# Environmental impact assessment of lithium-ion batteries for communication base stations

Jul 19, 2025 This study assesses the material, environmental, and economic performance of closed-loop lithium-ion battery (LIB) recycling amid China"s electric vehicle ambitions, ?

Oct 13, 2023 The environmental impacts of the manufacturing processes of NCM and LFP batteries can be better balanced by LFP-NCM batteries. This study provides a reference for ?

Nov 28, 2023 Abstract A sustainable low-carbon transition via electric vehicles will require a comprehensive understanding of lithium-ion batteries" global supply chain environmental ?

Feb 28, 2024 This paper presents a comprehensive environmental impact analysis of a lithium iron phosphate (LFP) battery system for the storage and delivery of 1 kW-hour of electricity. ?

Jan 10, 2025 Efficient utilization and recycling of power batteries are crucial for mitigating the global resource shortage problem and supply chain risks. Life cycle assessments (LCA) was ?

Jan 10, 2018 Thus, putting existing LCA studies on a common base is essential for battery technology benchmarking and avoids erroneous conclusions when comparing the ?

Jan 1, 2017 An extensive literature review is conducted in order to identify all available studies published on the environmental impacts of LIB production. The literature search is done in ?

Nov 30, 2023 As the performance of NIB is similar to that of LFP, this paper selected LFP as a representative of lithium batteries and established an assessment model based on Life Cycle ?

Feb 1, 2017 The optimized design of lithium ion secondary batteries using combination of carbon footprints and life cycle assessment (LCA) was proposed in this st?

Nov 30, 2022 This study examines the environmental and economic feasibility of using repurposed spent electric vehicle (EV) lithium-ion batteries (LIBs) in the ESS of ?

Apr 8, 2022 This study conducts a rigorous and comprehensive LCA of lithium-ion batteries to demonstrate the life cycle environmental impact hotspots and ways to improve the hotspots for ?

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Dec 21, 2023  The growing demand for lithium-ion batteries (LIBs) in smartphones, electric vehicles (EVs), and other energy storage devices should be correlated with their ?

Abstract As an important part of electric vehicles, lithium-ion battery packs will have a certain environmental impact in the use stage. To analyze the comprehensive environmental impact, ?

Nov 18, 2025  Nov 1, 2024 · This study conducts a comparative assessment of the environmental impact of new and cascaded LFP batteries applied in communication base stations using a life ?

5 days ago  Lithium-ion batteries (LIBs) are central to global decarbonization, powering applications from electric vehicles (EVs) to stationary energy storage, yet their typical service ?

Repurposing spent batteries in communication base stations (CBSs) is a promising option to dispose massive spent lithium-ion batteries (LIBs) from electric vehicles (EVs), yet the ?

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