

Company Code: 688005

Company Abbreviation: Ronbay Technology

**Ningbo Ronbay New Energy Technology Co., Ltd.**  
**2024 Annual Report Summary**

## Section I Important Notes

- 1、 This annual report summary is derived from the full annual report. For a comprehensive picture of the Company's operating performance, financial status, and future development plans, investors are encouraged to carefully read the full annual report on the website [www.sse.com.cn](http://www.sse.com.cn).**
- 2、 The Company's Board of Directors, Board of Supervisors, directors, supervisors, and senior management personnel guarantee the authenticity, accuracy, and completeness of the annual report, ensuring there are no false records, misleading statements, or significant omissions, and they bear individual and joint legal responsibilities.**
- 3、 All directors of the Company attended the Board of Directors meeting.**
- 4、 Pan-China Certified Public Accountants (Special General Partnership) issued a standard unqualified audit report for the Company.**
- 5、 Profit distribution plan or capital reserve capitalization plan for the reporting period approved by the Board of Directors**

According to the audit by Pan-China Certified Public Accountants (Special General Partnership), as of December 31, 2024, the parent company's distributable profits at the end of the period amount to RMB 268,284,854.38. Upon review by the Company's Board of Directors, the Company plans for the 2024 fiscal year to distribute profits based on the total share capital of 714,725,470 shares registered on the equity distribution record date, excluding 10,090,435 treasury shares in the special repurchase securities account, resulting in a base of 704,635,035 shares. It is proposed to distribute a cash dividend of 3.70 yuan (tax inclusive) per 10 shares to all shareholders, totaling a planned cash dividend of 260,714,962.95 yuan (tax inclusive), which accounts for 88.11% of the net profit attributable to shareholders of listed companies as per the 2024 consolidated financial statements. The Company will not issue bonus shares and will not capitalize the capital reserve. If there are changes in the Company's total share capital due to convertible bond conversions, share repurchases, share repurchases and cancellation for equity incentive grants, or share repurchases and cancellation for major asset restructurings between the announcement disclosure date and the equity distribution record date, the Company plans to maintain the per-share distribution ratio unchanged and adjust the total distribution amount accordingly. If there are subsequent changes in the total share capital, a separate announcement

will be made detailing the specific adjustments.

The Company's 2024 profit distribution plan has been reviewed and approved by the Fourth Session of the Third Board of Directors and the Fourth Session of the Third Board of Supervisors, and still needs to be submitted for review by the shareholders' general meeting.

The Company held the third session of the third Board of Directors on December 27, 2024, and reviewed and approved the *Proposal on the Capital Reserve Capitalization Plan for the Third Quarter of 2024*, which was subsequently reviewed and approved by the temporary shareholders' general meeting on January 15, 2025, agreeing to capitalize the capital reserves to shareholders at a rate of 4.9 shares for every 10 shares. The Company completed the equity distribution in March 2025, with a total of 231,725,615 shares converted, increasing the total share capital to 714,725,470 shares. Details are provided in the Third Quarter 2024 Equity Distribution Announcement (2025-005) disclosed on the Shanghai Stock Exchange website (www.sse.com.cn) on February 28, 2025.

## Section II Definitions

In this report, unless the context indicates otherwise, the definitions of following terms apply:

Definitions of Common Terms		
Company, The Company, and Ronbay Technology	refers to	Ningbo Ronbay New Energy Technology Co., Ltd.
Ronbay Lithium Battery	refers to	Ningbo Ronbay Lithium Battery Material Co., Ltd., the predecessor of Ronbay Technology, originally named Ningbo Jinhe Lithium Battery Material Co., Ltd.
Jinhe Lithium Battery	refers to	Ningbo Jinhe Lithium Battery Material Co., Ltd., later renamed Ningbo Ronbay Lithium Battery Material Co., Ltd.
Hubei Ronbay	refers to	Hubei Ronbay Lithium Battery Material Co., Ltd., a wholly-owned subsidiary of the Company
Beijing Ronbay	refers to	Beijing Ronbay New Energy Technology Co., Ltd., a wholly-owned subsidiary of the Company
Tianjin Ronbay	refers to	Tianjin Ronbay Skyland Technology Co., Ltd., a subsidiary controlled by the Company
EMT Corporation/EMT	refers to	Energy Material Technology Co., Ltd., a subsidiary controlled by the Company
Shanghai Ronbay	refers to	Shanghai Ronbay New Energy Investment Partnership (Limited Partnership), the controlling shareholder of the Company
Ronbay Management	refers to	Beijing Ronbay New Energy Investment Management Co., Ltd.
Ronbay Development	refers to	Beijing Ronbay New Energy Investment Development Co., Ltd.
Ronbay Technology Investment	refers to	Beijing Ronbay New Energy Technology Investment Management Co., Ltd.

