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Next-Generation Materials and Advanced Characterisation Techniques for Practical Li-Ion Batteries

Guest Editor:

Dr. Svetlozar Dimitrov Ivanov
Department of Electrical Engineering and Information Technology, Technische Universität Ilmenau, 98693 Ilmenau, Germany

Deadline for manuscript submissions:
closed (31 January 2025)

Message from the Guest Editor

The scientific scope of the Special Issue comprises (but is not strictly limited to) the following topics:

- Novel functionable active materials with potential practical significance (advanced cathodes based on NMC and LFP, silicon-based materials, etc.);
- New-generation electrolytes and their properties (conductivity, stability, electrochemical window, safety, ionic liquid based, solid electrolytes, etc.);
- Efficient coating technologies that can substitute the conventional slurry-based process (ultrathick active material coatings, electrochemical deposition, electrophoretic deposition, 3D printing, etc.);
- Anode-free Li-metal batteries (practical anode current collectors and full-cell performance);
- Advanced current collectors for practical LIBs (benefits from their properties, corrosion and corrosion inhibition, low thickness and weight, morphology);
- Applicable modern techniques for the characterisation of practically relevant parameters of LIBs and LIB materials, monitoring of safety, ageing and in situ mechanical properties (electrochemical dilatometry, measurements under external pressure, impedance-based methods, acoustic signal detection, etc.).

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

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Batteries Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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