

INDUSTRY OVERVIEW

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OVERVIEW OF GLOBAL AND CHINA MICRO- AND NANOFABRICATION MARKET

Introduction of Micro- and Nanofabrication Market

Micro- and Nanofabrication refers to the use of advanced precision equipment and technical processes to produce high-accuracy, high-complexity, and miniaturized functional components and systems at micro- and nanoscale. Microfabrication means the use of manufacturing processes such as lithography, deposition, etching, bonding and assembly to produce devices and structures with characteristic feature sizes of approximately 101 to 1,000 micrometers. Nanofabrication means the use of manufacturing processes to create and control structures with characteristic feature sizes of approximately 1 to 100 nanometers. Micro- and nanofabrication means the use of such processes across both scales to produce devices and structures with characteristic feature sizes of approximately 1 nanometer to 1,000 micrometers.

As one of the most important application sectors for micro- and nanofabrication, the global semiconductor market reached RMB5,136.8 billion in 2025 and is projected to grow to RMB7,755.3 billion by 2030, representing a CAGR of 8.1% from 2026 to 2030. Within the semiconductor industry, semiconductor test consumables are indispensable for ensuring production efficiency and yield. Leveraging micro- and nanofabrication technologies, these consumables meet the stringent precision, reliability, and consistency demands of semiconductor production. The global semiconductor test consumables market reached RMB27.9 billion in 2025 and is expected to expand to RMB37.2 billion by 2030, with a CAGR of 6.0% from 2026 to 2030.

In addition to the semiconductor test consumables market, the Micro-Electro-Mechanical Systems (MEMS) market represents another major application area for emerging micro- and nanofabrication technologies in the semiconductor field. In 2025, the global MEMS market reached RMB124.6 billion and is projected to grow to RMB170.9 billion by 2030, representing a CAGR of 6.7% from 2026 to 2030. Benefiting from their advantages in miniaturization, high precision, and reliability, MEMS devices are increasingly used in semiconductors, consumer electronics, automotive electronics, and other fields, driving sustained demand for advanced micro- and nanofabrication capabilities.

Drivers and Trends of Global and China Micro- and Nanofabrication Market

- **Rising Demand and Technology Upgrades:** Growing downstream demand from semiconductors, consumer electronics, IoT and AI, coupled with accelerated technology iteration, drives the development of the global micro- and nanofabrication industry and raises requirements for high-precision, large-scale manufacturing capabilities.

INDUSTRY OVERVIEW

- **Policy Support and Strategic Initiatives:** Policies such as the 14th Five-Year Plan for High-Quality Manufacturing Development (《“十四五”製造業高質量發展規劃》), along with initiatives like the U.S. NNI and EU Chips Act, support R&D and industrialization, promoting industry growth and supply chain development.

Entry Barriers of Global and China Micro- and Nanofabrication Market

The industry presents high entry barriers due to technological complexity, scale requirements, customer qualification and capital intensity.

- **Technological and Manufacturing Barriers:** Micro- and nanoscale production requires advanced processing, precision assembly and stable high-yield control. Consistent quality at scale depends on strong process capabilities and manufacturing experience, forming significant barriers.
- **Customer Qualification and Resource Barriers:** Downstream sectors such as semiconductors and automotive electronics require strict certification and long testing cycles. High switching costs create strong customer stickiness, making it difficult for new entrants to access supply chains.

Fluctuations in Global and China Micro- and Nanofabrication

During the Track Record Period, the micro- and nanofabrication industry experienced volatility, mainly due to semiconductor cyclicalities and raw material price fluctuations. In 2023, post-pandemic demand adjustment led the global semiconductor market to decline from USD574.1 billion in 2022 to USD527.0 billion, before bouncing back to USD627.6 billion in 2024. Downstream inventory reduction weakened demand for FT probes, while prior capacity expansion intensified competition and margin pressure. With semiconductor recovery and AI-driven demand, the market rebounded in 2024 and 2025. Meanwhile, rising copper prices over recent years added cost pressure and profitability fluctuations.

