Special Issue

High-Performance and Sustainable Supercapacitors: Current Status and Perspective

Message from the Guest Editors

Supercapacitors, also known as electrochemical capacitors, are highly efficient energy storage devices that possess high power and long cycle life. Currently, the major components of supercapacitors, i.e., electrode materials and electrolytes, cell configuration, as well as the underpinning mechanisms for different subtypes, are under intensive progress and development. With the recent prevailing of the concept of carbon neutrality, the advancement of supercapacitors is at the forefront of a new era. In this Special Issue, we are seeking contributions that further extend the research field of supercapacitors. Topics of interest include, but are not limited to:

- Materials and electrodes for supercapacitors
- Electrolyte engineering for supercapacitors
- Energy storage mechanism of supercapacitors
- Asymmetric supercapacitors
- Metal–ion hybrid supercapacitors
- New supercapacitor systems
- Flexible supercapacitors for wearable energy storage
- Computational simulation and theoretical calculation concerning supercapacitors
- Thermal management of supercapacitor systems
- Perspectives and reviews related to supercapacitors

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