

Special Issue

Battery Health Algorithms and Thermal Safety Modeling

Message from the Guest Editors

Battery is an excellent electric storage device such as lithium, sodium and potassium battery, etc. The batteries are widely used in many fields and contribute much to the development of new energy. However, cycle life and thermal safety of batteries are key factors to be considered during their use. To increase cycle and calendar life of battery, battery aging mechanisms and its influencing factors should be studied. State of health and remaining useful life prediction, charging strategy optimization, fault diagnosis algorithm are important to the health of battery. To increase thermal safety of lithium-ion battery, thermal stability, thermal runaway and thermal runaway propagation mechanisms should be studied. Heat generation of battery during charging/discharging or thermal runaway need to be calculated. Any study on modeling on thermal runaway, thermal runaway propagation and its suppression are important to thermal safety of battery. Thermal management system is important to prolong cycle life and control thermal safety of battery. Thermal management modeling (cooling or preheating) are deserved to be studied.

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