Challenges in the Global and China Micro- and Nanofabrication Market:

- **Low Localization Rate of High-End Equipment and Materials:** China remains reliant on imports for core equipment and materials such as lithography and etching systems. Domestic products still lag in precision, stability and reliability, constraining high-end manufacturing and value-added capability.
- **High Investment Intensity and Market Volatility:** Micro-nano fabrication requires continuous capital investment in equipment and R&D. Cyclical downstream demand and rising competition lead to unstable capacity utilization and profitability pressure, challenging sustained investment and innovation.

INDUSTRY OVERVIEW

OVERVIEW OF GLOBAL AND CHINA MEMS MICRO- AND NANOFABRICATION COMPONENTS MARKET

Introduction of MEMS Micro- and Nanofabrication Components Market

MEMS micro- and nanofabrication components are the foundational structural elements of MEMS systems, which integrate microscale mechanical and electronic parts to achieve high-precision sensing, actuation and energy conversion. Characterized by miniaturization, high integration, intelligence and low power consumption, MEMS devices are widely applied in consumer electronics, automotive and IoT sectors. Key components include shielding covers, micro-mechanical structures and micro connectors, supporting core MEMS devices such as acoustic, pressure and optical sensors as well as various actuators.

The production of MEMS micro- and nanofabrication components involves ultra-precise micro- and nanoscale processing, resulting in high technical, mass production, capital and certification barriers. Driven by strong demand from next-generation consumer electronics, automotive electronics and IoT applications worldwide and in China, the market has evolved from simple low-precision components toward intelligent, highly integrated and high-precision solutions, supporting robust industry expansion.

Market Size of Global and China MEMS Micro- and Nanofabrication Components

The global MEMS micro- and nanofabrication components market primarily includes key segments such as acoustic modules, optical modules, pressure sensors, inertial sensors, and other components. In recent years, global MEMS micro- and nanofabrication components market has experienced rapid expansion, with a CAGR of 6.4% from 2021 to 2025. In 2025, the global MEMS micro- and nanofabrication components market achieved RMB7.5 billion in revenue. Looking ahead, the market is projected to maintain strong growth momentum, with an estimated CAGR of 6.7% from 2026 to 2030. In the segmented market, acoustic modules MEMS micro- and nanofabrication components demonstrated the highest growth rate due to strong downstream demand, achieving a remarkable CAGR of 7.3% from 2021 to 2025. MEMS acoustic module primarily consists of microphone module and miniature speaker module. Currently, miniature speaker parts account for a relatively small market share. However, with the commercialization of embodied AI technologies, this segment is poised for exponential growth, emerging as a key driver for the expansion of the MEMS acoustic module micro- and nanofabrication components market. In 2025, the global MEMS acoustic module micro- and nanofabrication components market achieved RMB1.1 billion in revenue. The market is projected to maintain steady growth with an estimated CAGR of 8.7% during the 2026-2030 period.

Driven by the strong policy support for China’s MEMS and micro-nano manufacturing industries, the accelerated localization of the MEMS industrial chain, and the growing demand from emerging fields, the China MEMS micro- and nanofabrication components market size expanded from RMB518.4 million in 2021 to RMB816.6 million in 2025, with a CAGR of 12.1% from 2021 to 2025. Supported by the increasing demand for high-precision MEMS components in emerging fields such as domestic smart cars and IoT terminals, and the accelerated localization of MEMS industrial chains, the market size is expected to grow from RMB920.4 million in 2026 to RMB1,542.0 million in 2030, with a CAGR of 13.7% from 2026 to 2030.

INDUSTRY OVERVIEW

The global market for MEMS micro- and nanofabrication components is composed of distinct segments. Each segment is characterized by its unique technical principles and downstream applications, as illustrated in the table below.

