

# **Global Biodegradable Batteries Market Size study & Forecast, by Battery Type (Graphene Battery, Paper Battery, Redox Flow Battery, Others), by Application (Consumer Electronics, Healthcare, Others) and Regional Analysis, 2023-2030**

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## **Abstracts**

Global Biodegradable Batteries Market is valued at approximately USD 155.8 million in 2022 and is anticipated to grow with a healthy growth rate of more than 11.3% over the forecast period 2023-2030. The biodegradable batteries market refers to the sector of the energy storage industry that focuses on the development and commercialization of batteries made from environmentally friendly materials that naturally decompose over time, offering a sustainable alternative to conventional batteries. These batteries are typically made from environmentally friendly materials that are biodegradable, non-toxic and pose minimal harm to the environment. The Biodegradable Batteries Market is being driven by factors such as rising environmental concerns and the increasing demand for sustainable energy sources.

Biodegradable batteries are the sustainable solution for reducing e-waste. According to the roundup.org, 57.4 million metric tons of e-waste generated in 2021. And is growing by an average of 2 million metric tons every year and it is expected to reach 74.7 million metric tons in 2030. Approximately 17.4% of e-waste is currently being collected and recycled in an environmentally responsible manner. Thus, rising environmental concerns about e-waste management fueling the growth of the biodegradable batteries market. In addition, increasing R&D activities on biodegradable batteries and increasing demand for implantable medical devices from the healthcare industry create lucrative opportunities for the market. However, higher cost of biodegradable batteries hinders the growth of the market throughout the forecast period of 2023-2030.

The key regions considered for the Global Biodegradable Batteries Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. Asia Pacific dominated the market in 2022 owing to the R&D activities of biodegradable batteries are increasing and region has witnessed increasing awareness and concern about environmental sustainability. There is a growing emphasis on reducing pollution, minimizing waste, and adopting eco-friendly solutions. Asia Pacific is also considered the fastest growing region during the forecasted period due to rising investments in the development of sustainable energy sources, such as biodegradable batteries.

Major market player included in this report are:

Felis Leo Ventures Private Limited.

Better Battery Co.

KEMIWATT

CMBlu Energy AG

Stora Enso

Sony Group Corporation

XL Batteries

Bioenzymatic Fuel Cells

Doe Run Company

Battery Solutions LLC

Recent Developments in the Market:

In September 2022, Researchers from the University of Maryland and the University of Houston developed a more sustainable battery by utilizing zinc-metal battery chemistry and a biodegradable gel electrolyte made from chitosan, derived from discarded chitin found in crustacean shells. They replaced the conventional cathode with a biodegradable organic material. The battery maintained a high efficiency of 99.7% over 1,000 cycles and is two-thirds biodegradable, with the remaining zinc being recyclable. The goal is to create entirely biodegradable batteries, including both materials and fabrication processes, for a more environmentally friendly energy storage solution.

Global Biodegradable Batteries Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Battery Type, Application, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East &

## Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

### By Battery Type:

- Graphene Battery
- Paper Battery
- Redox Flow Battery
- Others

### By Application:

- Consumer Electronics
- Healthcare
- Others

### By Region:

- North America
  - U.S.
  - Canada

- Europe
  - UK
  - Germany
  - France
  - Spain
  - Italy

## ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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