Zunyi Ronbay Partnership	refers to	Zunyi Ronbay New Energy Investment Center (Limited Partnership)
Haiyu Investment	refers to	Huzhou Haiyu Equity Investment Partnership (Limited Partnership)
BAK Power	refers to	Shenzhen BAK Power Battery Co., Ltd. and its subsidiary Zhengzhou BAK Battery Co., Ltd.
Contemporary Amperex Technology Limited/CATL	refers to	Contemporary Amperex Technology Co., Limited and its subsidiaries: Jiangsu Contemporary Amperex Technology Limited, Fuding Contemporary Amperex Technology Limited, Sichuan Contemporary Amperex Technology Limited, and SAIC-CATL Power Battery Co., Ltd.
EVE Energy	refers to	Huizhou EVE Energy Co., Ltd. and its subsidiaries Huizhou EVE Chuangneng Battery Co., Ltd., Huizhou EVE Jineng Co., Ltd., and Hubei EVE Power Co., Ltd.
GEM	refers to	GEM Co., Ltd., Jingmen GEM New Materials Co., Ltd., GEM (Wuxi) Energy Materials Co., Ltd.
Lygend Resources	refers to	Lygend Resources & Technology Co., Ltd.
WeLion New Energy	refers to	Beijing WeLion New Energy Technology Co., Ltd.
Samsung SDI	refers to	Samsung SDI Co., Ltd., a subsidiary of Samsung Group
Tianqi Lithium	refers to	Chengdu Tianqi Lithium Co., Ltd.
Albemarle	refers to	Albemarle Management (Shanghai) Co., Ltd.
GGII/Gaogong Industrial Institute	refers to	A research and consulting firm focused on strategic emerging industries in China, with institutes for lithium batteries, electric vehicles, LED, robotics, new materials, and intelligent vehicles.
Lithium Battery	refers to	A type of battery using lithium metal or lithium alloy as cathode material and using non-aqueous electrolyte solution. Lithium batteries can be divided into lithium metal batteries and lithium-ion batteries. All references to "lithium batteries" in this report are lithium-ion batteries.
Lithium-Ion Battery	refers to	A secondary battery (rechargeable battery) that operates primarily by moving lithium ions between the cathode and anode. In the process of charging and discharging, Li <sup>+</sup> is embedded and de-embedded between the two electrodes. During charging, Li <sup>+</sup> is de-embedded from the cathode and embedded into the anode through the electrolyte, and the anode is in a lithium-rich state. The opposite is true for discharging.
Sodium-Ion Battery	refers to	A secondary battery (rechargeable battery) that operates primarily by moving sodium ions between the cathode and anode. In the

		process of charging and discharging, $\text{Na}^+$ is embedded and de-embedded between the two electrodes. During charging, $\text{Na}^+$ is de-embedded from the cathode and embedded into the anode through the electrolyte, and the anode is in a sodium-rich state. The opposite is true for discharging.
Cathode Materials	refers to	One of the main components of lithium batteries, the performance of the cathode material directly affects various performance indicators of lithium batteries.
Precursor	refers to	An intermediate product with highly uniform distribution of multiple elements, prepared through a solution process. This product can be converted into a finished product through chemical reactions and has a decisive impact on the performance indicators of the finished product.
Ternary Cathode Materials/Ternary Materials	refers to	Ternary composite cathode materials made from nickel salts, cobalt salts, and manganese/aluminum salts in cathode materials of lithium batteries.
NCM (Lithium Nickel Manganese Cobalt Oxide)	refers to	A ternary material with the chemical formula $\text{LiNi}_x\text{Co}_y\text{Mn}_z\text{O}_2$ , where $x+y+z=1$ . It is the most widely used ternary material in China. The higher the nickel content, the higher the specific capacity.
NCA (Lithium Nickel Cobalt Aluminum Oxide)	refers to	A ternary material with the chemical formula $\text{LiNi}_x\text{Co}_y\text{Al}_z\text{O}_2$ , where $x+y+z=1$ .
NCMA (Lithium Nickel Cobalt Manganese Aluminum Oxide)	refers to	A ternary material with the chemical formula $\text{LiNi}_x\text{Co}_y\text{Mn}_z\text{Al}_n\text{O}_2$ , where $x+y+z+n=1$ .
Lithium Iron Phosphate (LFP)	refers to	A phosphate (chemical formula: $\text{LiFePO}_4$ ) with an olivine structure, used as the cathode material for lithium-ion batteries, primarily for lithium-ion power batteries and lithium-ion energy storage.
Lithium Manganese Iron Phosphate (LMFP)	refers to	Lithium manganese iron phosphate ( $\text{LiMn}_x\text{Fe}_{1-x}\text{PO}_4$ ), a new phosphate solid solution lithium-ion battery cathode material formed by partially replacing the iron (Fe) in lithium iron phosphate ( $\text{LiFePO}_4$ ) with manganese (Mn).
New energy vehicles	refers to	Vehicles that adopt advanced technical principles, new technologies, and new structures (or use conventional vehicle fuels but with new on-board power devices), integrating advanced technologies in vehicle power control and drive.
Energy density	refers to	The energy possessed by a battery per unit volume or unit mass, categorized into volumetric energy density (Wh/L) and gravimetric energy density (Wh/kg).

