

What is a solid-state lithium-metal battery?

Unlike traditional lithium-ion batteries, QuantumScape's Solid-State Lithium-Metal Battery features an innovative anode-less design and a proprietary solid ceramic separator. The technology eliminates the need for graphite or silicon anode host material and replaces the organic separator with a solid ceramic one.

Are solid-state batteries a good alternative to lithium-ion batteries?

Solid-state batteries (SSBs) present a compelling alternative to traditional lithium-ion (Li-ion) batteries. SSBs offer advantages in terms of size, weight, safety, capacity, and recharging speed. Due to the absence of a liquid electrolyte, they can be smaller and lighter, making them ideal for applications including electric vehicles (EVs).

Does QuantumScape have a solid-state lithium-metal battery?

The company is also working on enhancing energy density through its solid-state lithium-metal battery technology. Unlike traditional lithium-ion batteries, QuantumScape's Solid-State Lithium-Metal Battery features an innovative anode-less design and a proprietary solid ceramic separator.

What is a solid-state separator in a lithium ion battery?

Zakuro's solid-state separator technology enables batteries with a lithium metal anode, dramatically increasing energy density over that of lithium ion. Solid-state cells eliminate the flammable liquid electrolyte of lithium ion batteries, removing...

What is the future of the solid-state battery industry?

Looking ahead, the future of the solid-state battery industry is not just promising--it is poised for transformative growth. According to a report by Market Research Future, the global solid-state battery market is expected to grow at a CAGR of 28% from 2022 to 2030, reaching a market value of approximately \$6 billion by the end of the decade.

What is a solid-state EV battery?

Their solid-state design uses lithium-metal anodes and high-nickel NMC cathodes to deliver higher energy density, faster charging, and improved safety. The company is scaling production via a roll-to-roll pilot facility, aiming to enhance the accessibility and sustainability of EV battery technology.

This company overview features profiles of industry innovators and covers the characteristics, types, and highlights of their solid-state battery technology.

Xinshijie is a leading solid-state lithium battery manufacturer dedicated to the research, development, and production of solid-state lithium metal batteries and related key materials.



# Solid state lithium metal battery companies

QuantumScape's lithium-metal solid-state batteries will charge faster, go farther, last longer and operate more safely than today's EVs and gas-powered vehicles -- bringing us closer to that ...

This article will delve into the top 15 solid-state battery manufacturers worldwide in 2025, covering their core profiles, solid-state battery technology R& D progress, and the latest market dynamics.

In this article, we explore the top 10 solid state battery manufacturers in the world that are driving innovation and shaping the future of energy storage.

When identifying the top solid-state battery companies, we focused on several critical factors to ensure a clear, transparent, and reliable ranking. This approach helps ...

For detailed company introductions, technologies, products, advantages, and comments, refer to the survey section below. We provides an in-depth analysis of the top 20 manufacturers of solid-state batteries, based on ...

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QuantumScape's lithium-metal solid-state batteries will charge faster, go farther, last longer and operate more safely than today's EVs and gas-powered vehicles -- bringing us closer to that lower carbon future.



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