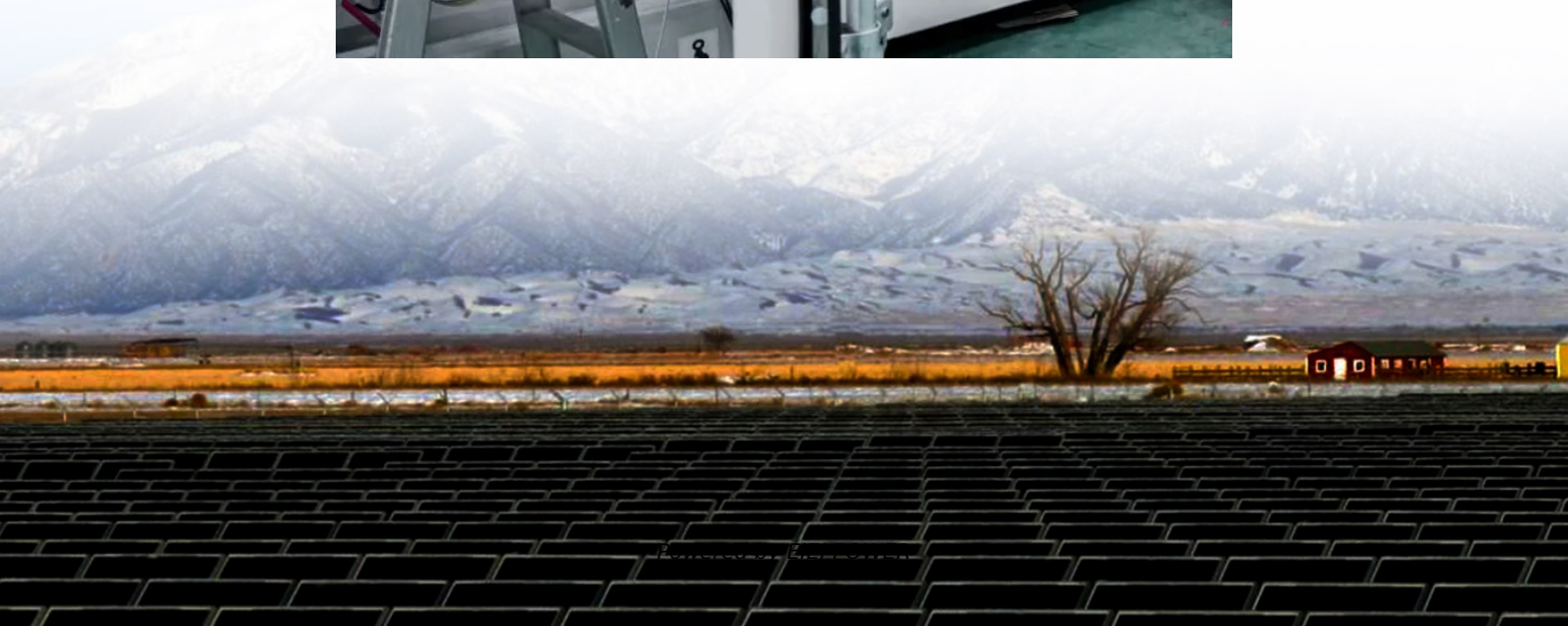


# Pack battery impact on the ground





## Overview

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Does lithium-ion battery pack have a ground impact?

A hypothetical global FE model is developed for ground impact of battery pack. Parametric study is carried out for ground impact of battery pack. Failures of individual cell and shell casing are predicted with detailed models. The present paper documents a comprehensive study on the ground impact of lithium-ion battery packs in electric vehicles.

What happens if you hit a battery pack on the ground?

The hard obstacles on the ground can hit and penetrate into the battery pack and the battery pack may cause fire accidents or failures due to the ground impact.

What is ground impact against battery pack of electric cars?

Scenarios of ground impact against battery pack of electric cars are discussed. A hypothetical global FE model is developed for ground impact of battery pack. Parametric study is carried out for ground impact of battery pack. Failures of individual cell and shell casing are predicted with detailed models.

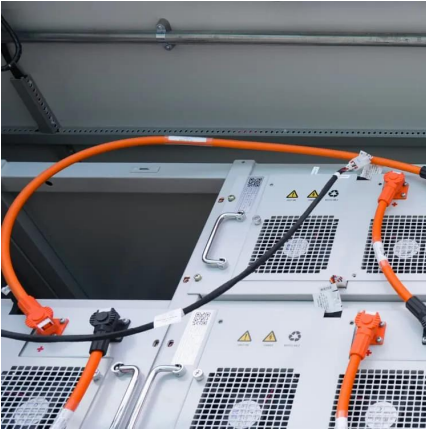
How to analyze the ground impact process of a battery pack?

To analyze the ground impact process of the battery pack from the view of the whole vehicle level, the coupling model of multi-rigid bodies and finite element model is built for the whole vehicle. Then the ground impact experiments with a production car are made and the simulation results and experiment results are compared.



## Pack battery impact on the ground

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