## Section III Basic Information and Key Financial Data of the Company

### 1、 Company profile

#### 1.1 Summary of company stock

"√ Applicable" "□ Not applicable"

Summary of company stock				
Type of stock	Stock exchange and sector where the stock is listed	Stock abbreviation	Stock code	Previous stock abbreviation
A-shares	Shanghai Stock Exchange Science and Technology Innovation Board	Ronbay Technology	688005	/

#### 1.2 Summary of the Company's depositary receipts

"□ Applicable" "√ Not applicable"

#### 1.3 Contact person and contact information

	Secretary of the Board of Directors
Name	Yu Jiyun
Address	No. 39 Tanjialing East Road, Yuyao, Zhejiang Province
Tel	0574-62730998
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Email	ir@ronbaymat.com

### 2、 Key accounting data and financial indicators for the past three years

#### 2.1 Key accounting data

Unit: Yuan Currency: RMB

	2024	2023	This year vs. last year Change (%)	2022
Total assets	24,622,978,521.33	24,639,096,566.49	-0.07	25,660,046,343.51
Net assets attributable to shareholders of listed companies	8,440,667,718.62	8,698,065,813.64	-2.96	6,964,671,593.28
Operating revenue	15,087,554,666.76	22,657,274,651.38	-33.41	30,122,995,138.19
Net profit attributable to shareholders of listed companies	295,910,777.62	580,908,514.51	-49.06	1,353,229,887.56
Net profit attributable to shareholders of listed companies after deducting	244,072,202.29	515,391,565.36	-52.64	1,316,756,769.65

non-recurring gains and losses				
Net cash flow from operating activities	523,401,116.89	1,795,379,751.91	-70.85	-240,981,050.07
Weighted average return on net assets (%)	3.46	7.73	Decrease of 4.27 percentage points	21.94
Basic earnings per share (Yuan/share)	0.42	0.85	-50.59	2.01
Diluted earnings per share (Yuan/share)	0.42	0.85	-50.59	1.99
Proportion of R&D investment to operating revenue (%)	2.81	1.56	Increase of 1.25 percentage points	1.62

## 2.2 Key accounting data by quarter during the reporting period

Unit: Yuan Currency: RMB

	First quarter (January-March)	Second quarter (April-June)	Third quarter (July-September)	Fourth quarter (October-December)
Operating revenue	3,691,640,761.48	3,195,976,159.83	4,435,657,808.45	3,764,279,937.00
Net profit attributable to shareholders of listed companies	-37,241,586.34	47,519,467.83	106,116,910.41	179,515,985.72
Net profit attributable to shareholders of listed companies after deducting non-recurring gains and losses	-38,330,259.94	34,521,303.84	92,524,080.68	155,357,077.71
Net cash flow from operating activities	-1,001,462,119.71	161,730,427.11	355,018,323.75	1,008,114,485.74

## Section IV Management Discussion and Analysis

### 1. Discussion and analysis of business conditions

The company remains strategically optimistic about the overall market competitiveness of high-nickel/ultra-high-nickel ternary materials. Globally, the market share of high-nickel/ultra-high-nickel ternary materials is bound to steadily increase in the future. Currently, there is a clear demand for high-energy density and long-range batteries in high-end vehicle models in the European and American markets, with high-nickel/ultra-high-nickel ternary materials being the

optimal choice. Especially with the gradual industrialization of solid-state batteries, the requirements for energy density are increasingly higher, making high-nickel/ultra-high-nickel ternary materials the optimal choice for solid-state batteries. In high-latitude regions like Europe, where extreme cold environments demand better low-temperature performance, high-nickel/ultra-high-nickel ternary materials can leverage their superior low-temperature performance advantages. Globally, the valuable metals in high-nickel/ultra-high-nickel ternary materials can be fully recycled. Particularly in European and American countries, where stringent sustainability requirements prevail, as a large number of batteries reach end-of-life in the future, the industrial chain for efficient ternary materials recycling will demonstrate greater low-cost advantages. Since 2024, the mass adoption of the 4680 large cylindrical batteries in vehicles has begun, accelerating the industrialization of solid-state batteries. Emerging markets such as humanoid robots and low-altitude economy will inevitably favor high-nickel/ultra-high-nickel ternary materials with higher energy density and power performance.

