

Global Nanowire Battery Market by Material Type (Silicon, Germanium, Transition Metal Oxides, Gold), by Industry Type (Consumer Electronics, Automotive, Aviation, Energy, Medical Devices), and Regional Analysis, 2022-2029

<https://marketpublishers.com/r/G6433673EDEAEN.html>

Date: February 2023

Pages: 200

Price: US\$ 4,950.00 (Single User License)

ID: G6433673EDEAEN

Abstracts

Global Nanowire Battery Market is valued at approximately USD 53 million in 2021 and is anticipated to grow with a healthy growth rate of more than 35.7% over the forecast period 2022-2029. A nanowire battery is an advanced version of a lithium-ion battery, in which the surface area of one or both electrodes increases by using nanowires. These batteries are considered as an ideal substitute for lithium-ion batteries, which are used for consumer electronics and electric vehicles. These wires are capable to expand four times their original size when charged with no fracturing. Accordingly, the surge in demand for batteries with high charge retention capacity, the exponential growth of the consumer electronics industry, and the rising demand for advanced medical applications and devices are the key factors that are stipulating the market demand across the globe.

The rising demand for electric vehicles plays a significant role that is bolstering the adoption of nanowire batteries. According to the India Brand Equity Foundation (IBEF), in 2021, it was estimated that the sales of electric vehicles (EVs) get doubled in 2021 compared to 2020 and witnessed a new record of 6.6 million electric vehicle sales. Similarly, as per Statista, in Brazil, the sales of electric vehicles during 2021 accounted for around 7,272 units, which is projected to reach over 17,860 units by 2027. Thus, the rising application of nanowire batteries in electric vehicles is creating various growth prospects in the global market. Moreover, growing spendings in research and development activities by automotive companies, as well as increasing need for high-performance batteries in electric grid storage applications are presenting various

lucrative opportunities over the forecasting years. However, the high presence of substitute battery technologies and high volume change of silicon nanowires during charge and discharge cycles are challenging factors for the market growth throughout the forecast period of 2022-2029.

The key regions considered for the Global Nanowire Battery Market study include Asia Pacific, North America, Europe, Latin America, and the Rest of the World. North America is the leading region across the world in terms of market share owing to rising innovations and technological advancements. Whereas, Asia-Pacific is anticipated to emerge as the fastest-growing market region during the forecast period 2019- 2026. Factors such as rise demand for batteries with high charge retention capacity enhance battery technology for electric mobility would create lucrative growth opportunities for the Asia-Pacific region during the forecast period of 2019-2026.

Major market player included in this report are:

Amprius Inc.

Sila Nanotechnologies Inc.

OneD Material, Inc.

Nexxon Limited

NEI Corporation

XG Sciences, Inc.

LG Chem Ltd.

Panasonic Holdings Corporation

Samsung SDI Co. Ltd.

Enevate Corporation

Recent Developments in the Market:

In January 2019, Harley Davidson (US), a renowned producer of high-end motorcycles, and Samsung SDI have signed a contract. At the 2019 International CES in Las Vegas, Nevada, Harley-Davidson debuted LiveWire, its first electric motorcycle, which features a lithium-ion battery pack from Samsung SDI.

Global Nanowire Battery Market Report Scope:

Historical Data 2019-2020-2021

Base Year for Estimation 2021

Forecast period 2022-2029

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

Segments Covered Material Type, Industry Type, Region

Regional Scope North America; Europe; Asia Pacific; Latin America; Rest of the World
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 Material Type:

Silicon

Germanium

Transition Metal Oxides

Gold

By Industry Type:

