# Bulgaria hpb solid state battery

What is high performance battery (HPB)?

A team of scientists working for Bonn-based company High Performance Battery (HPB),led by Prof. Dr. Günther Hambitzer,has achieved a decisive breakthrough in battery and storage technology with the development of the world's first solid-state batterywith outstanding properties to production readiness. Courtesy of High Performance Battery (HPB)

Is HPB solid state electrolyte safe?

By using the HPB solid state electrolyte developed by us,the performance of our battery will remain almost constant over its lifetime. No matter how heavy the battery is used. Our battery technology is safe because our HPB solid state electrolyte is non-flammableand the battery is non-explosive.

What is HPB solid-state electrolyte?

Through the use of our patented HPB solid-state electrolyte, internal resistance remains virtually constant throughout the service life. No matter how much the battery is used. The fields of application ? for our HPB solid-state battery are diverse and concern the generation, distribution and consumption of electricity.

Are HPB batteries safe?

Our battery technology is safebecause our HPB solid state electrolyte is non-flammable and the battery is non-explosive. No critical raw materials are needed for production. This also improves the environmental balance by more than half compared to conventional lithium-ion batteries.

Why should you choose HPB solid-state battery?

As a new basic technology, our HPB solid-state battery makes an important contribution to this. The combination of its properties is a "game changer" and a success factor for the success of the energy transition. The characteristics of our HPB solid-state electrolyte have already been confirmed by independent research institutes.

What makes HPB a good battery?

For the automotive industry,which develops its own high-performance rechargeable batteries,HPB provides its safe,robust and outstandingly conductive HPB solid-state electrolyte. In this way,the HPB solid-state electrolyte ensures that sufficient power is available even at extreme temperatures.

High Performance Battery Technology GmbH (HPBT) has developed an advanced solid-state battery that offers safety, a tremendous battery lifetime and up to a 50 % better environmental balance. The solid electrolyte - based on an inorganic system - is introduced into the cell in a liquid state using a drop-in process.

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The HPB Solid-State Electrolyte is formed from solid and liquid starting materials directly in the cell. Thanks to the unique drop-in production, the manufacturing of the HPB Solid-State Battery can be scaled up without the need to develop completely new production technologies.

The HPB solid-state electrolyte shows an absolutely higher conductivity at minus 40 °C than conventional liquid electrolytes at their optimum at plus 60 °C. These properties have been confirmed by independent partners and research institutes in the temperature range from minus 40 °C to plus 60 °C.

A team led by prof. Dr Günther Hambitzer has developed the world"s first solid-state battery, with what are said to be outstanding properties, to series production readiness. Its advantages are mainly that no cobalt is required, it has a 10 times longer service life and its electrolyte is non-flammable.

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The subject of battery development is the interaction of the three core components of a battery: anode, cathode and the HPB Solid-State Electrolyte as a complete battery cell. The development also includes industrial production up to the battery module (several battery cells combined form a battery module).

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