During the reporting period, the global new energy industry continued its rapid growth trend. According to EVTank data, global new energy vehicle sales reached 18.236 million units in 2024, a year-on-year increase of 24.4%. Driven by the new energy vehicle market, global power battery shipments continued to grow. According to SNER data, the total global installed capacity of power batteries reached 894.4 GWh in 2024, a year-on-year increase of 27.2%.

According to the data from ICCSINO Lithium Battery, global ternary material production reached 953,000 tons in 2024, with China's ternary material production at 614,000 tons. As a global leader in ternary cathode materials, the Company shipped 120,000 tons in 2024, a year-on-year increase of over 20%, with a global market share exceeding 12%, leading the world for four consecutive years. Additionally, the Company made positive progress in product and customer structure optimization, new business areas such as lithium manganese iron and sodium batteries, R&D, global layout, and organizational development.

During the reporting period, the Company's operating performance improved quarter by quarter, with total profits and profit per ton continuously improving. With the full monthly production capacity of the Korean factory in the fourth quarter, the further increase in overseas customer sales and the sales ratio of ultra-high-nickel products, the Company ultimately achieved an annual operating revenue of 15.088 billion yuan and a net profit of 329 million yuan.

## **1.1 Daily Operating Business**

### **1.1.1 Key Business Progress**

#### 1) Ternary cathode business

During the reporting period, the Company's sales of ternary cathode materials reached 120,000 tons, achieving a counter-trend growth of 20%, with a global market share exceeding 12%, a further increase of 2 percentage points from 2023, maintaining the global first position for four consecutive years.

On the basis of continuous improvement in business scale, both the Company's customer and product structures have seen significant improvements. In 2024, the cumulative sales to overseas customers exceeded 20,000 tons for the first time, with shipments of ultra-high-nickel products above the 9-series reaching 27,000 tons, increasing the ratio to 23%.

Since 2024, the widespread installation of 4680 large cylindrical batteries in vehicles has accelerated the industrialization of solid-state batteries. Emerging markets, such as humanoid robots and the low-altitude economy have achieved significant development. These market segments have clearly demanded higher energy density and higher power performance for high-nickel ternary materials. As a leader in high-nickel ternary materials, the Company has taken the lead in securing positions in these emerging markets, providing new support for the continuous growth of the Company's future business.

Additionally, during the reporting period, the Company's mid-nickel high-voltage series products were also recognized by leading customers, which will provide a new growth point for the continuous and stable increase in the sales of ternary materials.

In 2024, the Company invested approximately 175 million yuan in strategic businesses such as precursors, lithium manganese iron, and sodium batteries. The Company's continuous and steadfast investment in strategic businesses helps achieve strategic layout and customer positioning. Excluding strategic business investments, the ternary cathode business achieved a full-year profit of 504 million yuan. With the continuous increase in overseas production capacity and the release of overseas customer demand in 2025, the Company's profitability will be further enhanced.

## 2) Lithium manganese iron phosphate business

During the reporting period, with the development of commercial vehicle markets such as electric trucks, the sales of manganese-iron-lithium products in the high-power sector significantly increased. The Company's shipment of lithium manganese iron phosphate products saw a year-on-year increase of over 100%, maintaining the industry's leading market share for two consecutive years.

The Company holds the primary supplier position with multiple customers. The first-generation product secured nearly 10,000 vehicle orders from leading power battery companies, achieving a breakthrough in mass production in the EV sector. The EV client's pure application solution leads the industry and has secured cooperation intentions from top international customers, showing promise to further expand the market space for lithium manganese iron phosphate.

The second-generation lithium manganese iron phosphate product has completed validation and first-stage specification, with per-ton watt-hour cost 10% lower than lithium iron phosphate, having gained full customer recognition. After completing batch stability verification, production

line modification is expected to be completed by 2025, enabling mass production and delivery.

### 3) Sodium battery business

During the reporting period, the Company made significant breakthroughs in the development of sodium-ion cathode products, with substantial improvements in various performance parameters, process stability, and cost control. The Company's sodium-ion cathode products have maintained close cooperation with mainstream customers both domestically and internationally. In fields such as power, energy storage, and start-stop power supplies, the Company has secured leading positions among top battery manufacturers, boasting an industry-leading annual shipment volume. It is expected that the shipment volume will continue to experience rapid growth by 2025.

