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Sodium-ion battery energy storage landing

Overview

What is a sodium ion energy storage system?

The sodium-ion energy storage platform has been designed to overcome long-standing limitations of traditional lead-acid-based backup systems by offering up to 2-3 times longer life, significantly reducing operational costs and downtime. The storage system comes in 3.5Kw, 5Kw, and 10Kw models with in-built batteries.

Are sodium ion batteries a sustainable alternative?

Conversely, sodium-ion batteries provide a more sustainable alternative due to the tremendous abundance of salt in our oceans, thereby potentially providing a lower-cost alternative to the rapidly growing demand for energy storage. Currently most sodium-ion batteries contain a liquid electrolyte, which has a fundamental flammability risk.

Are phosphate-based polyanionic cathodes suitable for sodium-ion batteries?

In summary, phosphate-based polyanionic cathodes represent a highly promising option for sodium-ion batteries, particularly in applications where safety and extended cycle life are of paramount importance, such as in large-scale energy storage systems for renewable energy sources.

How do sodium ions work in a battery?

During the operational phase of the battery, sodium ions traverse the aqueous electrolyte between the cathode and anode, thereby completing the internal ionic circuit (Wu et al., 2024b, Li et al., 2024b).

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