanced view of the current state-of-the-art in this disciplin

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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