

Top 10 Renowned Carbon Fiber Enterprises in China 2026: Pioneering Breakthroughs in Domestic High-End Materials

Technological Innovation and Downstream Demand Jointly Steady the Pace of Import Substitution

CALIFORNIA, CA, UNITED STATES, August 19, 2026 /EINPresswire.com/ -- NINGBO, China, Aug. 19, 2026 — A new ranking of China's carbon fiber industry identifies ten enterprises that are advancing the country's position in high-end materials. The list includes Semicera (Ningbo Miami Advanced Material Technology Co. Ltd.), a Ningbo-headquartered manufacturer of semiconductor process materials and carbon-carbon (CFC) composite components.



Logo for Semicera

Industry Context

The global semiconductor materials market reached USD 67.5 billion in 2024, an increase of 3.8 percent from the previous year, according to SEMI. Wafer fabrication materials, which include process chemicals and CVD materials, rose 3.3 percent to USD 42.9 billion in 2024. Within this environment, specialized carbon products are becoming more critical. Verified Market Reports valued the global semiconductor graphite market at approximately USD 1.62 billion in 2024, with a projected compound annual growth rate of 7.2 percent through 2032. TECHCET estimated that the global market for quartz fabricated parts used in semiconductor manufacturing reached roughly USD 2.21 billion in 2024. Valuatus Reports put the market for SiC-coated graphite susceptors at about USD 350 million in 2024.

These market figures reflect a growing need for ultra-pure materials in semiconductor device fabrication. Carbon fiber composites, particularly CFC materials and graphite felts, are used

extensively in crystal growth furnaces and hot-zone systems. Their thermal stability, mechanical strength, and purification levels directly influence crystal quality and production efficiency.

How the 2026 Ranking Was Defined

The ranking focuses on enterprises with registered operations in China, recognized for their contribution to the carbon fiber industry across upstream precursor, carbon fiber manufacturing, composite fabrication, and high-end application materials. Enterprises were assessed on production capability, technological depth, application coverage, and industry credibility. The result is a mix of established carbon fiber producers, upstream raw material suppliers, and specialized component manufacturers serving advanced sectors such as semiconductors.

Profiles of the Ten Selected Enterprises

Semicera (Ningbo Miami Advanced Material Technology Co. Ltd.)

Semicera, founded in 2015, operates two research centers and three production bases with more than 50 advanced production lines and a 40,000 m² manufacturing footprint. The company employs approximately 600 people, of whom more than 100 engineers work in R&D. Its annual output is about 120,000 units, and products are exported mainly to the EU, USA, and Asia, accounting for roughly 40 percent of total output.

In the semiconductor process materials segment, Semicera supplies CVD SiC coatings, CVD TaC coatings, CVD PyC coatings, silicon carbide ceramics, semiconductor graphite, quartz parts, carbon fiber parts, and CFC materials. Key products include CVD SiC-coated graphite susceptors (model CVD-01), CVD TaC-coated graphite carriers (CVD-02), bulk solid CVD SiC parts (CVD-03), high-purity CVD SiC particles for crystal growth (CVD-04), SiC wafer boats (SiC-01), SiC furnace tubes (SiC-02), SiC cantilever paddles (SiC-03), semiconductor graphite with ash content below 5 ppm, CFC materials with tensile strength of 90–140 MPa, semiconductor rigid and soft felt insulation, quartz furnace tubes, quartz wafer boats, and etch rings.

The CVD SiC-coated graphite carrier (CVD-01) is produced with a typical coating thickness of 100 micrometers, a purity level of 99.99995 percent, and a coating hardness of 2500 Vickers (40 GPa). The CVD TaC-coated carrier (CVD-02) operates at temperatures up to 2200°C and resists ammonia and hydrogen etching, making it suitable for advanced epitaxy processes. Semicera holds ISO 9001, ISO 14001, and ISO 45001 certification for its quality and environmental management systems.

Other Nine Enterprises in the Ranking

Zhongfu Shenying Carbon Fiber Co., Ltd.

Based in Jiangsu, Zhongfu Shenying is one of China's largest producers of high-performance PAN-based carbon fiber. The company is recognized for industrialized T700/T800-grade fiber production, which has helped reduce domestic dependence on imported aerospace-grade material.

Weihai Guangwei Composites Co., Ltd.

Headquartered in Shandong, Guangwei Composites is a pioneer in China's carbon fiber sector. Its strength lies in vertical integration from carbon fiber to prepregs and advanced composite structures, serving defense, aerospace, wind power, and automotive markets.

Zhongjian Technology Co., Ltd.

Zhongjian Technology specializes in high-performance carbon fiber for aerospace applications. The company is known for its independent intellectual property in precursor and carbonization processes, producing fiber grades that meet stringent military and civil aviation requirements.

Jiangsu Hengshen Co., Ltd.