In early 2025, the Company successively secured orders for 3,000 tons of layered oxide cathode materials and hundreds of tons of polyanionic cathode materials, promptly initiating mass production and delivery processes. Additionally, the Company has begun constructing a new production line with an annual production capacity of 6,000 tons of sodium-ion cathode materials in Xiantao, Hubei to meet the demands of strategic top-tier market customers.

### 4) Precursor business

The precursor segment, as a crucial part of the Company's supply chain, has synergistically developed with the cathode business over the years, enhancing the Company's overall competitiveness. During the reporting period, the Company's domestic and international precursor production lines both passed certification audits by top-tier international customers, marking the Company's precursor products as having reached global first-class standards in technology and quality.

The Company's high-nickel/ultra-high-nickel batch process technology is at the industry's leading level. During the reporting period, the precursor business successfully facilitated the development cooperation of high-nickel/ultra-high-nickel cathodes with renowned domestic and international customers, with the precursor products also entering the introduction phase. The Company has simultaneously developed a series of products including lithium manganese iron phosphate, sodium-ion precursors, and mid-nickel ternary precursors, among which the lithium manganese iron liquid-phase precursor has achieved mass supply.

By 2025, leveraging its global layout, the Company's Korean precursor production line will achieve mass supply to international customers and accelerate the establishment of new overseas precursor capacities, strengthening international customer development and continuously enhancing core competitiveness.

### 5) Equipment business

The Company's equipment business adheres to independent development, driving continuous improvements in product technical performance and cost advantages. The Company's independently developed large rotary kiln has achieved breakthroughs in the mass production applications of ternary cathodes, phosphate cathodes, and precursors, successfully completing mass production verification of high-nickel cathode materials. It is set for large-scale application in the next generation of production

lines. The pioneering innovative sodium battery integrated process equipment has completed pilot certification, with the unique technology significantly reducing sodium battery manufacturing costs, opening up new growth points in the new energy field. Full-industry-chain equipment research and development (R&D) focuses on "high performance + low cost," driven by both technological iteration and large-scale application, continuously enhancing the Company's comprehensive competitiveness.

### **1.1.2 R&D Progress**

The Company has always emphasized technological innovation, strengthening R&D capabilities and expanding R&D scope. R&D direction extends from cathode material recycling industry chain downstream to material electrochemical systems, including battery cell design, manufacturing and dismantling processes, promoting used battery recycling. The Company's scientific research cooperation reaches metal mines and urban mines. While driving industry progress, the Company's relationship with the industry becomes closer, supply chain more optimized, and processes further stabilized. Through R&D and scientific research services, the Company is committed to forming an efficient, low-energy-consumption, zero-emission production model, achieving an efficient and stable supply chain, meeting sustainable development goals, and ultimately enhancing the market competitiveness of cathode materials.

During the reporting period, the Company continuously increased its R&D investment, with R&D expenditures totaling 424 million yuan, representing a year-on-year increase of approximately 20%. In terms of patents, the Company has completed applications for 245 domestic patents and 29 international patents, and has been granted 150 patents. The Company's total cumulative patent applications have reached 1,206, with a total of 597 patents granted both domestically and internationally. The Company's patents cover not only low-nickel/mid-nickel/high-nickel/ultra-high-nickel ternary materials, lithium manganese iron phosphate, sodium-ion cathode materials, and precursor materials but also include cutting-edge products such as solid-state battery materials, spinel nickel-manganese oxide cathodes, and lithium-rich manganese-based cathodes. Additionally, it includes upstream and downstream areas of the industry chain such as engineering equipment, testing, recycling, electrode sheets, and battery applications.

In the field of cutting-edge technology, ultra-high-nickel ternary cathode materials and sulfide electrolyte materials for solid-state batteries have been recognized by multiple domestic and international customers. The capacity and cycle performance of all-solid-state battery cathode materials remain leading, and the pilot production line for sulfide electrolytes is expected to be completed by 2025. Spinel nickel-manganese oxide and lithium-rich manganese-based cathode materials continue to be validated in collaboration with multiple customers, demonstrating excellent performance and receiving recognition from several customers. Spinel nickel-manganese oxide has achieved mass shipment, and it is expected to realize large-scale production and vehicle installation by 2026.

### **1.1.3 Supply Chain Progress**

During the reporting period, the Company established a three-in-one supply chain system integrating technology output, material supply, and green manufacturing, providing not only cathode materials but also covering research services (process design, performance optimization, etc.) and technology transfer (patent licensing, technology transfer, etc.). As a global leader in cathode materials, the Company collaborates openly with partners at all levels of the industry chain, achieving optimal resource allocation and maximum efficiency, forming an efficient, low-consumption, zero-emission, and irreproducible supply chain barrier.

