Special Issue

Lithium-Metal Batteries: Applications, Challenges and Progress

Message from the Guest Editor

The development of next-generation high-energy-density lithium-metal batteries (LMBs) imposes higher requirements on the properties of almost every component (including cathodes, electrolytes, separators, and anodes) of LMBs. To further improve the energy density and lifespans of LMBs, further significant progress is needed in the widening and deepening of the scientific framework for lithium-metal batteries. This Special Issue invites original articles dedicated to the following topics: strategies for enhancing the structure stability of high-voltage cathodes; various efficient functional organic electrolytes which can enable suppressed battery decomposition and facilitate the formation of desirable solid electrolyte interfaces/cathode electrolyte interfaces (SEI/CEI); separators with improved physiochemical properties to reinforce the battery performances and/or safety; artificial SEI/CEI layers to suppress electrolyte decomposition; and metallic anode protecting technologies to suppress the formation of dendrites and improve the coulombic efficiency (CE) of batteries.

Guest Editor

Dr. Zhi Chang

School of Materials Science and Engineering, Central South University, Changsha 410083, China

Deadline for manuscript submissions

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

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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