Special Issue

Behavior of Cathode Materials at High Voltage

Message from the Guest Editors

High-energy-density lithium-ion batteries are actively pursued for applications in electric vehicles to reduce our dependence on non-renewable fossil fuels. Among all cell components in LIBs, the cathodes that behave as the Li-supplying reservoir are currently the dominant factor limiting the energy density and cost. There is a clear trend to develop high-voltage cathodes for a better utilization of precious lithium reservoirs and to unlock their potential for a higher energy density. In this Special Issue, we are seeking contributions helping to address the following:

- Understand the behavior of cathode materials at a high voltage;
- Understand the stability of the cathode–electrolyte interface;
- Illustrate the failure mechanisms through advanced characterization;
- Investigate the functionality of cathode materials and the cathode–electrolyte interface through multiscale modeling;
- Develop mitigating solutions to improve the stability of the cathode materials and the cathode–electrolyte interface.

Guest Editors

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