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Electrochemistry and Lithium Batteries

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Deadline for manuscript submissions:
closed (25 February 2022)

Message from the Guest Editors

Lithium batteries are one of the most important enabling technologies for the green energy transition that contribute enormously to numerous UN Sustainable Development Goals.

The huge battery demand calls for next-generation (Gen 3b, Gen 4 and Gen 5) lithium-ion (LIBs), lithium-metal and solid-state batteries that exhibit higher performances than commercial LIBs in terms of improved safety, sustainability, energy and power density and lower costs.

Electrochemistry plays a fundamental role in the entire battery value chain, from raw materials to recycling, for the development of new electrode materials, electrolytes, cell components (e.g., binders, conductive agents, separators), study of the electrode/electrolyte interface, modelling and multiscale simulations, sustainable electrode manufacturing and recycling processes, characterisation techniques, diagnostic tools, and new cell designs of future batteries.

This Special Issue will collect the most recent developments and emerging trends in the field of next-generation lithium battery technologies.

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Message from the Editor-in-Chief

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Journal Rank: CiteScore - Q1 (Control and Optimization)

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