Sub-segment	Acoustic Modules	Optical Module	Pressure Sensors	Inertial Sensors
Technical Principle Differences	Based on the piezoelectric or capacitive effect generated by the vibration of micro-diaphragms, it converts sound signals into electrical signals. The core lies in the effective conversion and transmission of sound signals.	Based on the photoelectric effect triggered by optical signals, it converts optical signals into electrical signals. The core lies in the precise processing of light reception, reflection, or refraction.	Based on the piezoresistive or capacitive changes under pressure, it converts physical pressure into electrical signals. The core lies in the precise quantitative conversion of physical pressure.	Based on the signal changes generated by inertial forces acting on gyroscopes or accelerometers, it converts motion states into electrical signals. The core lies in the precise perception of an object's motion state.
Differences in Downstream Application Scenarios	Focusing on scenarios related to sound interaction and collection, it is mainly applied in products that need to process sound signals, such as mobile phone microphones, TWS earbuds, and smart speakers.	Focusing on scenarios related to vision and optical detection, it is mainly applied in automotive lidar for distance measurement, AR/VR devices for imaging effects, and industrial optical detection instruments.	Focusing on scenarios related to pressure monitoring, it is mainly applied in products that require real-time pressure monitoring, such as automotive tire pressure monitoring systems, industrial pipeline pressure control equipment, and medical sphygmomanometers.	Focusing on scenarios related to motion and positioning, it is mainly applied in satellite attitude control, vehicle stability systems, high-precision positioning for autonomous driving, and motion trajectory correction for industrial robots.
Leading Players in This Field	Knowles Electronics	AMS-OSRAM	WiKA	Anhui XDLK Microsystem

A clear strategic divide exists between industry leaders and other market players. Leading enterprises rely on mature technologies, extensive customer networks and strong financial strength to operate across multiple sensor categories (acoustic, optical, pressure, inertial, etc.). By contrast, smaller players are constrained and tend to focus on a single sub-segment.

This divergence reflects two core barriers. First, customer groups vary significantly across sensor types, requiring costly new channel development for cross-segment expansion. Second, technologies and R&D paths differ substantially across categories, demanding heavy, independent investment in R&D and production equipment. Diversified strategies are thus difficult for enterprises with limited resources.

Accordingly, a precise competitive analysis should focus on individual sub-segments, where firms compete on comparable technology, customer and scale dimensions.

Competitive landscape of Global MEMS Acoustic Module Micro- and Nanofabrication Components Market

The top five players of the global MEMS acoustic module micro- and nanofabrication components market in 2025 was 66.2%. In terms of revenue, the Company ranked second with a market share of 12.4% in 2025.

Drivers and Trends of Global and China MEMS Micro- and Nanofabrication Components Market

- **Diversified End-Use Applications:** Robust demand from consumer electronics, automotive, medical and intelligent devices, together with advancements in AI and IoT, drives market expansion. Emerging use cases such as smart home acoustic sensors further unlock new growth opportunities.;
- **Technology Evolution:** Industry trends toward intelligent signal processing, multi-sensor integration, and nanometer-scale precision, are fueled by semiconductor process breakthroughs and supply chain collaboration, and elevate MEMS performance and application potential;

INDUSTRY OVERVIEW

- **Overseas Procurement Growth:** Chinese manufacturers have achieved technological parity with international peers in key segments such as acoustic and pressure sensors. Amid global supply chain restructuring and ongoing cost optimization, international downstream customers have increasingly adopted high-quality components produced in China.

Entry barriers of Global and China MEMS Micro- and Nanofabrication Components Market

- **Technical Barriers & Localization Gaps:** Limited domestic substitution of core processes and equipment (such as lithography, etching and wafer-level packaging) restricts industrial breakthroughs. Domestic alternatives lag behind in precision, stability and integration capabilities, which hinders the yield and performance of high-end MEMS sensors and slows the pace of localization and industrial upgrading.
- **Insufficient Industrial Chain Synergy:** Weak collaboration between upstream material and equipment suppliers and downstream design and application enterprises, together with fragmentation in individual production links, has prolonged product iteration cycles and reduced responsiveness to rapidly changing market demands.

COMPARISON OF MICRO-AND NANOFABRICATION MANUFACTURING TECHNOLOGIES

Our Company utilizes a stamping-based process to produce its MEMS components and a laser-based fabrication process for its semiconductor probes. The table below compares these technologies with conventional machining and electroplating methods.

