

Special Issue on  
**Characterization of Energy-Related  
Nanomaterials by Using Scanning  
Analysis Techniques and Methodologies**

WILEY



## CALL FOR PAPERS

Researches regarding the performance improvement for energy storage and conversion devices have received consistent interests to overcome the future energy crisis due to shortage of fossil fuels. A precise characterization of nanomaterials has been the main challenge to enhance the performance of energy-related devices. Advances in the scanning analysis techniques (SEM (Scanning Electron Microscopy), SPM (Scanning Probe Microscopy), STEM (Scanning Transmission Electron Microscopy), etc.) have contributed to the accurate characterization of nanomaterials for energy storage and conversion applications as well as deep understanding of various energy-related nanomaterial properties. It has led to improvements and breakthrough in the performance of energy storage and conversion devices.

The purpose of this special issue is to address the recent progress in the researches of functional nanomaterials by using scanning analysis techniques and methodologies for energy storage and conversion applications including lithium batteries, supercapacitors, photovoltaics, fuel cells, thermoelectrics, and piezoelectrics. Herein, we invite authors to submit their original and high-quality papers or review articles on all aspects of energy-related research which utilizes scanning analysis techniques to characterize nanomaterials and devices for energy storage and conversion applications.

Potential topics include but are not limited to the following:

- Characterization of various nanomaterials and their associated devices for energy storage applications such as lithium secondary batteries and supercapacitors
- Characterization of various nanomaterials and their associated devices for energy conversion applications such as photovoltaics, fuel cells, thermoelectrics, and piezoelectrics
- Advanced scanning analysis techniques and methodologies for energy-related materials and devices
- Performance enhancement in energy storage and conversion devices by tuning nanomaterial properties with scanning analysis techniques

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/scanning/cern/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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