



The latest breakthrough news on new energy batteries

Sep. 30, 2019 -- A new concept for an aluminium battery has twice the energy density as previous versions, is made of abundant materials, and could lead to reduced production costs and ...

READ the latest Batteries News shaping the battery market. Based on a series of innovations in the chemistry system, CATL's first generation of sodium-ion batteries has the advantages of high-energy density, fast-charging capability, excellent thermal stability, great low-temperature performance and high-integration efficiency, ...

The International Energy Agency just released a new report on the state of critical minerals in energy, which has some interesting battery-related tidbits. So for the newsletter this week, let's ...

The latest advancement in capacitor technology offers a 19-fold increase in energy storage, potentially revolutionizing power sources for EVs and devices. Search Follow

6 · Columbia Engineering scientists are advancing renewable energy storage by developing cost-effective K-Na/S batteries that utilize common materials to store energy ...

Stanford chemists hope to stop the variability of renewable energy on the electrical grid by creating a liquid battery that offers long-term storage. Hopefully, this liquid organic hydrogen ...

UChicago Pritzker Molecular Engineering Prof. Y. Shirley Meng's Laboratory for Energy Storage and Conversion has created the world's first anode-free sodium solid-state battery.. The team hopes the breakthrough brings the reality of inexpensive, fast-charging, high-capacity batteries for electric vehicles and grid storage ...

The report illustrates how diversifying applications will create opportunities for new battery chemistries to compete with Li-ion, including: solid state batteries, such as rechargeable zinc alkaline, Li-metal, and Li-sulfur that will help electrify heavier mobility applications; low-cost and long-duration batteries, such as zinc-based, flow ...

An international team of researchers, led by Dr. Shenlong Zhao from the University of Sydney, has developed a new battery that has the potential to significantly reduce the cost of transitioning to a decarbonized economy. The battery has four times the energy capacity of lithium-ion batteries and is much cheaper to produce.

The pace of deployment of some clean energy technologies - such as solar PV and electric vehicles - shows what can be achieved with sufficient ambition and policy action, but faster change is urgently needed across most components of the energy system to achieve net zero emissions by 2050, according to the IEA's latest evaluation ...



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With a "breakthrough energy density" of 450 Wh/kg, Factorial claims the new tech can extend EV range by up to 80%. It will also drastically reduce the weight of EVs for even higher efficiency.

Stanford's breakthrough in lithium metal battery technology promises to extend EV ranges and battery life through a simple resting protocol, enhancing commercial viability. Next-generation electric vehicles could run on lithium metal batteries that go 500 to 700 miles on a single charge, twice the range of conventional lithium-ion batteries ...

Researchers studying how lithium batteries fail have developed a new technology that could enable next-generation electric vehicles (EVs) and other devices that are less prone to battery fires ...

Most battery-powered devices, from smartphones and tablets to electric vehicles and energy storage systems, rely on lithium-ion battery technology. Because lithium-ion batteries are able to store a significant amount of energy in such a small package, charge quickly and last long, they became the battery of choice for new devices.

The upshot of this innovative design is a battery with excellent energy density, around four times that of the lithium batteries in Tesla's Model 3 at 1 kWh/liter in volumetric terms.

CATL said the new EV battery is the world's first with 4C ultra-fast charging and +620 miles (1,000 km) CLTC long-range capabilities. The new battery can gain a one-km range in as little as one ...

1 · Journal Reference: Han-Ming Hau, Tara Mishra, Colin Ophus, Tzu-Yang Huang, Karen Bustilo, Yingzhi Sun, Xiaochen Yang, Tucker Holstun, Xinye Zhao, Shilong Wang, ...

Scientists have created an anode-free sodium solid-state battery. This brings the reality of inexpensive, fast-charging, high-capacity batteries for electric ...

Breakthrough in all-solid-state battery technology with a novel electrodeposition method increases efficiency and lifespan. A research team, consisting of Professor Soojin Park from the Department of Chemistry, PhD candidate Sangyeop Lee from the Division of Advanced Materials Science, and Dr. Su

"A lithium-metal battery is considered the holy grail for battery chemistry because of its high capacity and energy density," said Xin Li, associate professor of materials science at the Harvard John A. Paulson School of Engineering and Applied Science (SEAS). "But the stability of these batteries has always been poor."

An international team of researchers, led by Dr. Shenlong Zhao from the University of Sydney, has developed a new battery that has the potential to significantly reduce the cost of transitioning to a ...



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22 · In just nine minutes, the 302 Wh kg battery was able to recharge 80 per cent of its energy, surpassing previously reported commercial lithium-ion batteries. The ...

Leading EV battery maker CATL released its new breakthrough battery pack with up to a nearly 1 million mile (1.5 million km), 15-year warranty.. CATL, Yutong launch new long-life EV battery. CATL ...

Sodium-ion batteries. The Pacific Northwest National Lab recently announced a breakthrough in sodium-ion battery tech that promises greater immunity to the temperature-management requirements that ...

What's next for batteries. Expect new battery chemistries for electric vehicles and a manufacturing boost thanks to government funding this year. By. Casey Crownhart. January 4, 2023. BMW...

Prof. Donald Sadoway and his colleagues have developed a battery that can charge to full capacity in less than one minute, store energy at similar densities to lithium-ion batteries and isn't prone to ...

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.

Wright said their patented batteries, with up to four times the energy density of most lithium-ion batteries used in current electric cars, offers breakthrough. The key challenge is taking it from ...

Engineers created a new type of battery that weaves two promising battery sub-fields into a single battery. The battery uses both a solid state electrolyte and an all-silicon anode, making it a ...

Your source for the latest research news. ... to significantly reduce energy storage costs New, low-cost battery built with four times the capacity of lithium ... breakthrough for renewable energy ...

Researchers from Chalmers University of Technology have produced a structural battery that performs ten times better than all previous versions. It contains carbon fiber that serves simultaneously as an electrode, conductor, and load-bearing material. Their latest research breakthrough paves the way

2 · New Material Could Radically Improve Lithium-Ion Batteries. A new battery cathode material developed by engineer Hailong Chen costs far less while allowing ...

The battery retained 80% of its capacity after 6,000 cycles, outperforming other pouch cell batteries on the market today. The technology has been licensed through Harvard Office of Technology Development to Adden Energy, a Harvard spinoff company cofounded by Li and three Harvard alumni. The company has scaled up the technology ...

A solid-state battery developer in China has unveiled a new cell that could help change the game for electric



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mobility. Tailan New Energy"s vehicle-grade all-solid-state lithium batteries offer ...

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 ...

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