Technologies Name	Advantages	Disadvantages
Stamping-based Process	Extremely high mass production efficiency, suitable for large-scale standardized production. Low unit processing cost and good process stability, which is in line with the manufacturing of large-scale and standardized products.	High initial mold investment and low process flexibility. Once the product design is changed, the cost of mold adjustment or replacement is high and the cycle is long.
Conventional Machining Process	Extremely high flexibility, suitable for complex prototype production, small-batch customization, and scenarios with a wide range of material applicability. Low entry cost for equipment.	Low production efficiency, high unit cost, and difficulties in achieving large-scale and consistent control of yield and precision.
Laser-based Fabrication Process	No physical contact is required, complex geometric shapes can be processed, the yield is high, and digital control enables rapid switching of production tasks.	High equipment investment, challenges in processing specific high-reflectivity materials, and professional technical support is required for operation and maintenance.
Conventional Electroplating Process	It can form a uniform and dense coating on the surface of the substrate, improving the wear resistance, corrosion resistance, and electrical conductivity of the product.	There are environmental risks and high treatment costs; it is difficult to precisely control the uniformity of the coating thickness

OVERVIEW OF GLOBAL AND CHINA SEMICONDUCTOR TEST PROBE MARKET

Introduction of Semiconductor Test Probe Market

Semiconductor testing primarily consists of three key phases: design verification during chip development, wafer-level testing through Chip Probing (CP), and post-packaging testing via Final Test (FT). Test probes serve as critical consumables across all testing stages, forming electrical connections

INDUSTRY OVERVIEW

between test equipment and chips to evaluate performance. By analyzing test data, engineers identify failure causes to optimize design, production, and packaging processes, ultimately improving yield rates and product quality. Both global and China semiconductor test probe markets demonstrate strong growth momentum, with sustained expansion expected in coming years.

Market Size of Global and China Semiconductor Test Probe

In recent years, the global semiconductor test probe market has exhibited cyclical growth patterns, primarily influenced by the semiconductor industry’s inherent volatility, recording a CAGR of 3.1% from 2021 to 2025. In 2025, the global semiconductor test probe market achieved RMB12.1 billion in revenue. Looking ahead, the market is projected to maintain strong growth momentum, with an estimated CAGR of 6.6% from 2026 to 2030. Within the segmented markets, the FT probe sector has shown particularly strong growth momentum. This acceleration is primarily attributed to two key factors: the substantial increase in GPU shipments driven by surging AI computing demands, which has significantly boosted FT probe requirements; and the enhanced testing needs resulting from advanced packaging technologies, leading to a marked rise in probe utilization. As a result, the FT probe market recorded a CAGR of 3.5% from 2021 to 2025, and is projected to maintain steady growth with an estimated CAGR of 7.5% during the 2026-2030 period.

Driven by policy backing for semiconductor self-sufficiency, rapid capacity expansion of domestic wafer fabs, robust demand from AI chips and automotive semiconductors, and accelerated import substitution of high-performance final test probes, the China FT probe market grew from RMB600.6 million in 2021 to RMB798.0 million in 2025, achieving a CAGR of 7.5% from 2021 to 2025. Going forward, supported by escalating test requirements for advanced packaging and high-computing chips, the market is projected to rise from RMB910.8 million in 2026 to RMB1.384 billion in 2030, with a CAGR of 11.0% over 2026–2030.

Competitive Landscape of the Global Semiconductor Test Probe Market

The top five players of the global Semiconductor Test Probe Market in 2025 was 33.8%. In terms of revenue, the Company ranked ninth with a market share of 2.1% in 2025.

Competitive landscape of Global Semiconductor FT Probe Market

The top five players in the global semiconductor FT probe market accounted for an aggregate market share of 42.9% in 2025. In terms of revenue, our Company ranked fourth with a market share of 6.6% in 2025.

