

What is CATL 'condensed battery' technology?

CATL is showing novel 'Condensed Battery' technology in Shanghai, which claims an energy density of 500 Wh/kg at the cell level. The Chinese battery giant considers it suitable for electric aircraft but also envisions use in road vehicles, with series production to start this year.

What is a CATL battery?

CATL uses highly conductive biomimetic condensed-state electrolyte to get to this level, which explains the battery name. The condensed battery features ultra-high energy density cathode materials and new anode materials, separators, and manufacturing processes.

What is the energy density of a lithium-based condensed battery?

The lithium-based condensed battery was launched Wednesday at the Auto Shanghai expo, with CATL claiming blockbuster energy density figures "up to 500 Wh/kg." The highest density cells we've seen previously would be from Amprius, which was shipping batteries at 450 Wh/kg more than a year ago.

Will CATL launch a condensed battery?

More interestingly, the Chinese manufacturer will launch an automotive-grade version of the condensed battery, with mass production planned by the end of the year. CATL mentioned the condensed batteries last June, days after the company unveiled the Qilin battery with an energy density of 255 Wh/kg.

How much energy does a CATL battery produce?

According to the report, CATL's current prototypes are impressive. They offer an energy density of 500 Wh/kg. To put that in perspective, this is an improvement of over 40% compared to existing lithium-ion batteries, which typically max out at around 350 Wh/kg.

Is CATL launching a 500 Wh/kg battery?

CATL launches 500 Wh/kg battery. Source: CATL In one of the most significant battery breakthroughs in recent years, the world's largest battery manufacturer CATL has announced a new "condensed" battery with 500 Wh/kg which it says will go into mass production this year.

CATL has been committed to the safety design of high energy density systems. Following the mass production of the 8-series products featuring no thermal propagation in 2020, the no thermal propagation technology with a ...

At IAA Transportation 2024, Contemporary Amperex Technology Co., Limited (CATL), the global leader in new energy technology innovations, launched its ...

The cloud management of batteries was initially the realm of startups and is now in the mainstream cell manufacturers complete ownership system. CATL. CATL are the largest battery manufacturer and hence

perhaps ...

Volkswagen Group is CATL's customer, along with Tesla, BMW, Nio, Xpeng, Geely, Mercedes-Benz, and others. CATL is the biggest battery supplier in China and worldwide. 2024 battery market share in China. Data: ...

High Energy Density: 500 Wh/kg, ... CATL's condensed battery technology aims to address these challenges head-on by introducing several key innovations: 3D Honeycomb Anodes: ...

CATL chief scientist Wu Kai says the condensed battery integrates a range of innovative technologies, including the ultra-high energy density cathode materials, innovative anode materials, separators, and manufacturing ...

It reports that CATL has built a micron-scale adaptive mesh structure that regulates inter-chain interaction forces for changes in the electro-chemical reactions of ultra-high energy density ...

Unveiled at the last Shanghai Auto Show, CATL's condensed battery offers an ultra-high energy density of up to 500Wh/kg, opening up the possibility of electrifying passenger aircraft. The condensed battery uses a ...

CATL made a ground-breaking debut of their latest battery technology, the condensed battery, at Auto Shanghai on April 19th. This cutting-edge battery technology boasts an impressive energy density of up to 500 ...

On April 19, CATL launched condensed battery, a cutting-edge battery technology at Auto Shanghai. With an energy density of up to 500 Wh/kg, it can achieve high energy density and high level of safety at the same time in a ...

CATL's prototype solid-state batteries have an impressive energy density of 500 Wh/kg, a 40 percent improvement over current lithium-ion batteries that typically reach 350 ...

On June 23, CATL launched Qilin, the third generation of its CTP (cell-to-pack) technology. With a record-breaking volume utilization efficiency of 72% and an energy density of up to 255 Wh/kg, it achieves the highest integration level ...

EnerD series products adopt CATL's new generation of energy storage dedicated 314Ah batteries, equipped with CATLCTP liquid cooling 3.0 high-efficiency grouping technology, optimize the grouping structure and ...

Supported by breakthroughs in the innovation of material system, CATL's first-generation sodium-ion battery boasts high energy density, high-rate charging, excellent ...

CATL successfully tested a 4-ton electric plane powered by its ultra-high energy density battery. By 2028, CATL expects to reveal an 8-ton civil electric aircraft with around 1,200 to 1,800 miles ...

To meet the market demand for high energy density batteries, for e-buses in particular, CATL has developed MTV, which directly integrate the modules to the vehicles, ...

CATL goes all in for 500 Wh/kg solid-state EV battery mass production. CATL's prototype solid-state batteries have an impressive energy density of 500 Wh/kg, a 40 percent ...

High Energy Density: 500 Wh/kg, double the density of Tesla's 4680 cells. Innovative Anode Design: 3D honeycomb structure increases surface area and efficiency. Advanced Electrolytes:...

China's CATL announced a new battery type at Auto Shanghai 2023. The so-called condensed battery is a semi-solid state battery that promises to offer a 500-Wh/kg energy density while...

In 2021, CATL showcased the first generation of sodium-ion batteries, capturing media attention with high energy density and quick charging capabilities. CATL's second-generation battery promises further ...

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