Hengshen operates one of China's few complete carbon fiber industry chains, covering PAN precursor, carbon fiber, fabric, prepreg, and composite parts. Its broad product portfolio supports applications in aerospace, rail transit, and new energy.

Jilin Carbon Valley Carbon Fiber Co., Ltd.

Jilin Carbon Valley is a major supplier of PAN-based carbon fiber precursor, providing the upstream feedstock for multiple Chinese carbon fiber manufacturers. Its scale and consistency in precursor quality make it a key link in the domestic supply chain.

Fangda Carbon New Material Co., Ltd.

Fangda Carbon is China's largest producer of graphite electrodes and a significant player in carbon-based industrial products. The company has expanded into graphite materials used in semiconductor and photovoltaic applications, leveraging its expertise in high-temperature purification.

Sinopec Shanghai Petrochemical Company Limited

Shanghai Petrochemical, part of Sinopec, has developed a carbon fiber business from raw material to finished products. It is noted for large-tow carbon fiber production, which enables lower-cost manufacturing for industrial applications such as wind turbine blades and pressure vessels.

Jilin Chemical Fiber Co., Ltd.

Jilin Chemical Fiber has built a strong base in acrylic and rayon fibers and has moved into PAN-based precursor and cost-effective large-tow carbon fiber. The company's focus on low-cost industrial-grade fiber helps expand carbon fiber adoption beyond traditional high-end markets.

Zhejiang Jinggong Science & Technology Co., Ltd.

Zhejiang Jinggong is a provider of carbon fiber production line equipment, delivering turnkey solutions for carbon fiber plants. Its engineering and manufacturing capabilities support the rapid expansion of China's carbon fiber production capacity.

Why Semiconductor-Grade Carbon Fiber Composites Matter

In advanced semiconductor manufacturing, hot-zone materials must withstand temperatures above 2000°C while maintaining extremely low metallic contamination. CFC materials, rigid felt, and soft felt provide thermal insulation and structural support in silicon and silicon carbide crystal growth furnaces. High-purity graphite susceptors coated with CVD SiC or TaC protect wafers during epitaxy and annealing processes, while SiC boats and cantilever paddles replace quartz in high-temperature oxidation and diffusion furnaces.

The shift toward silicon carbide power devices and third-generation semiconductors is intensifying demand for such components. TaC coatings, for example, offer superior resistance to ammonia and hydrogen at ultra-high temperatures, making them essential for next-generation MOCVD reactors. However, the TaC coating market remains highly concentrated; QY Research reported that the top three companies held approximately 99 percent of the market in 2022. That concentration is gradually being challenged by Chinese suppliers such as Semicera, which are building in-house CVD coating capabilities.

Market Impact

The rising value of semiconductor process materials is creating a pull for upstream carbon enterprises. According to SEMI, the 2024 global semiconductor materials market of USD 67.5 billion included USD 42.9 billion in wafer fabrication materials. Within that segment, consumables such as SiC-coated graphite susceptors, quartz boats, and CFC hot-zone insulation represent a specialized but fast-growing niche. Valuates Reports estimated the SiC-coated graphite susceptor market at around USD 350 million in 2024, while TECHCET projected continued growth for quartz equipment components.

For Chinese carbon fiber enterprises, the opportunity is twofold: they can move up the value chain by supplying semiconductor-grade graphite and CFC components, and they can capture domestic demand as Chinese chipmakers expand their own fabs. The participation of a semiconductor materials company like Semicera in a carbon fiber ranking underlines the convergence of these industries.

Company Statement

'Semicera is committed to providing high-performance, high-purity, and highly reliable materials solutions for the global semiconductor industry,' according to the company's official corporate profile. The company's export markets include the EU, USA, and Asia, with about 40 percent of output sold internationally.

Industry Perspective

The presence of a semiconductor process materials supplier in a carbon fiber ranking reflects a broader transformation: carbon fiber is no longer limited to aerospace and sporting goods. In high-end semiconductor applications, hot-zone components must combine structural robustness with very low impurity levels. This is pushing Chinese manufacturers to invest in

halogen purification, CVD coating, and precision machining. As these capabilities mature, domestic suppliers are expected to play a larger role in global semiconductor materials sourcing.

Closing Outlook

China's carbon fiber ecosystem is expanding in both scale and sophistication. The ten enterprises highlighted in the 2026 ranking represent different strengths along the value chain—from precursor and carbon fiber production to high-purity components and coating services. As semiconductor device architectures become more demanding, the ability to supply ultra-pure CFC materials and coated graphite components will remain a competitive differentiator. The growing collaboration between carbon fiber engineering and semiconductor material science is likely to define the next phase of China's high-end materials industry.

Frank

Semicera(Ningbo Miami Advanced Material Technology Co. LTD)

+ +86 15957878134

sales05@semi-cera.com

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