

3. Lin Guofa. Research on Temperature Field and Optimization of Heat Dissipation Structure of Lithium Battery Packs for Pure Electric Vehicles [D]. Chongqing University, (2011). 4. ZHANG Junxia. Thermal Characteristics Analysis and Optimization Design of Power Battery Packs for Electric Vehicles [D]. Tianjin University of Science and Technology ...

In this paper, the heat generation model and three-dimensional heat dissipation model of lithium-ion battery packs are established by using computational fluid dynamics (CFD) method. The temperature distribution law of battery pack is simulated and analyzed. The heat dissipation structure of battery pack is optimized.

To address the challenges posed by insufficient heat dissipation in traditional liquid cooled plate battery packs and the associated high system energy consumption. This ...

To address the challenges posed by insufficient heat dissipation in traditional liquid cooled plate battery packs and the associated high system energy consumption. This study proposes three distinct channel liquid cooling systems for square battery modules, and compares and analyzes their heat dissipation performance to ensure battery safety ...

Algorithmic and Simulated Based Structural Optimization of Air-Cooling Heat Dissipation Structure for EV Battery Pack . April 2020; IOP Conference Series Materials Science and Engineering 782(3 ...

In this paper, optimization of the heat dissipation structure of lithium-ion battery pack is investigated based on thermodynamic analyses to optimize discharge performance ...

Firstly, a 3-D simulation model is established for heat dissipation characteristics simulation of a battery pack, and the simulation model is confirmed by ...

According to the different media, the BTMS can be categorized into air [10], liquid [11], and phase-change material cooling systems [12] pared with other media, air cooling system is widely used because of the simple structure, safety, and reliability [13].But due to the relatively low heat capacity and thermal conductivity of air, this will lead to problems ...

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