INDUSTRY OVERVIEW

Drivers and Trends of Global and China Semiconductor Test Probe Market

- **Downstream Demand Growth:** Expansion in AI, computing power, IoT and new energy vehicles has driven the growth of the semiconductor industry. As critical testing consumables, test probes benefit from the long-term upward trend in testing demand, supporting sustained market expansion.
- **Tech Advancements Boost Testing Needs:** Shrinking process nodes (to 3nm and beyond), the adoption of Chiplet architectures, as well as 3D and heterogeneous packaging have increased chip complexity, multiplying test steps, test points and probe usage, thereby driving stronger demand for advanced probe technologies.
- **Shift to High-Performance, Intelligent and Automated Solutions:** Test probes are evolving toward higher frequency, precision and durability. The integration of AI and big data enables adaptive intelligent testing, while fully automatic probe stations have become standard configurations to improve testing efficiency and satisfy mass production requirements.

Challenges in the Global and China Semiconductor FT Probe Market

- **Accelerated Testing Tech Iteration & Rising R&D Costs:** Rapid process iteration toward 3nm/2nm advanced nodes has raised performance requirements for FT probes, necessitating sustained heavy investment in R&D and equipment, and further elevating industry entry barriers.
- **Specialized Material Dependence & Cost Volatility:** FT probes rely on high-purity alloys and specialized insulating materials with concentrated supply chains. Fluctuations in material prices and supply stability may exert impacts on production costs and overall profitability.
- **Post-Pandemic Lag & Market Volatility:** Post-pandemic lag effects in 2023 led to semiconductor demand adjustments; downstream manufacturers reduced procurement of FT probes, resulting in slower demand growth. Meanwhile, capacity expansions during the pandemic led to elevated inventory digestion pressure and intensified industry competition.

Entry Barriers in the Global Semiconductor FT Probe Market

The semiconductor FT probe industry has high entry barriers, mainly in technical complexity, customer certification and capital intensity.

- **Technical and Manufacturing Barriers:** FT probe R&D and production demand high precision, process stability and interdisciplinary expertise. Accumulated experience in design, quality and process control creates high thresholds for new entrants to reach required yield, reliability and consistency.
- **Customer Qualification and Resource Barriers:** High-end downstream customers apply strict supplier qualification and long-cycle reliability testing. High switching costs lead to strong customer loyalty, making it difficult for new players to obtain certification and enter the supply chain.

INDUSTRY OVERVIEW

OVERVIEW OF GLOBAL AND CHINA MINIATURE TRANSMISSION SYSTEM IN SWEEPING ROBOT MARKET

Definition and Current Status of Miniature Transmission Systems

Miniature transmission systems are precision mechanical assemblies that enable power transmission and motion conversion in compact spaces. Comprising core components such as micro motors and gears, along with housings, brackets, and bearings, these systems prioritize motion control, speed regulation, direction adjustment, and precision over sheer power output.

Miniature transmission systems are widely applied in robotics, serving as core components for precision power delivery and motion control. In sweeping robots, they enable accurate movement, obstacle navigation, and cleaning path planning. With the rising penetration of smart cleaning devices, demand for compact, efficient, and low-noise transmission solutions has accelerated. Domestic manufacturers are advancing high-precision reducers and gear modules tailored for sweeping robots, supporting performance upgrades and integration with intelligent navigation technologies such as AI and IoT.

Overview of Service Robots

Robots are programmable, autonomous systems designed to perform tasks. They can be classified into industrial robots, service robots, special-purpose robots and other types. Service robots support daily activities across various scenarios and include public and personal/household types, with sweeping robots falling into the latter category.

Overview of Micro Transmission Systems in Service Robots

Micro transmission systems are precision mechanical components that enable power transmission and motion control in service robots with sweeping robots representing a key application segment. Widely applied in locomotion, navigation and actuation, they support compact design, high efficiency, low noise and durability.