Consumer Electronics

Automotive

Aviation

Energy

Medical devices

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
RoLA
Rest of the World

Contents

CHAPTER 1. EXECUTIVE SUMMARY

- 1.1. Market Snapshot
- 1.2. Global & Segmental Market Estimates & Forecasts, 2019-2029 (USD Million)
 - 1.2.1. Nanowire Battery Market, by Region, 2019-2029 (USD Million)
 - 1.2.2. Nanowire Battery Market, by Material Type, 2019-2029 (USD Million)
 - 1.2.3. Nanowire Battery Market, by Industry Type, 2019-2029 (USD Million)
- 1.3. Key Trends
- 1.4. Estimation Methodology
- 1.5. Research Assumption

CHAPTER 2. GLOBAL NANOWIRE BATTERY MARKET DEFINITION AND SCOPE

- 2.1. Objective of the Study
- 2.2. Market Definition & Scope
 - 2.2.1. Scope of the Study
 - 2.2.2. Industry Evolution
- 2.3. Years Considered for the Study
- 2.4. Currency Conversion Rates

CHAPTER 3. GLOBAL NANOWIRE BATTERY MARKET DYNAMICS

- 3.1. Nanowire Battery Market Impact Analysis (2019-2029)
 - 3.1.1. Market Drivers
 - 3.1.1.1. Rising demand for electric vehicles
 - 3.1.1.2. Surge in demand for batteries with high charge retention capacity
 - 3.1.2. Market Challenges
 - 3.1.2.1. Presence of substitute battery technologies
 - 3.1.2.2. High volume change of silicon nanowires during charge and discharge cycles
 - 3.1.3. Market Opportunities
 - 3.1.3.1. Increasing expenditure on R&D activities by automotive companies
 - 3.1.3.2. Rising need for high-performance batteries in electric grid storage applications

CHAPTER 4. GLOBAL NANOWIRE BATTERY MARKET INDUSTRY ANALYSIS

- 4.1. Porter's 5 Force Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry
- 4.2. Futuristic Approach to Porter's 5 Force Model (2019-2029)
- 4.3. PEST Analysis
 - 4.3.1. Political
 - 4.3.2. Economical
 - 4.3.3. Social
 - 4.3.4. Technological
- 4.4. Top investment opportunity
- 4.5. Top winning strategies
- 4.6. Industry Experts Prospective
- 4.7. Analyst Recommendation & Conclusion

CHAPTER 5. RISK ASSESSMENT: COVID-19 IMPACT

- 5.1. Assessment of the overall impact of COVID-19 on the industry
- 5.2. Pre COVID-19 and post COVID-19 Market scenario

CHAPTER 6. GLOBAL NANOWIRE BATTERY MARKET, BY MATERIAL TYPE

- 6.1. Market Snapshot
- 6.2. Global Nanowire Battery Market by Material Type, Performance - Potential Analysis
- 6.3. Global Nanowire Battery Market Estimates & Forecasts by Material Type
2019-2029 (USD Million)
- 6.4. Nanowire Battery Market, Sub Segment Analysis
 - 6.4.1. Silicon
 - 6.4.2. Germanium
 - 6.4.3. Transition Metal Oxides
 - 6.4.4. Gold

CHAPTER 7. GLOBAL NANOWIRE BATTERY MARKET, BY INDUSTRY TYPE

- 7.1. Market Snapshot
- 7.2. Global Nanowire Battery Market by Industry Type, Performance - Potential Analysis
- 7.3. Global Nanowire Battery Market Estimates & Forecasts by Industry Type
2019-2029 (USD Million)

7.4. Nanowire Battery Market, Sub Segment Analysis

- 7.4.1. Consumer Electronics
- 7.4.2. Automotive
- 7.4.3. Aviation
- 7.4.4. Energy
- 7.4.5. Medical devices

CHAPTER 8. GLOBAL NANOWIRE BATTERY MARKET, REGIONAL ANALYSIS

8.1. Nanowire Battery Market, Regional Market Snapshot

8.2. North America Nanowire Battery Market

8.2.1. U.S. Nanowire Battery Market

- 8.2.1.1. Material Type breakdown estimates & forecasts, 2019-2029
- 8.2.1.2. Industry Type breakdown estimates & forecasts, 2019-2029