The Company continues to deepen its global supply layout. Based on its cathode material base in South Korea, the Company has established a supply chain system for key metals (such as lithium, nickel, and cobalt) that meets the requirements of the EU Battery Regulation and the U.S. Inflation Reduction Act. It has set up a raw material traceability system and requires upstream suppliers to complete responsible mining assurance initiative certifications, meeting the requirements of European and American customers. The Company has increased its efforts to extend involvement with upstream resources by renewing long-term supply agreements with leading lithium salt companies and reaching long-term cooperation with mining enterprises in Australia and Africa. For nickel and cobalt resources, the Company deepens cooperation with nickel smelting enterprises such as GEM and Lygend, and has established connections with local nickel mining enterprises in Indonesia, significantly enhancing its control over upstream resources and significantly improving supply chain security and cost advantages.

### **1.1.4 Engineering Technology Progress**

The Company's independently designed kiloton-level large production line has been installed in South Korea and is expected to start pilot production in the first half of 2025, achieving a significant increase in energy efficiency compared to the phase-I production line in the country. Additionally, the next-generation 3,000-ton ultra-large production line is under development, with further upgrades in equipment automation and production line digitization, resulting in a reduction of core indicators such as one-time investment and operating costs by over 20% on average compared to the previous generation of kiloton production lines.

The production line for the Poland project has been upgraded and iterated based on the South Korean kiloton production line, with an automation level superior to that of the South Korean line. The project has commenced design and procurement work and is expected to be commissioned by 2026. The launch of the new production line in Europe marks a second upgrade in the Company's overseas engineering technology development and comprehensive project management capabilities. It also exports a batch of international engineering and technical talents, laying the foundation for the smooth implementation of future projects in other global regions.

### **1.1.5 Progress in Industrialization of Manufacturing Management**

During the reporting period, a global system was actively established on the manufacturing management platform. The Chungju cathode factory in South Korea carried out process innovation and TPM management, with the phase-I project completing the introduction of international customer certification and achieving full production in the fourth quarter. The phase-II project in South Korea has been completed and is planned for pilot production in the first half of 2025. The South Korean precursor factory has completed technical modifications of production lines and passed international customer certification, preparing for overseas order stockpiling.

In terms of smart production and information system introduction, the manufacturing management operating system has been successfully piloted domestically and will be promoted to overseas bases. By integrating capabilities from engineering, manufacturing, and digital promotion platforms, the phase-II production line in South Korea will become a globally leading cathode material production line upon completion. The engineering management team for the Poland project is being fully established. The Company will formulate multi-dimensional smart enhancement strategies based on the European project.

In terms of talent cultivation and reserves, the Company has set up owner groups for European and South Korean projects, matching domestic human resources from different professions throughout the process from project planning, design, construction, delivery, to debugging and mass production, providing full-process technical and management empowerment. Meanwhile, the Company promotes overseas talent cultivation and development, completing the supplementation of senior management positions and localized operational talents at the Chungju cathode factory in South Korea and the Poland cathode factory, driving the talent structure towards internationalization, and conducting cultural integration and promotion activities between domestic and overseas teams to enhance cross-cultural collaboration.

### **1.2 Globalization Progress**

The Company's globalization has always been at the industry's forefront. With the current changes in the world's political and market environment, this advantage will be further amplified by 2025. During the reporting period, with the deepening of the globalization strategy, the Company achieved fruitful results in overseas development, with a layout formed as follows:

Client-side: 57 new international clients were developed in Japan, South Korea, Europe, and North America; multiple international client development agreements and strategic cooperation agreements were signed; the South Korean factory received certification from Japanese clients and began mass production, while also being officially integrated into the supply chain of well-known Japanese and South Korean battery companies.

Manufacturing-side: In the South Korean region, the Company has established an annual production capacity of 20,000 tons of high-nickel ternary materials and 6,000 tons of precursors, with an additional 40,000 tons of high-nickel capacity completed and expected to start pilot production in the

first half of 2025; in the European region, the Company completed the layout of the Poland base through investment and acquisition. The base's factory buildings, laboratory buildings, and auxiliary facilities are complete, with all necessary environmental assessment procedures in place. The phase-I project of the 20,000-ton mid-nickel/high-nickel ternary materials is progressing steadily and is expected to complete the main structure within 2025; in the North American region, the Company has completed the registration of its North American subsidiary; after more than a year of site selection and preparation, the North American project has entered the initiation stage.

