Special Issue

High-Performance Materials for Energy Conversion

Message from the Guest Editors

Energy conversion systems are essential for addressing global energy demands and combating climate change, and high-performance materials are at the forefront of improving the efficiency, durability, and cost-effectiveness of these technologies.This Special Issue covers a wide range of materials, including those used in solar cells, fuel cells, batteries, catalytic and thermoelectric devices, and supercapacitors, with an emphasis on their properties, fabrication methods, and performance characteristics. Topics of interest include novel material design strategies, nano-structuring approaches, advanced coatings, and material optimization techniques for energy harvesting and storage systems. Additionally, the Special Issue will highlight the role of advanced manufacturing methods in scaling these materials for practical applications. By showcasing cutting-edge research, this Special Issue seeks to guide the development of next-generation energy conversion materials that are essential for building a sustainable energy future.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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