Cylindrical solar container lithium battery is slightly deformed by pressure

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In this paper, a detailed model of the cylindrical lithium-ion battery is established, which not only establishes the anode, cathode, separator, winding, and battery casing but also assigns ...

In this paper, the 18650 cylindrical lithium-ion battery and its jellyroll quasi-static compression test, and establishes an optimization model based on the experimental results.

Abstract Lithium-ion (Li-ion) batteries have undergone a multitude of improvements and achieved a high level of technological maturity. To further optimise cell performance, an ...

The goal of the research is to experimentally investigate the effect of mechanical deformation on Lithium-ion battery cell. The paper thoroughly studies the phenomenon of short ...

concerns. This work develops a model to simulate and understand the thermal runaway of a cylindrical battery cell at different sub-atmospheric pressures.

Using a self-made dynamic in-situ monitoring system, the force-electrical-thermal evolution of batteries subjected to various punches are investigated and the effects of state of charge (SOC) ...

Using the model, we examine the impacts of ambient pressure, cell heating rate, and safety-venting threshold on battery thermal failure, with a particular focus on safety venting and thermal runaway. ...

What is a cylindrical lithium-ion battery module? Peng et al. devised a cylindrical lithium-ion battery module featuring a compact hybrid cooling system integrating PCM and heat pipes. The batteries are ...

The results shed light on the failure mechanism of lithium-ion batteries under axial load and guide the safety design of the battery and safety arrangement of battery packs.

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In this study, both radial and axial compression deformation were produced experimentally to analyze their influence on the performance and safety of lithium-ion batteries.

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