

Solid state battery roadmap





latest 4th-generation Superfluidized All-Inorganic Solid-State Lithium Ceramic Battery and outlining its strategic blueprint for large-scale. What is a solid-state battery roadmap?

Based on an extensive literature review and an in-depth expert consultation process, the roadmap critically evaluates existing research as well as the latest findings and compares the development potential of solid-state batteries over the next ten years with that of established lithium-ion batteries.

What are the main interests of a solid state battery?

Current key interests include solid-state batteries, solid electrolytes, and solid electrolyte interfaces. He is particularly interested in kinetics at interfaces. Abstract Solid-state batteries are considered as a reasonable further development of lithium-ion batteries with liquid electrolytes.

What is Fraunhofer ISI's solid-state battery roadmap 2035+?

In May 2022, Fraunhofer ISI has developed Solid-State Battery Roadmap 2035+ . Fraunhofer ISI is supporting the German battery research with a roadmap and monitoring process, strategic information processing and status seminars for the exchange of information on scientific progress and technology transfer.

How can a solid-state battery be recycled?

Similar to the recycling of conventional LIB, these established processes can be adapted and applied to solid-state batteries to enable the recovery of their main cell components. The metallic components of solid electrolytes and cathodes are accessible by pyro- or hydrometallurgical recycling processes.

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

Solid-state batteries are considered as a reasonable further development of lithium-ion batteries with liquid electrolytes. While expectations are high, there are still open questions concerning the choice of materials, and the resulting concepts for components and full cells.

How long have solid-state batteries been developed?

In the last 10 to 15 years, companies as well as research institutes have been developing solid-state batteries. The following is an overview of cell concepts



currently researched and developed by various institutions.



Solid-State Battery Roadmap 2035+

This roadmap on solid-state batteries (SSB) was developed as part of the accompanying project BEMA II funded by the Federal Ministry of Education and Research (BMBF) under the initiative ...



[Technology & R& D Roadmap for GEN4 & GEN5 Solid ...](#)

Below is a detailed roadmap outlining current and future milestones for GEN4 and GEN5 battery generations, as well as their respective technological innovations and impact on the solid-state battery industry.



Solid-State Battery Roadmap 2035+

As a result, there's a shift towards developing solid-state batteries (SSBs), which use solid electrolytes rather than liquid. This roadmap provides insights into the developments of SSBs over the next decade in ...





A Roadmap for Solid-State Batteries

On the basis of an analysis of all materials and concept options, a roadmap for solid-state batteries is presented, relying on both literature survey and experts' opinions.



Technology & R& D Roadmap for GEN4 & GEN5 Solid-State ...

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Solid-State Battery: Technological Roadmap and Future ...

This article delves into the technological advancements, material innovations, and strategic roadmaps shaping the development of solid-state batteries, supported by quantitative ...



BATTERY 2030+ Roadmap

The BATTERY 2030+ vision is to incorporate smart sensing and self-healing functionalities into battery cells with the goals of increasing battery reliability, enhancing lifetime, improving safety, ...



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