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Advances in Rechargeable Li Metal Batteries

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Message from the Guest Editors

The rechargeable lithium metal battery, as the 'holy grail' in battery technology, has ultrahigh theoretical capacity (3862mAh g^{-1}) and great electrochemical potential (–3.04V vs. SHE). Therefore, researchers from academia and industry are dedicating great efforts for batteries toward a mature technology. However, lithium-metal corrosion, dendrite formation/growth, volume expansion, and inventory loss lead to severe safety issues and capacity fading. To address these concerns, this edition discusses the suitability of rechargeable lithium-metal batteries for applications and characterizations. Potential topics for the Special Issue include but are not limited to the following:

- All-solid-state lithium metal battery;
- Advanced characterizations for lithium-metal batteries;
- Liquid electrolyte;
- Lithium metal anode protection;
- Artificial solid–electrolyte interface (SEI);
- High-capacity cathode for lithium-metal batteries;
- Lithium metal electrostripping/electroplating mechanisms;
- Lithium host.

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Message from the Editor-in-Chief

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