Battery Cell Balancing Optimisation for Battery Management System

(Congress Paper)


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Abstract

Battery cell balancing in every electrical component such as home electronic equipment and electric vehicle is very important to extend battery run time which is simplified known as battery life. The underlying solution to equalize the balance of cell voltage and SOC between the cells when they are in complete charge. In order to control and extend the battery life, the battery cell balancing is design and manipulated in such way as well as shorten the charging process. Active and passive cell balancing strategies as a unique hallmark enables the balancing of the battery with the excellent performances configuration so that the charging process will be faster. The experimental and simulation covers an analysis of how fast the battery can balance for certain time. The simulation based analysis is conducted to certify the use of optimisation in active or passive cell balancing to extend battery life for long periods of time. © Published under licence by IOP Publishing Ltd.

Indexed keywords

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Aerospace engineering  Automobile electronic equipment  Charging (batteries)  Electric batteries  Electronic equipment  Oscillators (electronic)  Secondary batteries

Optimal control strategy of dual-active-bridge converter for battery energy storage system

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