Special Issue

Battery Management Systems Based on Electrochemical Impedance Spectroscopy

Message from the Guest Editors

Electrochemical Impedance Spectroscopy (EIS) is emerging as a vital tool for enhancing battery management systems (BMSs), offering precise insights into a battery's state of health, charge, and overall performance. This Special Issue aims to explore the integration of EIS within BMS, focusing on cutting-edge research which leverages impedance data for the real-time monitoring, predictive maintenance, and optimization of battery systems. We invite contributions addressing both theoretical and practical aspects, including novel EIS techniques, data interpretation methods, and their application to various battery chemistries, alongside studies that bridge the gap between laboratory-scale experiments and real-world applications, as well as those exploring the challenges of implementing EIS in commercial BMSs. As this Special Issue seeks to advance the understanding and application of EIS in BMSs, providing a platform for researchers to present innovative solutions which enhance battery longevity, safety, and efficiency, authors are encouraged to submit original research, review articles, and case studies that contribute to this rapidly evolving field.

Guest Editors

Dr. Sung Yeul Park
Department of Electrical and Computer Engineering, University of Connecticut, Storrs, CT, USA

Dr. Balakumar Balasingam
Department of Electrical & Computer Engineering, University of Windsor, 401 Sunset Avenue, Windsor, ON N9B 3P4, Canada

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

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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

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