

The latest news on battery technology breakthroughs

Which companies have made advances in battery recycling technology in 2024?

Several companies made advances in battery recycling technology in 2024. Altilium has developed a hydrometallurgical recycling technology that achieved over 97% lithium recovery from LFP batteries. The company has demonstrated its ability to recycle both LFP and NMC batteries.

Which EV battery company has made significant progress in 2024?

Contemporary Amperex Technology Co. Limited (CATL), the world's largest EV battery maker, made significant progress in solid-state batteries in 2024. The company has entered trial production of 20 amp-hour (Ah) solid-state cells, achieving an energy density of 500 Wh/kg--a 40% improvement over existing lithium-ion batteries.

What's going on in the battery industry?

From more efficient production to entirely new chemistries, there's a lot going on. The race is on to generate new technologies to ready the battery industry for the transition toward a future with more renewable energy. In this competitive landscape, it's hard to say which companies and solutions will come out on top.

Could new technology boost Apple's battery capacity?

Apple supplier says new tech has 100 times the capacity of its current batteries. Japan's TDK is claiming a breakthrough in materials used in its small solid-state batteries, with the Apple supplier predicting significant performance increases for devices from wireless headphones to smartwatches.

What makes TDK a good battery?

The battery is focused on fast charging and high energy density. TDK Corporation developed a solid-state battery material with an energy density of 1,000 Wh/L, 100 times greater than their previous solid-state batteries. The battery uses oxide-based solid electrolytes and lithium alloy anodes, enhancing safety and performance.

What is battery technology?

The battery technology is designed to be used in smaller-sized cells, replacing existing coin-shaped batteries found in watches and other small electronics.

Lexus is the luxury arm of Toyota, so its first EVs with this new-and-improved battery technology are not likely to come in the lower-cost, mass-market package many consumers expect from Toyota ...

Clarios and Altris Partner for Low-Voltage Sodium-Ion Battery Systems; Top News in Sodium-Ion Battery Sector for 2024; ... KPIT's Sodium-Ion Battery Technology Breakthrough; Sodium-Ion Batteries: The Future of Sustainable Energy Storage ... New strides in sodium-ion battery tech mark a big leap in enhancing their

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performance, cost efficiency ...

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The Japanese carmaker's top battery expert said on Tuesday that simplifying the production process for battery materials would bring down the cost of its long-awaited next-generation technology.

He says the new technology breaks the limits that have long restricted the development of the battery sector and will open up a new era of electrification centred on high safety and light weight. During the presentation, ...

The race is on to come up with breakthroughs that will make batteries more efficient, safer and, crucially, cheaper. ... Latest news. Vehicle Sales GM remains coy about Chinese exports. ... American Battery ...

QuantumScape has developed a solid-state battery with over 1,000 charging cycles and over 95% capacity retention. The battery is focused on fast charging and high ...

Previous studies have struggled with solid precipitates and low capacity and the search has been on for a new technique to improve these types of batteries. Yang's group developed a new electrolyte, a solvent of acetamide ...

A breakthrough in electric vehicle battery design has enabled a 10-minute charge time for a typical EV battery. This is a record-breaking combination of a shorter charge time and more energy ...

Honda also plans to launch EVs powered by the new battery tech by 2030. ... a new milestone. With "breakthrough" energy density of up to 450 Wh/kg, Factorial claims its battery tech can boost ...

Northvolt has made a breakthrough in a new battery technology used for energy storage that the Swedish industrial start-up claims could minimise dependence on China for the green transition.. The ...

The battery technology landscape continues to evolve, driven by the need for cleaner, more sustainable energy solutions. In 2024, battery technology advanced on several fronts. Here are five of the top developments. Electric vehicle battery. Image used courtesy of CATL 1. Solid-State Batteries

Widespread adoption of sodium-ion batteries could be limited without greater breakthroughs in technology, a new study has found. The Stanford University paper, published in Nature Energy, which evaluated over 6,000 scenarios to test the robustness of their road maps, found that competitive potential was under threat.. The study by STEER (a new partnership ...

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Discover the latest breakthroughs in EV battery technology for 2025. From solid-state batteries to silicon anodes and fast charging, learn what's new and exciting in the world of electric vehicles.

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The new process increases the energy density of the battery on a weight basis by a factor of two. It increases it on a volumetric basis by a factor of three. Today's anodes have copper current ...

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