Sodium batteries in china

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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,...

The state utility says the 10 MWh sodium-ion battery energy storage station uses 210 Ah sodium-ion battery cells that charge to 90% in a mindblowing 12 minutes. The system comprises 22,000...

The worldwide demand for sodium-ion EV batteries is growing, as evidenced by BYD"s construction of a new sodium-ion EV battery plant in China. A lower cost is one of the benefits of sodium-ion batteries, along with greater safety, longer life cycles, and greater environmental sustainability.

On November 22, China"s Huawei announced a new patent for sodium-ion batteries named "Electrolyte Additives and Preparation Methods, Electrolytes and Sodium-ion Batteries." The company"s latest work has focused on improving the shortcomings of sodium batteries - such as low coulombic efficiency and poor cycle life - by optimizing ...

In January 2024, BYD began constructing its first sodium-ion battery plant in Xuzhou, China. Investment into the project is 10 billion yuan (USD 1.4 billion), and the planned annual output capacity is 30 GWh. BYD’s subsidiary Findreams Battery signed an agreement with Huaihai Group to construct the plant. The two companies announced they would make batteries for micro electric vehicles (EVs) and e-scooters, as those micro-mobility EVs will make the best use of sodium-ion packs.

China is the global leader in EV production and adoption. The country has invested heavily in EVs, giving it a significant lead. China produces 75% of the world’s lithium-ion batteries used in EVs. This availability gives China an advantage in EV production. However, this may be changing with the advent of sodium-ion batteries.

A Volkswagen-backed Chinese EV company, JAC Yiwei, produced a hatchback using a sodium-ion battery pack from HiNa Battery in December 2023. Jiangling Motors (JMC), a joint venture partner with Ford Motors, started mass production of another EV powered by a sodium-ion EV battery. The car is named the JMEV EV3, and Farasis Energy supplies the battery. CATL announced in April 2023 that the first automaker to use its sodium-ion batteries will be the Chery Auto iCar brand in China.

Sodium-ion batteries (NIBs, Na+, SIBs, or Na-ion batteries) are rechargeable batteries that use sodium ions (Na+) as their charge carriers. In some cases, their cell construction and working principle are similar to lithium-ion batteries, but sodium replaces lithium as the cathode material.

Chinese companies lead the top five global sodium-ion EV battery manufacturers as of 2023. Those include

CATL, and HiNa Battery Technology Co., Ltd. America’s top sodium-Ion EV battery manufacturer is Natron Energy, Inc., located in Santa Clara, California. The U.K. made the top five list with its Faradion, and France ranked with its Tiamat Sas.

According to Statista, total global production of soda ash was about 58 million metric tons (including both natural and synthetic soda ash). The United States was the leading producer of natural soda ash in 2022, producing 11 million metric tons. Turkey was second, with 4.4 million metric tons.

Coherent Market Insights estimated the global market for sodium-ion batteries to be worth USD 275.1 million in 2021. From 2022 to 2030, CMI predicted it to increase at a compound annual growth rate (CAGR) of 15.3%.

As sodium-ion EV battery production efforts have begun only recently, significant investments have yet to happen for sodium batteries in the U.S. As demand for this new technology grows, investors will enable more building of new factories. However, America’s future of becoming a global producer of sodium-ion EV batteries may change depending on the outcomes of the 2024 elections.

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