



Lithium Batteries: Latest Advances and Prospects

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Message from the Guest Editors

The significant advantages of lithium-ion batteries lie in the high specific energy, long cycle life, low self-discharge rate, no memory effect, and environmental pollution. At present, the research hotspots of lithium-ion batteries mainly focus on three aspects: large capacity, long life, and safety.

At present, in-depth research has been carried out in battery design, cathode and anode material preparation process, electrolyte and additive improvement, battery production process, and integrated battery protection circuit, and a large number of research results have been applied to production practice. The main obstacle and bottlenecks of lithium-ion batteries are the charging time and safety. The security issue of lithium-ion batteries has always been a major problem plaguing the industry. The recall of electronic devices and accidents also make consumers pay more and more attention to the safety of batteries. This has caused widespread concern about the safety of batteries.

For this Special Issue in *Metals*, we welcome reviews and articles in the areas of principle, theoretical calculation, characterization, and applications of lithium-ion batteries.





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Message from the Editorial Board

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