



Quantum Battery Applications

Guest Editor:

Dr. James Quach

Ramsay Fellow, University of
Adelaide, Adelaide, SA 5005,
Australia

Deadline for manuscript
submissions:

closed (30 April 2022)

Message from the Guest Editor

Dear Colleagues,

As the advent of the heat engine required the development of thermodynamics, the quantum technology ecosystem will require the development of quantum thermodynamic theory. One of the insights arising out of this research programme is the notion of a quantum battery (QB). QBs are driven either by quantum entanglement, which reduces the number of traversed states in the Hilbert space compared to (classical) separable states alone or by cooperative behaviour that increases the effective quantum coupling between battery and source. The idea of a QB is a powerful one, therefore it is imperative that we find out whether it is just a theoretical curiosity or a practical quantum technology. This Special Issue invites researchers to submit original research on the potential applications of QBs.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Karim Zaghib

Department of Chemical and
Materials Engineering, Concordia
University, Montréal, QC H3G
1M8, Canada

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.

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 - Q2 (Electrical and Electronic Engineering)

Contact Us

Batteries Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/batteries
batteries@mdpi.com
[X@batteriesmdpi](https://twitter.com/batteriesmdpi)