The first sodium-ion solid-state battery

What is the world's first anode-free sodium solid-state battery?
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 closer than ever.

Can a sodium solid-state battery be anode-free?
Scientists have created an anode-free sodium solid-state battery. This brings the reality of inexpensive,fast-charging,high-capacity batteries for electric vehicles and grid storage closer than ever.

Could a new sodium battery architecture be a future direction?
Researchers in the U.S. have created a new sodium battery architecture with stable cycling for several hundred cycles, which could serve as a future direction to enable low-cost, high-energy-density and fast-charging batteries. Image: Laboratory for Energy Storage and Conversion, UC San Diego From pv magazine ESS News site

Is sodium a good battery material?
Sodium,common in ocean water and soda ash mining,is an inherently more environmentally friendly battery material. The LESC research has made it a powerful one as well. Innovative architecture To create a sodium battery with the energy density of a lithium battery,the team needed to invent a new sodium battery architecture.

Can sodium solid-state batteries work better than lithium?
"Sodium solid-state batteries are usually seen as a far-off-in-the-future technology,but we hope that this paper can invigorate more push into the sodium area by demonstrating that it can indeed work well,even better than the lithium version in some cases," Deysher said. The ultimate goal?

Could a sodium battery be more affordable?
The paper,published today in Nature Energy,demonstrates a new sodium battery architecture with stable cycling for several hundred cycles. By removing the anode and using inexpensive,abundant sodium instead of lithium,this new form of battery will be more affordableand environmentally friendly to produce.

UChicago Prof. Shirley Meng"s Laboratory for Energy Storage and Conversion creates the world"s first anode-free sodium solid-state battery - a breakthrough in inexpensive, ...

To create a sodium battery with the energy density of a lithium battery, the team needed to invent a new sodium battery architecture. Traditional batteries have an anode to ...

The first sodium-ion solid-state battery

To create a sodium battery, which is said to boast an energy density on par with lithium-ion batteries, the research team needed to invent a new sodium battery architecture. It opted for an anode-free battery design, ...

By removing the anode and using inexpensive, abundant sodium instead of lithium, this new form of battery will be more affordable and environmentally friendly to produce. Through its innovative solid-state design, ...

In what is described as the world first, researchers at the Laboratory for Energy Storage and Conversion (LESC) in the U.S. have managed to devise design principles for ...

Earlier this month, teams at the University of Chicago Pritzker School of Molecular Engineering and the University of California San Diego published a paper in Nature Energy demonstrating the world"s first anode-free, ...

Researchers developed the first anode-free solid-state battery that"s based on sodium, which is cheaper and more abundant than lithium. ... And we can actually build AA ...

Earlier this month, teams at the University of Chicago Pritzker School of Molecular Engineering and the University of California San Diego published a paper in Nature ...

This implies that the HC has a similar sodium storage mechanism in a solid-state battery as in a liquid electrolyte battery. All cells delivered a sodiation capacity of around ...

In what is described as the world first, researchers at the Laboratory for Energy Storage and Conversion (LESC) in the U.S. have managed to devise design principles for enabling an anode-free all...

Volkswagen Group"s battery company PowerCo and QuantumScape have entered into a groundbreaking agreement to industrialize QuantumScape"s next-generation solid-state lithium ...

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 ...

Stockholm, Sweden - Northvolt today announced a state-of-the-art sodium-ion battery, developed for the expansion of cost-efficient and sustainable energy storage systems worldwide. The cell ...

Researchers from UChicago Professor Y. Shirley Meng"s Laboratory for Energy Storage and Conversion have created the first anode-free sodium solid-state battery. By developing this battery, the LESC - a ...

Researchers from UChicago Professor Y. Shirley Meng"s Laboratory for Energy Storage and Conversion have created the first anode-free sodium solid-state battery. By ...

The first anode-free sodium solid-state battery offers fast-charging, affordability, and eco-friendliness. Learn

how it revolutionizes clean energy storage!

UChicago Prof. Shirley Meng"s Laboratory for Energy Storage and Conversion creates the world"s first anode-free sodium solid-state battery - a breakthrough in inexpensive, clean, fast-charging batteries.

To create a sodium battery, which is said to boast an energy density on par with lithium-ion batteries, the research team needed to invent a new sodium battery architecture.

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In two years, China will have nearly 95 percent of the world"s capacity to make sodium batteries. Lithium battery production will still dwarf sodium battery output at that point, ...

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