Special Issue

High-Performance Supercapacitor

Message from the Guest Editors

The increased concern regarding the depletion of fossil fuels and the emanation of greenhouse gases necessitates the advancements of energy storage devices for the effective utilization of renewable energy sources. In this scenario, high-performance energy storage devices (batteries and supercapacitors) are the best candidates to tackle the present and future energy crises. Although supercapacitors deliver less specific energy than batteries, they are unavoidable in practical applications, especially in hybrid electric vehicles and electronic gadgets. Unprecedented strategies need to be developed to boost the specific energy of supercapacitors. The main focus should be centered on their important components, namely, active electrode materials, separators, and electrolytes. Further, an in-depth understanding of electrode kinetics and the various factors influencing their overall performance is crucial to achieving a higher efficiency of energy storage and its utilization. With this in mind, this Special Issue is designed to compile recent advancements in the field of high-performance supercapacitors for next-generation energy applications.

Guest Editors

Dr. Balaraman Vedhanarayanan
Department of Applied Chemistry and Biotechnology, Chiba University, Chiba City 263-8522, Japan

Dr. K. C. Seetha Lakshmi
Department of Chemistry, Faculty of Science, Chiba University, Chiba City 263-8522, Japan

Deadline for manuscript submissions

closed (25 April 2024)

Batteries

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 6.6

mdpi.com/si/136084

Batteries
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
batteries@mdpi.com

mdpi.com/journal/batteries

Batteries

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 6.6

mdpi.com/journal/batteries

MDPI

About the Journal

Message from the Editor-in-Chief

Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

Editor-in-Chief

Prof. Dr. Karim Zaghib
Department of Chemical and Materials Engineering, Concordia University, Montréal, QC H3G 1M8, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Electrochemistry) / CiteScore - Q1 (Electrical and Electronic Engineering)