

# New lithium flow battery





## Overview

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Are flow batteries a viable alternative to traditional lithium-ion batteries?

Flow batteries have emerged in recent years as a potential alternative to more traditional lithium-ion batteries due to the technology's large-scale capacity, potentially longer life span, high energy efficiency, and increased safety with the absence of fire risk.

What are lithium-ion semi-solid flow batteries (Li-ssfbs)?

As a new type of high energy density flow battery system, lithium-ion semi-solid flow batteries (Li-SSFBS) combine the features of both flow batteries and lithium-ion batteries and show the advantages of decoupling power and capacity. Moreover, Li-SSFBS typically can achieve much higher energy density while maintaining a lower cost.

What is a flow battery?

Their next-generation "flow battery" opens the door to compact, high-performance battery systems for homes, and is expected to be much cheaper than current \$10,000 lithium-ion systems. Flow batteries have been around for decades but have traditionally been used in large-scale energy storage due to their large size and slow charge speeds.

What are lithium-based nonaqueous redox flow batteries?

Lithium-based nonaqueous redox flow batteries (LRFBS) are alternative systems to conventional aqueous redox flow batteries because of their higher operating voltage and theoretical energy density. However, the use of ion-selective membranes limits the large-scale applicability of LRFBS.



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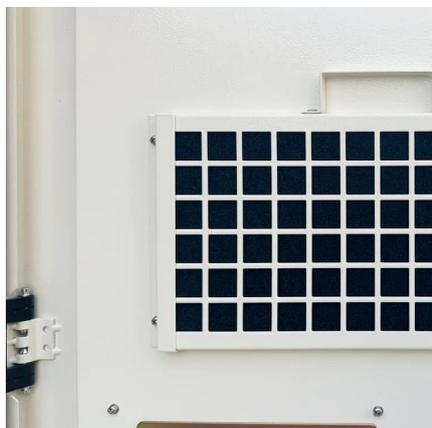


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