

Glass Like Carbon Market By Synthesis (Low Temperature Synthesis, High Temperature Synthesis), By Application (Electrode Material, Surgical Implants, Semiconductors and Electronics, Temperature Management, Others): Global Opportunity Analysis and Industry Forecast, 2021-2031

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Report description:

The global glass-like carbon market was valued at \$82.3 million in 2021, and is projected to reach \$118.4 million by 2031, growing at a CAGR of 3.7% from 2022 to 2031.

Glass-like carbon, also known as glassy carbon is a brittle form of carbon with exceptional properties which has paved new application areas for the carbon element. The material is very stable at high temperatures and continuous high-level heating or cooling does not cause any prominent effects on the material. These properties have made Glass-like Carbon desirable for applications where performance development has greater importance than cost.

The growth of the global glass-like carbon market is driven by increase in demand for consumer electronic devices wherein glass-like carbon is widely used for producing semiconductors, diodes, transistors, sensors, and other electronic components. In addition, rise in global electricity demand has escalated the demand for modern & advanced fuel cells where glassy carbon-based plays a significant role in electrochemical applications. According to a report published by the International Energy Agency (IAE), the global electricity demand has grown by 5% in 2021 and is estimated to grow by 4% in 2022 driven by the global economic recovery. This is predicted to foster the demand for glass-like carbon market during the forecast period.

However, production of glass-like carbon requires highly sophisticated equipment. Also, the isolated chambers used during heat treatment are much costlier. This restrains the manufacturers with low investment potential to enter into the glass-like carbon production; thus, hampering the growth of the glass-like carbon market.

On the contrary, emergence of compressed form of glassy carbon opens possibilities for aerospace applications where low weight and high strength materials are required. Furthermore, glassy carbon is ultra-strong, lightweight, elastic and electrically conductive that makes it best suited for use in integrated circuits, sensors, semiconductors, and other electronic devices of

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aircrafts. This is anticipated to create new opportunities for the expansion of the glass-like carbon market in the aerospace sector in the near future.

The glass-like carbon market is segmented into synthesis, application, and region. On the basis of synthesis, the market is bifurcated into low temperature synthesis and high temperature synthesis. Depending on application, it is fragmented into electrode material, surgical implants, semiconductors and electronics, temperature management, and others. Region-wise, the market is studied across North America, Europe, Asia-Pacific, and LAMEA.

The leading players operating in the global glass-like carbon market include ALS Co., Ltd, Bioanalytical Systems, Inc., Final, Advanced Materials, Merck KGaA, Metrohm AG, PalmSens BV, Redoxme AB, Structure Probe, Inc., Tokai Carbon, and XRD Graphite Manufacturing Co., Ltd. The global glass-like carbon market report provides in-depth competitive analysis as well as profiles of these major players.

Key Benefits For Stakeholders

- This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the glass like carbon market analysis from 2021 to 2031 to identify the prevailing glass like carbon 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 glass like carbon 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 glass like carbon market trends, key players, market segments, application areas, and market growth strategies.

Key Market Segments

By Synthesis

- Low Temperature Synthesis
- High Temperature Synthesis

By Application

- Electrode Material
- Surgical Implants
- Semiconductors and Electronics
- Temperature Management
- Others

By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- Germany
- United Kingdom
- France
- Spain
- Italy
- Rest of Europe
- Asia-Pacific
- China
- India

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- Japan
- South Korea
- Australia
- Rest of Asia-Pacific
- LAMEA
- Brazil
- Saudi Arabia
- South Africa
- Rest of LAMEA
- Key Market Players
- Bioanalytical Systems, Inc.
- ALS Co., Ltd
- Final Advanced Materials
- Merck KGaA
- Metrohm AG
- PalmSens BV
- Redoxme AB
- Structure Probe, Inc
- Tokai Carbon
- XRD Graphite Manufacturing Co., Ltd

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