**Supply Chain:** The Company has signed 3-year long-term contracts with international lithium salt suppliers to secure long-term resources and prices; established deep cooperation with high-quality lithium miners in Australia, Africa, and South America; optimized MHP supply and cost channels to stabilize raw material sources for nickel material trading business, laying the foundation for optimizing global material costs.

**Talent Management:** The Company has recruited and built a team of talents with international vision and professional skills, increasing the proportion of localized employees and local management talents in overseas bases.

**Social Responsibility and Sustainable Development:** The Company actively adopted environmental protection measures, participated in local public welfare activities, and improved employee benefits, enhancing its engagement in corporate social responsibility and social governance, integrating into the local society.

With the globalization and advancement of the Company's overseas business, Ronbay is continuously learning and improving in development, gradually becoming a company that adapts to different national systems, cultures, and management environments worldwide.

### **1.3 Progress in Organization and Management**

During the reporting period, the Company comprehensively optimized the group's organizational management system, constructed a minimalist three-layer organizational structure, established a future strategy office, strengthened the group's strategic control and innovation business investment capabilities, and fully authorized business units for daily operations. Based on the functional empowerment hierarchy and business value chain positioning, the Company modularized each department, forming a cross-functional matrix collaboration mechanism, helping to build an industrial investment and operation group.

To support the continuous implementation of the global strategy, the Company will further improve the diversified incentive mechanism to ensure that all regions at home and abroad can attract talents and build excellent talent echelons to meet the growing needs of the Company's international business. In the future, the Company will increase its efforts in training and cultivating employees and cadres, accelerate digital and intelligent transformation and artificial intelligence applications in various fields, and build an efficient global management platform.

## **2. Overview of the Company's Main Business During the Reporting Period**

### **2.1 Main Business, Products, or Services**

The Company is mainly engaged in the research, development, production, and sales of multi-materials, lithium manganese iron phosphate materials, sodium-ion materials, and multi-precursor materials. The products are mainly used in the manufacture of lithium/sodium batteries and are primarily applied in fields such as electric vehicles, electric two-wheelers, energy storage equipment, and electronic products. Core products include NCM811 series, NCA series, NCMA series, Ni90 and above ultra-high-nickel series cathode materials, pure and blended lithium manganese iron phosphate cathode materials, layered oxide and polyanion series sodium-ion cathode materials, and ternary precursors.

As the first domestic company to achieve mass production of NCM811 series products and apply them to global mainstream terminal automakers, the Company's high-nickel and ultra-high-nickel series products are at the global leading level in terms of technology and production scale. In recent years, with the mass production and installation on vehicles of high-energy density batteries such as Qilin batteries and large cylindrical batteries, the Company's ultra-high-nickel 9-series product shipments have continued to increase; in the field of solid-state batteries, it has established cooperation with more than 40 domestic and international battery and complete vehicle manufacturers, including CATL and WeLion New Energy. Particularly, the battery products matched with the cathode materials for semi-solid-state batteries have been applied to terminal customers' 1000-kilometer ultra-long-range models. The ternary cathode materials for solid-state batteries feature high capacity, stable interface, and long cycle life, gaining full recognition from leading industry customers, with stable growth in shipments during the reporting period. Simultaneously, guided by a global strategy, the Company accelerated its entry into the European and American new energy vehicle markets, continuously optimizing its customer structure. In 2024, the proportion of overseas customers further increased. Additionally, the Company has established cooperative relationships with five of the world's top six most valuable battery and electric vehicle customers, with cumulative overseas customer sales exceeding 20,000 tons. With positive progress in international customer development, the Company's 9-series ultra-high-nickel products have achieved cumulative sales of 27,000 tons, marking a new breakthrough.

After years of accumulation, the strategic advantages of the Company's precursor segment have become increasingly significant, and the synergistic effects with the cathode segment are also becoming more prominent. In 2024, the Company's precursor production line successfully passed the certification audit of top international customers, indicating that the product quality level has reached global first-class standards. The high-nickel/ultra-high-nickel batch process technology has reached an industry-leading level, and significant breakthroughs have also been achieved in lithium manganese iron liquid-phase precursors. The overall competitiveness improvement of the precursor business in 2024 has also brought more project collaboration opportunities for the Company's cathode business, forming new growth. Currently, related projects are progressing steadily and are expected to achieve breakthroughs in

2025, further enhancing the Company's influence and market share in the industry.

