

Sodium Ion Battery Market Charges Ahead: A Decade of Innovation Unveiled from 2021 to 2031

Sodium Ion Battery Market Expected to Reach \$1.2 Billion by 2031 — Allied Market Research

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/EINPresswire.com/ -- The surge in the expansion of utilization of electric vehicles in the transportation industry and increasing demand for energy storage devices in residential and industrial applications have driven the demand for low-cost batteries. The need for sustainable green energy

development and government support to solar and wind power generation industries which help achieve the zero-carbon emission targets led to the expansion of energy storage services which have a positive impact on the market. The growing awareness among the people regarding the utilization of renewable power generation on the environment is expected to

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The low cost of sodium ion batteries and increasing focus on renewable energy industries are the key factors boosting the Sodium ion battery market growth.”

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create potential opportunities for the growth of the sodium-ion battery market during the forecast period. The [sodium ion battery market](https://www.alliedmarketresearch.com/request-sample/10962) size was valued at \$0.3 billion in 2021, and the sodium ion battery industry is estimated to reach \$1.2 billion by 2031, growing at a CAGR of 15.9% from 2022 to 2031.

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Sodium ions de-intercalate from the cathode and move to the anode when the battery is charged. Sodium ion batteries offer high electrochemical quality in terms of charge-discharge, reversibility, and specific discharge capacity. These batteries are now being used in electric

automobiles. A sodium ion (Na-ion) battery is a great replacement for a lithium-ion (Li-ion) battery. Li-ion battery materials cost higher than sodium ion battery materials. Sodium ion batteries are gaining appeal as an alternative energy storage solution for automobiles, aircraft, and marine applications, among others. Sodium ion batteries are in high demand due to their easy availability and accessibility. These batteries are appropriate for situations where compactness is secondary. Energy is stored in the form of chemical bonds at the anode.

Growth in consumer demand for sodium ion batteries, notably in the automotive, electronics, and electrical industries, has led to an expansion of the global automotive sodium ion battery market growth. The transition to sodium battery cells will be simpler for manufacturers as handling sodium-based chemicals may be accomplished using the same equipment that handles lithium-ion components. As sodium metal is so widely accessible, sodium ion batteries are more likely to be long-lasting, which helps meet the growing need for a dependable power source.

Sustainability, affordability, and greater safety are just a few of the significant benefits sodium ion batteries may provide to EV manufacturers and consumers. However, compared to lithium-ion, sodium ion batteries have a lower energy density. With further technological advancements, this problem should be resolved in the coming years. As a result, several battery manufacturers are looking into the prospect of using sodium ion batteries in place of conventional lithium-ion batteries in upcoming electric cars. The automotive sodium ion battery market is projected to grow as a result of all these causes.

In January 2020, the new EU-funded project NAIMA, "Na-Ion materials are essential components to manufacture reliable battery cells for non-automotive applications," which started in France. The European Commission awarded this project a Horizon2020 program grant of almost EUR 8 million. The duration of the program is 36 months, which started in December 2019 and is expected to end in December 2022. The NAIMA project is expected to demonstrate that two new generations of highly competitive and safe sodium ion cells developed and tested during the project are some of the most robust and cost-effective alternatives to current and future Li-based technologies for storage applications. The presence of the above-mentioned trends and investments for the development of electric vehicles have a significant impact on the development of the sodium ion battery market opportunities.

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Battery technologies are an essential catalyst to unlock growth and new advances in sectors such as electric vehicles (EVs), electronic devices, and battery energy storage (BES) for renewable energy. An increase in dependence on battery storage is driving enormous demand. Thus, battery applications are expected to become a \$400 billion-plus market by 2030, up from \$142.3 billion in 2022.

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- Recycling could be the last step undertaken only when batteries cannot be repurposed or reused. LFP has been a popular chemistry in commercial use of EVs and stationary storage globally. Second use of LFP batteries makes great sense as unlike NMC or NCA batteries, LFP batteries do not contain high-value metals. Besides, LFP has a better cycle life and safety performance.
- Second-life batteries could be 50-70% cheaper than the new ones.

The sodium ion battery market forecast is segmented based on application, end-user, and region. Based on application, the market is fragmented into residential, commercial, and industrial. In addition, based on end-use, the market is bifurcated into stationary energy storage and transportation. Region-wise, the market is studied across North America, Europe, Asia-Pacific, and LAMEA. Presently, Europe accounts for the largest sodium ion battery market share, followed by North America, Asia-Pacific, and LAMEA.

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The Sodium Ion Battery industry's key market players adopt various strategies such as product launch, product development, collaboration, partnership, and agreements to influence the market. It includes details about the key players in the market's strengths, product portfolio, market size and share analysis, operational results, and market positioning.

Key players in the Sodium Ion Battery market include:

Mitsubishi Corporation
 Natrium Energy
 Zoolnasm
 Natron Energy
 HiNa BATTERY
 Panasonic Corporation
 Kishida Chemical
 Faradion Limited
 CATL
 Ronbay Technology

The industrial segment dominates the global Sodium ion battery market. Sodium ion batteries have a wide range of applications in energy storage devices which are used for backup power supply in manufacturing industries. In addition, it is also widely used in large-scale renewable power generation utilities across the globe. Power and Energy industries play a vital role in the modernization and industrialization of human civilization. The electric power industry covers the generation, transmission, distribution, and sale of electric power to the general public and

industry. The energy industry is the total of all of the industries involved in the production and sales of energy.

The stationary energy storage segment dominates the global Sodium ion battery market. A stationary energy storage device can store energy and discharge it in the form of electricity. An array of batteries, an inverter, an electronic control system, and a thermal management system are often included in a stationary energy storage system. Unlike a fuel cell, which creates power without having to be charged, energy storage systems must be charged in order to deliver electricity when it is required.

Europe segment dominated the global Sodium ion battery market. Europe is a well-developed country with stringent regulations regarding environmental pollution. These stringent regulations regarding the reduction of carbon footprint across the country and rapid development in recent years which lead to surpassing expectations in terms of steep cost reduction, user-friendliness, and manifold applications in a variety of sectors have fueled the manufacturer to expand their manufacturing capabilities.

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- As per sodium ion battery market analysis, Europe holds a dominant position in 2021 and will continue to maintain the lead over the forecast period.
- By application, the industrial segment was the leading segment in 2021.
- By end-use, the stationary energy storage segment for the largest market share in 2021.

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- In July 2021, CATL launched its first sodium ion battery product. This product is widely used in stationary energy storage to store renewable energy. This product launch will increase the market share of the firm in the sodium ion battery market.
- In April 2020, Faradion Ltd., the world leader in sodium ion battery technology, announced it had received its first order from ICM Australia for its high-energy sodium ion batteries for use in the Australian market.

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David Correa
Allied Market Research
+ +1 800-792-5285

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