

Special Issue

Design and Energy Conversion of Functional Electrode Materials for Multivalent Ion Batteries

Message from the Guest Editor

Supercapacitors and ion batteries have attracted much attention because of their low-cost, simple preparation process, fast charging ability (within seconds), ultra-high-power density, and pollution-free properties. Nevertheless, low energy density is an important factor restricting the application of supercapacitors. It is a feasible method to optimize the surface electronic structure of electrode materials and increase electron transport through the reasonable design of electrode materials. At the same time, among any energy conversion strategies, the electrochemical catalytic decomposition of water is also gaining popularity due to its low energy consumption and lack of pollution. However, due to the slow kinetics of OER and the low electrode life, a larger overpotential is required to drive the reaction. Therefore, it is necessary for electrode materials to achieve energy storage and energy conversion at the same time.

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.

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