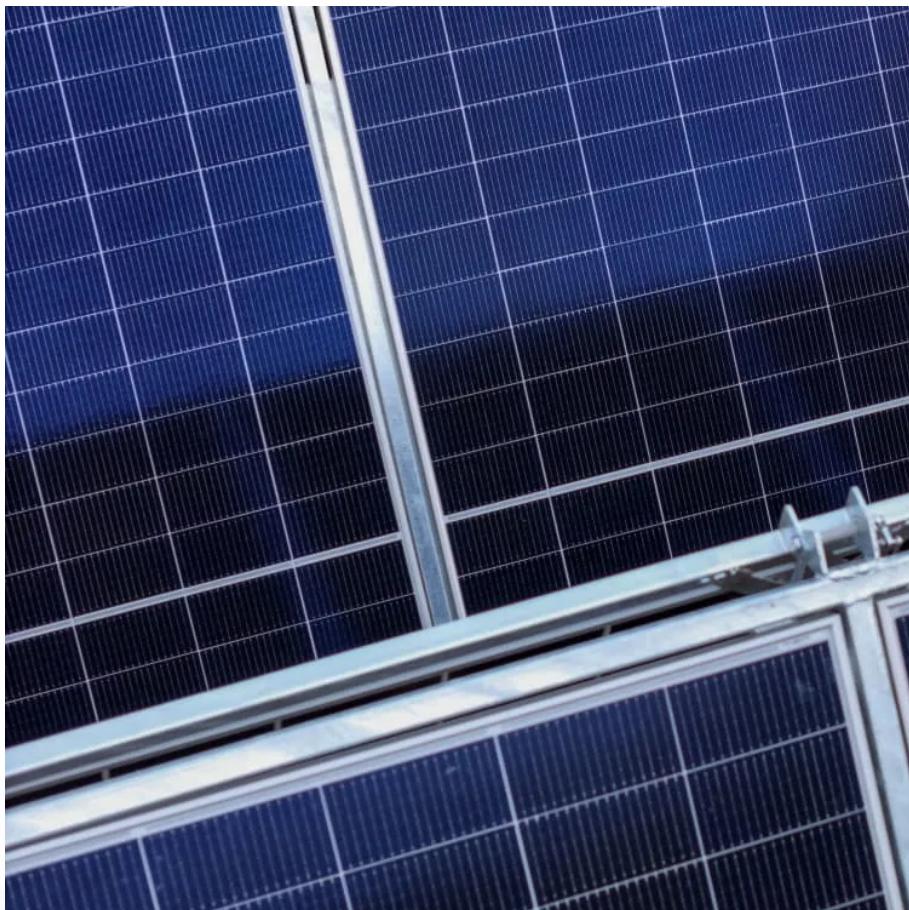




MODERNIZATION SOLAR

Battery Recycling Energy Storage Project





Overview

Are battery recycling solutions sustainable?

Growing demand for electric vehicles, renewable energy storage, and consumer electronics is driving an urgent focus on sustainable battery recycling solutions. The report by CAS and Deloitte is a comprehensive analysis of lithium-ion battery recycling and covers both market and scientific perspectives on this rapidly evolving industry.

How are batteries recycled?

In direct recycling, the cathode materials are processed without breaking down their crystal structure. Spent batteries are first manually disassembled and separated into different parts (Fig. 3a), and the cathode materials are subsequently recovered through a relithiation process 92.

Can EV batteries be recycled?

For example, LFP, a battery chemistry growing in popularity for EVs, is economically a challenge for battery recycling as it does not contain high-value metals like nickel or cobalt. This makes recycling this battery chemistry unprofitable through conventional recycling methods.

How can recycling reduce end-of-life lithium-ion batteries?

The rapid increase in lithium-ion battery (LIB) production has escalated the need for efficient recycling processes to manage the expected surge in end-of-life batteries. Recycling methods such as direct recycling could decrease recycling costs by 40% and lower the environmental impact of secondary pollution.



Battery Recycling Energy Storage Project



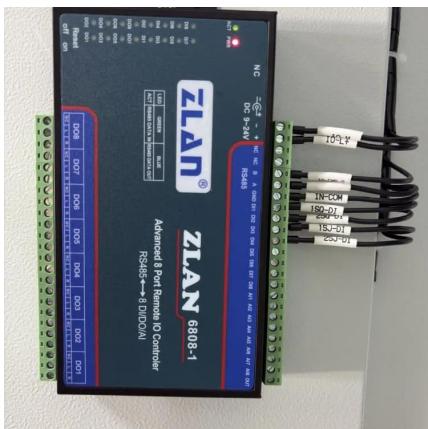
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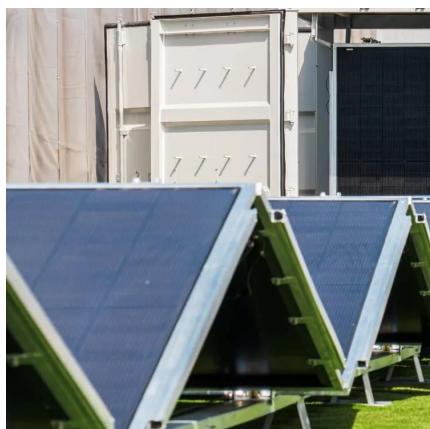
[The evolution of lithium-ion battery recycling](#)

Jan 15, 2025 · Demand for lithium-ion batteries (LIBs) is increasing owing to the expanding use of electrical vehicles and stationary energy storage. Efficient and closed-loop battery



recycling ...

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