

Germany Hamburg energy storage supercapacitor





Overview

The facility, officially opened on November 28, 2025, is already supplying supercapacitors to Siemens, General Electric and Hitachi Energy for European electrical grid applications, as well as to major US hyperscale data center operators for AI infrastructure. What is the largest supercapacitor factory in Europe?

Our ISO 9001- and 14001-certified Dresden Superfactory in Germany is the largest supercapacitor factory in Europe. Our upcoming production facility for graphene-based supercapacitors, the Leipzig Superfactory, will be the largest and most modern supercapacitor factory globally.

How can supercapacitors improve grid stability?

4.1. Energy storage 4.1.1. Renewable energy integration (solar) The intermittent nature of renewable energy sources like solar poses significant challenges to grid stability. With their exceptional power density and rapid charge-discharge capabilities, supercapacitors offer a promising solution to address these issues.

Are supercapacitors a good energy storage device?

Supercapacitors are among the most promising electrochemical energy-storage devices, bridging the gap between traditional capacitors and batteries in terms of power and energy density. Their charge-storage performance is largely influenced by the properties of electrode materials, electrolytes and the underlying charge-storage mechanisms.

How does a supercapacitor energy storage system work?

Abeywardana et al. implemented a standalone supercapacitor energy storage system for a solar panel and wireless sensor network (WSN) . Two parallel supercapacitor banks, one for discharging and one for charging, ensure a steady power supply to the sensor network by smoothing out fluctuations from the solar panel.



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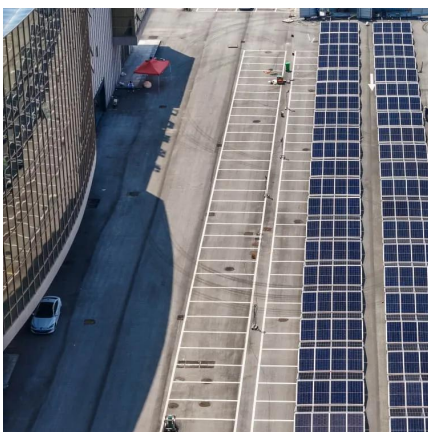
[Supercapacitors: An Emerging Energy Storage System](#)

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