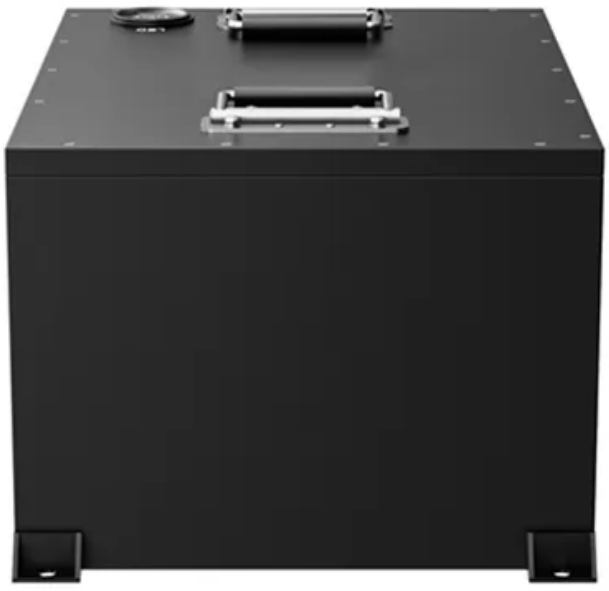
PIENAAR ENERGY (PTY) LTD

Environmental assessment of sodium-ion batteries for integrated mobile base station equipment



Environmental assessment of sodium-ion batteries for integrated m

(PDF) On the environmental competitiveness of sodium-ion batteries

It provides the corresponding inventory data for five different types of SIB and compares their environmental impacts with those of competing LIB, taking into account the full life cycle

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On the environmental competitiveness of sodium-ion batteries under a

This work provides a complete and comprehensive update of the state of knowledge in the field of life cycle assessment of SIB. It develops and discloses a specific tool for dimensioning and assessing ...

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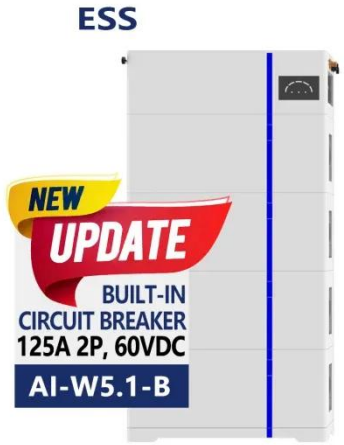

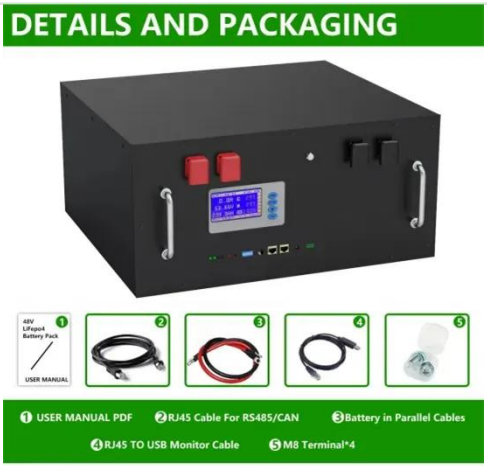

Beyond Lithium: Evaluating Sodium-Ion Batteries for the Next

Sodium-ion batteries (SIB) are gaining attention as a sustainable, cost-effective alternative to lithium-ion technology in electric vehicles (EVs), driven by concerns over lithium's scarcity, high ...

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Developing a life cycle assessment model for sodium-ion batteries

By laying this foundation, the secondment aimed to enable the creation of an initial LCA model that could be expanded and refined in future work to assess the environmental impacts of ...

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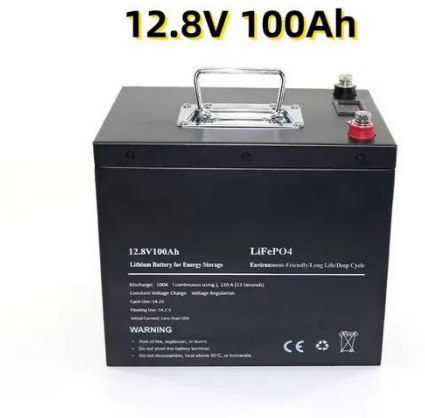

Life cycle assessment of sodium-ion batteries

This study presents a prospective life cycle assessment for the production of a sodium-ion battery with a layered transition metal oxide as a positive electrode material and hard carbon as a ...

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Technology Strategy Assessment

This technology strategy assessment on sodium batteries, released as part of the Long-Duration Storage Shot, contains the findings from the Storage Innovations (SI) 2030 strategic initiative.

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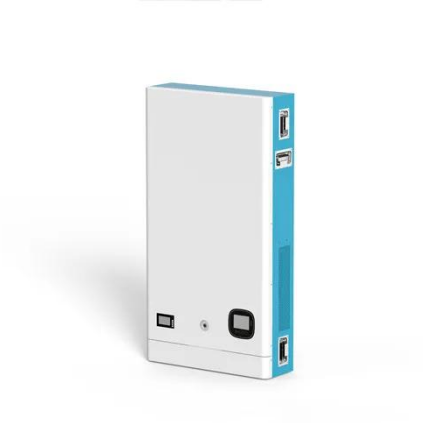
Life cycle assessment on sodium-ion cells for energy



storage

Key drivers for the expected entrance of sodium-ion storage are the low price, high abundance of cell materials and expectations of a more safe and sustainable battery.

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From lab to market with sustainable sodium-ion batteries

This Review provides an overview of various sodium-ion chemistries with respect to key criteria, including sustainability, before discussing potential solutions, market prospects and future

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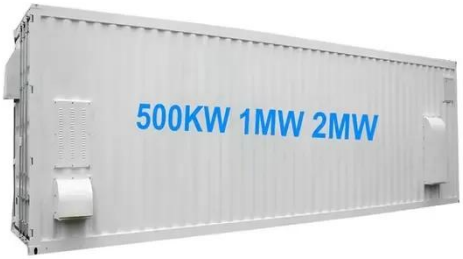

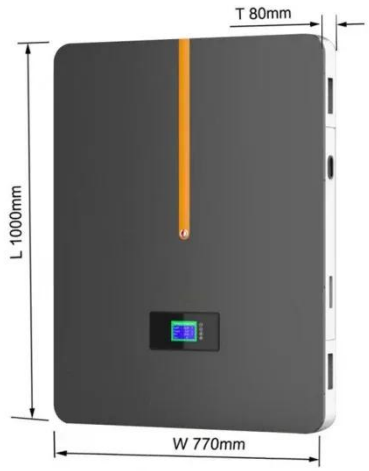

A methodology for absolute environmental sustainability assessment ...

The proposed methodology is illustrated using a comparative case study of a sodium-ion battery (NaNMC type) and a lithium-ion battery (LiNMC type). An economic allocation- based ...

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Comparative life cycle assessment of lithium-ion,

sodium-ion, and ...

In this study, we analyze, based on current electric vehicle electrode stack designs, the environmental impact of LIB cells, SIB cells, and SSB cells.

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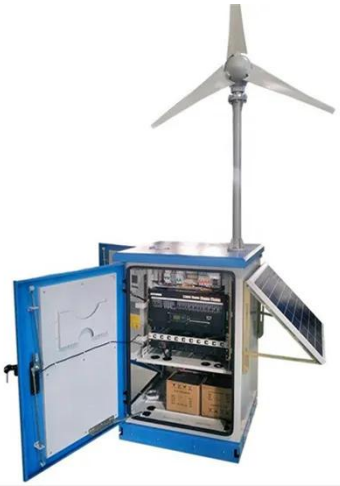

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