

Metal-Air Battery Market By Metal (Zinc, Aluminium, Iron, Lithium, Others), By Voltage (Low, Medium, High), By Application (Electric Vehicles, Military Electronics, Electronic Devices, Stationary Power, Others): Global Opportunity Analysis and Industry Forecast, 2021-2031

Market Report | 2022-09-01 | 260 pages | Allied Market Research

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Report description:

The global metal-air battery market is envisioned to garner \$1,636.8 million by 2031, growing from \$424 million in 2021 at a CAGR of 14.97% from 2022 to 2031.

The metal-air batteries have drawn a lot of attention because of an increasing need for energy sources with a high energy density and stability for emerging electrical vehicles. Metal-air batteries show a huge potential as a form of energy storage for several applications. In addition, to serving as portable power storage for electric vehicles, it can also serve as an energy storage system for the regulation of energy flow among renewable energy generators. Furthermore, the rising use of aluminum-air batteries due to their characteristics such as lightweight, and recyclable makes an aluminum-air battery ideal for electric vehicles. These factors are anticipated to fuel the metal-air battery market growth in the expected time frame.

the key factors boosting the meat-air battery are the rising demand for high-density storage options for voltage range as well as stability of systems, growing adoption of green technology in batteries to reduce the carbon footprint and environmental pollution and increasing shifts of electric vehicle manufacturing companies towards the metal-air battery instead of traditional Li-ion battery. However, it is anticipated that metal-air batteries will generate significant revenue as these are reliable, affordable, and non-combustible. The metal-air batteries have environmentally beneficial qualities that make them appropriate for electronic device manufacturers, aerospace use, and the military. These factors are expected to boost the metal-air battery market size.

The metal-air battery uses metal anodes that react with the electrolyte solutions present in the battery to form the passivation of layers called solid electrolyte interphase films. this film causes a loss in the battery performance. these factors are anticipated to hamper the metal-air battery market growth during the forecasted period.

The latest development in the field of metal-air battery technology showcased that metal-air batteries can be used the removal of

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water pollutants from water. The metal-air can be used to remove certain pollutants from the water while producing electricity. currently, more R&D is going on in the field of removing arsenic and collecting phosphorous from groundwater, collecting algae in aquaculture wastewater, and also achieving certain effects. Additionally, the certain advantages of metal-air batteries such as simple installation and short start-up time, which will be suitable for remote villages where treatment facilities are not available or imperfect. with advancements in technology and research, the power generation performance of the metal-air battery will be improved, and power can be developed and supplied while treating the aquaculture wastewater. These factors are anticipated to boost the metal-air battery market share.

COVID-19 impact on the metal-air battery market was negative. The COVID-19 pandemic brought several uncertainties leading to severe economic losses as various businesses across the world were at a standstill. There were import-export restrictions laid down on major metal-air battery-producing countries such as Japan and China, which imposed significant challenges on the market. Additionally, many countries across the globe are investing in the development of metal-air battery technology. Such as, India is investing in a battery technology that employs aluminum rather than lithium as the major component in order to reduce dependence on foreign resources and technologies. The largest oil refiner in the country, Indian Oil Corp., partnered with Israeli startup Phinergy Ltd. to develop the aluminum-air battery in India. These factors are projected to hinder the metal-air battery market growth during the pandemic time period.

The key players profiled in this report include Arconic, GPB International Limited, Arotech Corporation, Fuji Pigment Co., Ltd., Zinc8 Energy Solutions Inc., POLY PLUS, E-Stone Batteries B.V., NantEnergy Inc., Log 9 Materials, and PHINERGY.

Key Benefits For Stakeholders

-This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the metal-air battery market analysis from 2021 to 2031 to identify the prevailing metal-air battery market opportunities.

-The market research is offered along with information related to key drivers, restraints, and opportunities.

-Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.

-In-depth analysis of the metal-air battery market segmentation assists to determine the prevailing market opportunities.

-Major countries in each region are mapped according to their revenue contribution to the global market.

-Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.

-The report includes the analysis of the regional as well as global metal-air battery market trends, key players, market segments, application areas, and market growth strategies.

Key Market Segments

By Metal

Aluminum

Iron

Lithium

Zinc

Others

By Voltage

Low

Medium

High

By Application

Electric Vehicles

Military Electronics

Stationary Power

Others

By Region

North America

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U.S.
Canada
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Asia-Pacific
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China
India
Australia
South Korea
Rest of Asia-Pacific
LAMEA
Brazil
Saudi Arabia
United Arab Emirates
South Africa
Rest of LAMEA
List of Key Players Profiled in the Report
Arconic
GPB International Limited
Arotech Corporation
Fuji Pigment Co., Ltd.
Zinc8 Energy Solutions Inc.
POLY PLUS
E-Stone Batteries B.V.
NantEnergy Inc.
Log 9 Materials
PHINERGY
Key Market Segments
By Metal
- Zinc
- Aluminium
- Iron
- Lithium
- Others
By Voltage
- Low
- Medium
- High
By Application
- Electric Vehicles

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- Military Electronics
- Electronic Devices
- Stationary Power
- Others

By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- Germany
- United Kingdom
- France
- Spain
- Italy
- Rest of Europe
- Asia-Pacific
- China
- Japan
- India
- South Korea
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- Rest Of Asia Pacific
- LAMEA
- Brazil
- Saudi Arabia
- UAE
- South Africa
- Rest of LAMEA
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- Phinergy
- log 9 materials
- PolyPlus Battery Company
- GP Batteries International Limited
- Zinc8 Energy Solutions Inc.
- ZAF Energy Systems, ACTXE Limited
- Arotech Corporation
- Renata SA
- Energizer Holdings, Inc.
- Ionomr Innovations Inc.

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