Market Size of Global and China Miniature Transmission Systems in Service Robot Market

The global robotics market has maintained strong growth momentum, driven by increasing automation demand, AI integration, and industrial upgrading across major economies. China remains the world’s largest and fastest-growing robotics market, expanding from RMB4.6 billion in 2021 to RMB10.8 billion in 2025 with a CAGR of 23.5%, and expected to increase to RMB33.8 billion in 2030, achieving a CAGR of 25.9%. The global market expanded from RMB15.1 billion in 2021 to RMB31.8 billion in 2025, representing a CAGR of 20.4% during 2021–2025, and is projected to rise to RMB75.7 billion in 2030, reflecting an accelerated CAGR of 19.1% for 2026–2030.

Competitive Landscape of China Miniature Transmission Systems in Service Robot Industry

The China Miniature Transmission Systems in Service Robot Industry market is relatively fragmented. In terms of revenue, the top five players take the 23.7% market share, and the company ranked eighth with market share of 1.7% in 2025.

INDUSTRY OVERVIEW

Market Size of Global and China Miniature Transmission Systems in Sweeping Robot Market

The global miniature transmission systems in sweeping robot market has experienced steady growth, supported by rising adoption of smart home cleaning solutions worldwide. According to Frost & Sullivan, the global miniature transmission systems in sweeping robot market grew from RMB6.9 billion in 2021 to RMB10.7 billion in 2025, representing a CAGR of 11.6% during 2021–2025, and is projected to rise to RMB23.1 billion in 2030, with an accelerated CAGR of 17.0% for 2026–2030. China accounted for a significant share of the global market, expanding from RMB1.7 billion in 2021 to RMB2.7 billion in 2025, with a CAGR of 12.0%, and is expected to grow to RMB6.5 billion in 2030, reflecting a CAGR of 19.2% over the same period.

Competitive Landscape of China Miniature Transmission Systems in Sweeping Robot Industry

The China miniature transmission systems market for sweeping robots is relatively concentrated, and the top five players in 2025 was 61.1%. In terms of revenue, the company ranked fourth with market share of 6.8% in 2025.

Drivers and Trends of China Miniature Transmission Systems in Sweeping Robot Industry

- **Growing Demand from Downstream Applications:** Growth in smart home appliances and service robotics is driving demand for miniature transmission systems in sweeping robots. Rising household penetration and improving performance are accelerating adoption of compact, high-precision modules.
- **Policy Support Driving Industry Growth:** Policies such as The Development Plan for Intelligent Manufacturing (2021–2025) (《智能製造發展規劃(2021-2025年)》) promote advanced manufacturing in home appliances and support innovation in miniature transmission systems, while local incentives strengthen the domestic supply chain.
- **Advancement towards Intelligent and Automated Systems:** Miniature transmission systems are advancing towards greater intelligence and automation, with AI and sensor integration enabling adaptive navigation and driving demand for high-precision solutions.

Challenges in China’s Miniature Transmission System Industry

- *Dependence on Imports for Core Technologies:* The industry still relies on overseas players for key technologies such as precision gear design and durability optimization. Domestic products, despite rapid progress, lag in torque density, noise control and reliability, constraining upgrading and localization.
- *Difficulties in Balancing Cost and Quality:* Price-sensitive downstream demand contrasts with the high cost of precision manufacturing. Cost reduction may affect yield and reliability, while higher quality increases pricing pressure, making cost-performance balance a key challenge.

Entry Barriers in China’s Miniature Transmission System Industry

China’s miniature transmission system industry presents relatively high entry barriers, driven by technological complexity, scale requirements, and customer certification.

INDUSTRY OVERVIEW

- Achieving high torque density, low noise and long service life requires advanced capabilities in precision gear design, micro-processing and high-reliability assembly. Stable large-scale production further depends on mature process control and manufacturing experience, forming significant technical barriers.
- *Cost and Economies-of-Scale Barriers:* Price sensitivity in downstream consumer robots necessitates cost competitiveness. Manufacturers rely on scale and supply-chain optimization to reduce costs, making it difficult for new entrants to match established players before reaching sufficient scale.