8.2.2. Canada Nanowire Battery Market

8.3. Europe Nanowire Battery Market Snapshot

8.3.1. U.K. Nanowire Battery Market

8.3.2. Germany Nanowire Battery Market

8.3.3. France Nanowire Battery Market

8.3.4. Spain Nanowire Battery Market

8.3.5. Italy Nanowire Battery Market

8.3.6. Rest of Europe Nanowire Battery Market

8.4. Asia-Pacific Nanowire Battery Market Snapshot

8.4.1. China Nanowire Battery Market

8.4.2. India Nanowire Battery Market

8.4.3. Japan Nanowire Battery Market

8.4.4. Australia Nanowire Battery Market

8.4.5. South Korea Nanowire Battery Market

8.4.6. Rest of Asia Pacific Nanowire Battery Market

8.5. Latin America Nanowire Battery Market Snapshot

8.5.1. Brazil Nanowire Battery Market

8.5.2. Mexico Nanowire Battery Market

8.5.3. Rest of Latin America Nanowire Battery Market

8.6. Rest of The World Nanowire Battery Market

CHAPTER 9. COMPETITIVE INTELLIGENCE

9.1. Top Market Strategies

9.2. Company Profiles

- 9.2.1. Amprius Inc
 - 9.2.1.1. Key Information
 - 9.2.1.2. Overview
 - 9.2.1.3. Financial (Subject to Data Availability)
 - 9.2.1.4. Product Summary
 - 9.2.1.5. Recent Developments
- 9.2.2. Sila Nanotechnologies Inc.
- 9.2.3. OneD Material, Inc.
- 9.2.4. Nexeon Limited
- 9.2.5. NEI Corporation
- 9.2.6. XG Sciences, Inc.
- 9.2.7. LG Chem Ltd.
- 9.2.8. Panasonic Holdings Corporation
- 9.2.9. Samsung SDI Co. Ltd.
- 9.2.10. Enevate Corporation

CHAPTER 10. RESEARCH PROCESS

- 10.1. Research Process
 - 10.1.1. Data Mining
 - 10.1.2. Analysis
 - 10.1.3. Market Estimation
 - 10.1.4. Validation
 - 10.1.5. Publishing
- 10.2. Research Attributes
- 10.3. Research Assumption

List Of Tables

LIST OF TABLES

TABLE 1. Global Nanowire Battery Market, report scope

TABLE 2. Global Nanowire Battery Market estimates & forecasts by Region 2019-2029 (USD Million)

TABLE 3. Global Nanowire Battery Market estimates & forecasts by Material Type 2019-2029 (USD Million)

TABLE 4. Global Nanowire Battery Market estimates & forecasts by Industry Type 2019-2029 (USD Million)

TABLE 5. Global Nanowire Battery Market by segment, estimates & forecasts, 2019-2029 (USD Million)

TABLE 6. Global Nanowire Battery Market by region, estimates & forecasts, 2019-2029 (USD Million)

TABLE 7. Global Nanowire Battery Market by segment, estimates & forecasts, 2019-2029 (USD Million)

TABLE 8. Global Nanowire Battery Market by region, estimates & forecasts, 2019-2029 (USD Million)

TABLE 9. Global Nanowire Battery Market by segment, estimates & forecasts, 2019-2029 (USD Million)

TABLE 10. Global Nanowire Battery Market by region, estimates & forecasts, 2019-2029 (USD Million)

TABLE 11. Global Nanowire Battery Market by segment, estimates & forecasts, 2019-2029 (USD Million)

TABLE 12. Global Nanowire Battery Market by region, estimates & forecasts, 2019-2029 (USD Million)

TABLE 13. Global Nanowire Battery Market by segment, estimates & forecasts, 2019-2029 (USD Million)

TABLE 14. Global Nanowire Battery Market by region, estimates & forecasts, 2019-2029 (USD Million)

