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Estimation of the State-of-Charge and State-of-Health of Lithium-Ion Batteries

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Message from the Guest Editor

A battery's energy and power strongly depend on the battery's state. In particular, the residual energy is related to the cell's State-of-Charge (SoC) as well as to the battery's age, and is the reason why the performance of lithium-ion batteries degrades with time and use. As the direct measurement of SoC and State-of-Health (SoH) is unavailable in real-time applications, a key task for the BMS is to provide an accurate estimation of the battery's state. This is required in order to achieve high battery efficiency, avoid damage, predict the Remaining Useful Life (RUL), and potentially slow the rate of deterioration.

This Special Issue will focus on the analysis, design, implementation, and validation of strategies for the estimation of the state of lithium-ion cells and, more generally, algorithms for the management of lithium-ion batteries. Studies that employ recently developed data-driven approaches will also be welcome.



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Special Issue



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Message from the Editor-in-Chief

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