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3rd International Conference on Mechanical, Automotive and Aerospace Engineering, ICMAAE 2016; Kulliyah of Engineering, International Islamic University Malaysia (IIUM)Kuala Lumpur; Malaysia; 25 July 2016 through 27 July 2016; Code 127354

## Battery Cell Balancing Optimisation for Battery Management System

(Conference Paper)

Yusof, M.S.<sup>a</sup> (<https://www.scopus.com/authid/detail.uri?authorId=57194013778&eid=2-s2.0-85018281331>),

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### Abstract

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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

Engineering controlled terms: Aerospace engineering Automobile electronic equipment Charging (batteries) Electric batteries Electronic equipment Oscillators (electronic) Secondary batteries

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Chang, F. (<https://www.scopus.com/authid/detail.uri?origin=recordpage&authorId=565159>), Zheng, Z. (<https://www.scopus.com/authid/detail.uri?origin=recordpage&authorId=236695>), Li, Y.