New Materials for Battery Technology

Microsoft and the Pacific Northwest National Laboratory used AI and high-performance computing to discover a promising new battery material faster than ever before.

The new material provides an energy density--the amount that can be squeezed into a given space--of 1,000 watt-hours per liter, which is about 100 times greater ...

Researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have developed a new lithium metal battery that can be charged and ...

Battery 2030+ is the "European large-scale research initiative for future battery technologies" with an approach focusing on the most critical steps that can enable the acceleration of the findings ...

Microsoft researchers used AI and supercomputers to narrow down 32 million potential inorganic materials to 18 promising candidates in less than a week - a screening ...

This new battery technology uses sulfur for the battery"s cathode, which is more sustainable than nickel and cobalt typically found in the anode with lithium metal. How Will They Be Used? Companies like Conamix, an electric ...

MIT researchers have now designed a battery material that could offer a more sustainable way to power electric cars. The new lithium-ion battery includes a cathode based on organic materials, instead of cobalt or ...

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The company has scaled up the technology to build a smart phone-sized pouch cell battery. ... "Our research explains one possible underlying mechanism of the process and ...

Researchers from the Harvard John A. Paulson School of Engineering and ...

The newly discovered material by the Liverpool team, composed of non-toxic, earth-abundant elements, offers a safer and more efficient alternative. Its ability to conduct ...

The researchers queried AQE for battery materials that use less lithium, and it quickly suggested 32 million different candidates. From there, the AI system had to discern which of those materials ...

The race is on to generate new technologies to ready the battery industry for the transition toward a future with

more renewable energy. ... layer it with the other battery ...

A new type of battery, based on a material discovered with the help of AI, is shown being tested in the laboratory. Dan DeLong/Microsoft. Share this: ... medicine and ...

Microsoft announced Tuesday that a team of scientists used artificial intelligence and high-performance computing to plow through 32.6 million possible battery materials - ...

So what"s new with battery materials? This probably isn"t news to you, but EV sales are growing quickly--they made up 14% of global new vehicle sales in 2022 and will reach 18% in 2023 ...

Using AI and cloud computing, Microsoft was able to quickly identify 18 promising battery materials for the Department of Energy. It needed just 80 hours to do ...

Microsoft and Pacific Northwest National Laboratory winnowed down millions of possible electrolyte materials into viable candidates in less than nine months. From powering ...

The anode active materials that collect these ions during charging are often carbon-based graphite. Silicon attracts more lithium ions but physically expands in the ...

The new kind of battery might reduce lithium requirements by around 70 per cent, reducing the reliance on a metal that is expensive and ethically problematic.

Web: https://centrifugalslurrypump.es