Special Issue

Redox Flow Batteries: Recent Advances and Perspectives

Message from the Guest Editors

The widespread adoption of renewable energy sources such as wind and solar power requires safe and efficient large-scale energy storage to smooth out their intermittency. Redox flow batteries (RFBs) represent one of the most promising technologies for this application because of their high safety, flexible design, easy scalability, high energy efficiency, and long lifetime. Over the past few decades, RFBs have witnessed significant development: not only has the performance of conventional RFBs improved considerably, but also a wide range of new battery chemistries/concepts have been proposed. This Special Issue will cover recent advances and perspectives in this particularly attractive technology. Topics of interest include but are not limited to:

- Electrode design;
- Membrane design;
- Electrolyte formulation;
- New redox couples;
- Cell structural design and optimization;
- Modeling and simulation;
- Technoeconomic analysis.

Guest Editors

Dr. Maochun Wu

Department of Mechanical Engineering, The Hong Kong Polytechnic University, Hong Kong, China

Prof. Dr. Haoran Jiang

School of Mechanical Engineering, Tianjin University, Tianjin 300072, China

Deadline for manuscript submissions

closed (30 November 2023)

Batteries

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 6.6

mdpi.com/si/116115

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)