TABLE 15. U.S. Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 16. U.S. Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 17. U.S. Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 18. Canada Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 19. Canada Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 20. Canada Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 21. UK Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 22. UK Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 23. UK Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 24. Germany Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 25. Germany Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 26. Germany Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 27. France Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 28. France Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 29. France Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 30. Italy Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 31. Italy Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 32. Italy Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 33. Spain Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 34. Spain Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 35. Spain Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 36. RoE Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 37. RoE Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 38. RoE Nanowire Battery Market estimates & forecasts by segment 2019-2029

(USD Million)

TABLE 39. China Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 40. China Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 41. China Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 42. India Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 43. India Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 44. India Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 45. Japan Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 46. Japan Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 47. Japan Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 48. South Korea Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 49. South Korea Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 50. South Korea Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 51. Australia Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 52. Australia Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 53. Australia Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 54. RoAPAC Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 55. RoAPAC Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 56. RoAPAC Nanowire Battery Market estimates & forecasts by segment 2019-2029 (USD Million)

TABLE 57. Brazil Nanowire Battery Market estimates & forecasts, 2019-2029 (USD Million)

TABLE 58. Brazil Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 59. Brazil Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 60. Mexico Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 61. Mexico Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 62. Mexico Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 63. RoLA Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 64. RoLA Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 65. RoLA Nanowire Battery Market estimates & forecasts by segment
2019-2029 (USD Million)

TABLE 66. Row Nanowire Battery Market estimates & forecasts, 2019-2029 (USD
Million)

TABLE 67. Row Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 68. Row Nanowire Battery Market estimates & forecasts by segment 2019-2029
(USD Million)

TABLE 69. List of secondary sources, used in the study of global Nanowire Battery
Market

TABLE 70. List of primary sources, used in the study of global Nanowire Battery Market

TABLE 71. Years considered for the study

TABLE 72. Exchange rates considered

List of tables and figures and dummy in nature, final lists may vary in the final
deliverable

List Of Figures

LIST OF FIGURES

- FIG 1. Global Nanowire Battery Market, research methodology
 - FIG 2. Global Nanowire Battery Market, Market estimation techniques
 - FIG 3. Global Market size estimates & forecast methods
 - FIG 4. Global Nanowire Battery Market, key trends 2021
 - FIG 5. Global Nanowire Battery Market, growth prospects 2022-2029
 - FIG 6. Global Nanowire Battery Market, porters 5 force model
 - FIG 7. Global Nanowire Battery Market, pest analysis
 - FIG 8. Global Nanowire Battery Market, value chain analysis
 - FIG 9. Global Nanowire Battery Market by segment, 2019 & 2029 (USD Million)
 - FIG 10. Global Nanowire Battery Market by segment, 2019 & 2029 (USD Million)
 - FIG 11. Global Nanowire Battery Market by segment, 2019 & 2029 (USD Million)
 - FIG 12. Global Nanowire Battery Market by segment, 2019 & 2029 (USD Million)
 - FIG 13. Global Nanowire Battery Market by segment, 2019 & 2029 (USD Million)
 - FIG 14. Global Nanowire Battery Market, regional snapshot 2019 & 2029
 - FIG 15. North America Nanowire Battery Market 2019 & 2029 (USD Million)
 - FIG 16. Europe Nanowire Battery Market 2019 & 2029 (USD Million)
 - FIG 17. Asia pacific Nanowire Battery Market 2019 & 2029 (USD Million)
 - FIG 18. Latin America Nanowire Battery Market 2019 & 2029 (USD Million)
 - FIG 19. Global Nanowire Battery Market, company Market share analysis (2021)
- List of tables and figures and dummy in nature, final lists may vary in the final deliverable

I would like to order

Product name: Global Nanowire Battery Market by Material Type (Silicon, Germanium, Transition Metal Oxides, Gold), by Industry Type (Consumer Electronics, Automotive, Aviation, Energy, Medical Devices), and Regional Analysis, 2022-2029

Product link: <https://marketpublishers.com/r/G6433673EDEAEN.html>

Price: US\$ 4,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G6433673EDEAEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970