HISTORICAL PRICE TRENDS OF MAJOR RAW MATERIAL

Prices of major metal raw materials have shown notable fluctuations over the past five years. In general, most metals experienced an increase during the post-pandemic recovery period and then partially corrected as supply recovered and downstream demand normalized. Looking ahead, prices of these raw materials are expected to move within a relatively narrow range.

- **Copper:** Global copper prices rose significantly during 2020–2021, driven by a rapid post-pandemic recovery in industrial and infrastructure demand, accelerated electrification-related applications, supply disruptions in major producing countries, and low inventory levels amid highly accommodative global liquidity conditions. After that step-up, copper prices generally stayed at a relatively elevated level through 2021–2023. Copper prices continued to rise in 2024 and 2025, primarily driven by improving demand expectations, supply constraints and growing energy transition demand, and are expected to increase moderately going forward. The price of copper from 2021 to 2025 was RMB60,104.7, RMB59,409.8, RMB60,122.2, RMB65,783.8, and RMB71,049.6 per tonne, respectively.
- **Stainless steel (hot rolled stainless steel of grade 304):** Stainless steel prices were broadly stable initially, then rose with the post-pandemic recovery in manufacturing and durable goods demand, before easing as industrial growth moderated and downstream sectors destocked; although raw material prices fluctuated, stainless steel prices increased in 2025, driven by multi-factor cost structures, supply-side adjustments and recovering downstream demand. The price of stainless steel from 2021 to 2025 was RMB13,611.2, RMB19,379.5, RMB18,757.3, RMB14,362.6, and RMB18,609.6 per tonne, respectively. Stainless steel prices are expected to remain broadly range-bound, with weak traditional demand offset by resilient growth in new energy and high-end applications.
- **Nickel (primary nickel):** Nickel prices increased in 2021, supported by post-pandemic recovery and strong demand from stainless steel and battery materials, before declining from 2022 to 2025 due to large-scale capacity expansions in major producing regions and slower demand growth. The price of primary nickel from 2021 to 2025 was RMB119,127.3, RMB174,060.8, RMB152,442.4, RMB121,002.7, and RMB108,962.4 per tonne, respectively. Looking forward, prices are expected to remain under near-term pressure amid ample supply, with gradual stabilization as higher-cost capacity is phased out and market balance improves.
- **Iron ore:** Iron ore prices declined from 2021 to 2022 amid easing post-pandemic steel demand and policy-driven output controls, remained relatively stable from 2022 to 2024 as supply and demand reached a more balanced level, and fell again from 2024 to 2025 due to

INDUSTRY OVERVIEW

weaker property-related demand and ample seaborne supply. The price of iron ore from 2021 to 2025 was RMB1,020.3, RMB812.2, RMB851.9, RMB799.3, and RMB733.2 per tonne, respectively. Going forward, prices are expected to remain broadly stable to slightly soft, supported by moderate steel demand and sufficient global supply.

SOURCE OF INFORMATION

In connection with the [REDACTED], we have engaged Frost & Sullivan to conduct a detailed analysis and to prepare an industry report on the global and China’s micro- and nanofabrication markets. Frost & Sullivan is an independent global market research and consulting company founded in 1961 and is based in the U.S. Services provided by Frost & Sullivan include market assessments, competitive benchmarking and strategic and market planning for a variety of industries. We have included certain information from the Frost & Sullivan Report in this document because we believe such information facilitates an understanding of the micro- and nanofabrication market for potential [REDACTED]. Frost & Sullivan prepared its report based on its in-house database, independent third-party reports and publicly available data from reputable industry organizations. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesize information in relation to the market, prices and other relevant information. Frost & Sullivan believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. Frost & Sullivan research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources. We have agreed to pay Frost & Sullivan a fee of RMB900,000 for the preparation of the Frost & Sullivan Report. The payment of such amount was not contingent upon our successful [REDACTED] or on the content of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other industry report in connection with the [REDACTED]. We confirm that after taking reasonable care, there has been no adverse change in the market information since the date of the report prepared by Frost & Sullivan, which may qualify, contradict or have an impact on the information set forth in this section in any material respect.