

# Global Biomass-Derived Hard Carbon Anode Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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## Abstracts

According to our (Global Info Research) latest study, the global Biomass-Derived Hard Carbon Anode market size was valued at US\$ 134 million in 2025 and is forecast to a readjusted size of US\$ 1203 million by 2032 with a CAGR of 37.1% during review period.

Biomass-Derived Hard Carbon Anode is an advanced battery anode material in which the carbon matrix is exclusively derived from renewable biomass feedstocks — primarily coconut shells, rice husks, bamboo, lignin, and bagasse — through controlled high-temperature carbonization processes. Unlike synthetic hard carbon produced from petroleum or coal-tar precursors, biomass-derived hard carbon leverages the naturally disordered, hierarchically porous microstructure of plant-based organic matter to achieve large interlayer spacing, abundant sodium/lithium-ion storage sites, and inherently low production costs. Its advantages include superior rate capability, high coulombic efficiency, long cycle life, and a significantly reduced carbon footprint relative to fossil-fuel-based alternatives. The capacity utilization rate in 2025 reached 78%, and the industry's average gross margin was approximately 35%. Production in 2025 totaled 4,193 tons at an average price of 31,000 USD per ton. The upstream segment mainly consists of coconut shells and pitch, with representative suppliers including Olam Group, Cargill, Baowu Carbon Materials, and Sinopec. The midstream focuses on carbonization, graphitization, particle size control, and purity optimization to ensure consistent electrochemical performance. Downstream applications are primarily in lithium-ion and sodium-ion batteries, with key customers including Panasonic, Samsung SDI, CATL, BYD, and Farasis Energy.

Biomass-Derived Hard Carbon Anodes are the cornerstone of the rapidly expanding

sodium-ion battery industry. Leveraging abundant and low-cost precursors like bamboo, straw, and peanut shells, they offer a pragmatic solution to the supply chain constraints of traditional coconut shell-based carbon. With continuous breakthroughs in closed-pore structure regulation and carbonization processes, these materials are balancing cost-efficiency with electrochemical performance. As sodium-ion batteries penetrate the energy storage, electric two-wheeler, and A00-class EV markets, biomass hard carbon is evolving from a niche alternative into a strategic pillar for next-generation, sustainable energy storage.

This report is a detailed and comprehensive analysis for global Biomass-Derived Hard Carbon Anode market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

#### Key Features:

Global Biomass-Derived Hard Carbon Anode market size and forecasts, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Biomass-Derived Hard Carbon Anode market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Biomass-Derived Hard Carbon Anode market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Biomass-Derived Hard Carbon Anode market shares of main players, shipments in revenue (\$ Million), sales quantity (Tons), and ASP (US\$/Ton), 2021-2026

#### The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Biomass-Derived Hard Carbon Anode

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Biomass-Derived Hard Carbon Anode market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Kuraray (Japan), JFE Chemical (Japan), Kureha (Japan), Sumitomo (Japan), Stora Enso (Finland), Shanshan (China), BTR (China), Putailai (China), Best Graphite (China), HiNa Battery Technology (China), etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

## Market Segmentation

Biomass-Derived Hard Carbon Anode market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

### Market segment by Type

Coconut Shell Based

Rice Husk Based

Others

### Market segment by Specific Capacity

Specific Capacity

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