Special Issue

Supercapacitor and Related Materials

Message from the Guest Editor

Supercapacitors store energy via electrolyte ions adsorption or fast surface redox reactions, enabling ultrafast charging/discharging, long lifecycle, and bridging the energy gap between traditional dielectric capacitors and batteries. Nanomaterials offer greatly improved ionic transport and electronic conductivity, which is essential to the electrochemical performances of supercapacitors. Advanced nanomaterials such as carbon-based nanomaterials, graphene, MXene, transition metal chacogenides, metal oxides, conducting polymers, metal–organic frameworks, and covalent organic frameworks have been developed for high-performance supercapacitors. Additionally, prominent progress in supercapacitors has been achieved, specifically in rational design high-voltage window electrolyte, device fabrication methods, and charge storage mechanisms.

Original research papers, reviews, and perspectives related to the scope of the section are warmly welcomed.

Guest Editor

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Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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