

# The production principle of condensed matter battery

Can a condensed matter battery achieve mass production?

Chinese battery industry heavyweight CATL has unveiled a novel condensed matter battery technology with an energy density of up to 500 Wh/kg. The company said it can achieve mass production within this year. On April 19, CATL unveiled its condensed battery technology at Auto Shanghai.

What is a 'condensed matter' battery?

The Chinese battery giant considers it suitable for electric aircraft but also envisions use in road vehicles, with series production to start this year. Officially referred to as "Condensed Matter" battery, the new cells exhibit high safety and precisely that high energy density, as CATL's chief scientist Wu Kai stated at the trade show.

What is a condensed battery & how does it work?

The condensed battery boasts an impressive energy density of 500 Wh/kg, which is double that of Tesla's renowned 4680 cells. This high energy density makes the condensed battery particularly suitable for electric passenger aircraft, promising longer flight ranges and improved efficiency compared to current battery technologies.

Will CATL be able to make a condensed matter battery?

CATL will also be able to start mass production of the condensed matter battery for electric vehicle uses later this year, Wu added.

What is CATL's condensed battery?

CATL's Condensed Battery will feature high safety and high energy density, with single cells having an energy density of up to 500 Wh/kg, the company's chief scientist Wu Kai said today at the Shanghai auto show. Subscribe to CnEVData to see our full data tables.

Is CATL launching a condensed battery?

The battery giant will also launch the automotive-grade version of condensed batteries, which are expected to be put into mass production this year. Last year, CATL unveiled Qilin battery with the highest integration efficiency in the world, and it has started mass production this March.

On April 19th, CATL released an innovative and cutting-edge battery technology at the Shanghai International Automobile Industry Exhibition - Condensed Matter Battery, with a single energy density of up to 500Wh/kg, ...

The so-called "condensed matter" battery, a type of semi-solid state product with condensed electrolyte and new anode and separator materials, will have an energy density of up to 500 Wh/kg. At the launch ceremony at the ...

# The production principle of condensed matter battery

With regard to the "Condensed Battery", CATL's chief developer Wu Kai summarizes: "The battery combines innovative cathode materials with ultra-high energy density, new anode and separator materials with a completely new type of electrolyte". - Lithium metal battery? - Silicon anode? - Anode-less battery? - Lithium-Sulfur battery?

Li-ion battery materials have been widely studied over the past decades. The metal salts that serve as starting materials for cathode and production, including  $\text{Li}_2\text{CO}_3$ ,  $\text{NiSO}_4$ ,  $\text{CoSO}_4$  and  $\text{MnSO}_4$ , are mainly produced using hydrometallurgical processes. In hydrometallurgy, aqueous precipitation and crystallization are important unit operations. ...

Aiming at the electrochemical reaction changes of ultra-high specific energy chemical materials, CATL adopts high-dynamic biomimetic condensed electrolytes to construct a micron-level self-adaptive network ...

CATL is collaborating on the development of Condensed Battery for civilian electric aircrafts, and the battery for EVs will have mass production capability this year.

At the Shanghai auto show, CATL, the world's largest manufacturer of lithium-ion batteries for electric vehicles, announced it expects to begin production of "condensed matter" semi-solid...

Chinese battery industry heavyweight CATL has unveiled a novel condensed matter battery technology with an energy density of up to 500 Wh/kg. The company said it can achieve mass...

Web: <https://roomme.pt>