As a comprehensive supplier of cathode materials covering the entire market, the Company continues to expand its competitive advantage and market territory in high-nickel materials while innovating around its main business. The performance of the mid-nickel high-voltage series materials has been certified by customers, and multiple lithium manganese iron phosphate cathode materials have been applied in four-wheeled vehicles, two-wheeled vehicles, energy storage, and consumer fields. The development of the new generation of low-cost products has also made phased progress and has been recognized by end customers. In 2024, the Company's lithium manganese iron material achieved doubled sales volume, with the mixed system completing Ministry of Industry and Information Technology (MIIT) filing for two domestic vehicle models, while the pure system also obtained designated certification from overseas battery cell customers. Based on the original small power market, with the development of commercial vehicle markets such as electric trucks, lithium manganese iron products have also seen a significant increase in sales in the large power sector. In the sodium-ion field, the Company's layered oxide and polyanionic products are at the industry-leading level in terms of comprehensive indicators such as performance, process stability, and cost control, securing key positions with top customers at home and abroad. The production line has passed customer audits and certifications and is expected to achieve large-scale mass production and delivery in 2025.

## **2.2 Main Business Models**

The Company possesses an independent R&D, procurement, production, and sales system, primarily achieving profitability through the R&D, manufacturing, and sales of diverse cathode materials and their precursors, lithium manganese iron phosphate materials, and sodium-ion cathode materials.

### **(1) R&D Model**

The Company has formed a customer-centric, market-oriented R&D system. It operates through business divisions that focus on customer needs and a research institute dedicated to forward-looking industries and high-end products. Additionally, by adopting the Integrated Product Development (IPD) approach, cross-departmental product development teams have been formed, enhancing "horizontal + vertical" R&D capabilities. The Company's Central Research Institute integrates R&D resources from China, Japan, and South Korea, undertaking core functions such as cutting-edge technology research, product process innovation, and incubation of new ventures, supporting the Company's transformation from original innovation to mass production and enhancing its R&D capabilities in process improvement. In terms of industrializing R&D products, the Company provides material samples to customers while also offering suggestions on usage conditions based on the development status of downstream customers' battery products, assisting customers in finalizing their battery systems and jointly exploring product application markets. Regarding R&D personnel training, the Company continuously empowers

R&D staff through R&D system training and knowledge sharing, providing a steady stream of R&D talents for the Company's business expansion.

## **(2) Procurement Model**

To achieve integrated management of supply chain development, centralized procurement, and processing trade, the Company established Ronbay Commerce and continues to develop an integrated commercial and industrial trading platform on basis of the establishment. Regarding procurement strategy, for major raw materials such as nickel, cobalt, manganese, and lithium, the Company has established long-term partnerships with renowned domestic and international upstream suppliers including Ganfeng Lithium, Albemarle, GEM, Tianqi Lithium, Huayou Cobalt, and Lygend Resources, forming a relatively stable qualified supplier list, ensuring continuous stable raw material supply while establishing cost competitive advantages. In terms of supplier management, the Company strictly controls the procurement process by promoting standardized bidding procedures and systematic supplier evaluation, ensuring the reliability of raw material quality.

## **(3) Production Model**

The Company primarily adopts a production model based on sales, guided by customer orders and medium-c to long-term demand plans, to formulate and implement production plans. In terms of production organization, the Company has established comprehensive production process control procedures and fast, effective customer order processing workflows. The production department formulates production plans based on sales plans provided by the sales department, as well as actual inventory, safety stock levels, and production capacity of the workshop. In actual operations, the production pace is reasonably adjusted according to specific orders, ensuring timely delivery and stable quality while reducing inventory levels to control production costs and improve capital efficiency. Additionally, to meet the production needs of some new materials, the engineering department optimizes the production line layout and equipment structure according to the special requirements of new products. Furthermore, to address the issues of widely distributed customers, rapid development speed, and significant scale differences, the Company has established four major production bases in Hubei, Guizhou, Zhejiang, and South Korea, and set up offices in Ningde, Shenzhen, and South Korea. This maximizes the utilization of market resources, enabling rapid response in product development, manufacturing, and logistics. For strategic customers, the Company also implements customized production based on their specific technical parameter requirements to ensure stable supply and high performance of products.

## **(4) Sales Model**

The Company primarily adopts a direct sales model, with core customers covering mainstream battery factories and automakers both domestically and internationally. Given the complexity of the battery material systems, the long R&D cycle of power batteries, and the high precision control

requirements in the manufacturing process, the Company, as a cathode material enterprise, needs to provide customers with supporting technical solutions for different battery systems. To this end, the Company organizes and coordinates sales, R&D, procurement, and engineering departments to form project teams to quickly respond to specific needs of different customers.

## **2.3 Industry Overview**

### **2.3.1 Development stage, basic characteristics, and main technical barriers of the industry**

#### **(1) Industry Development Stage**

The Company primarily focuses on the field of cathode materials for lithium-ion batteries, which is a crucial component of strategic emerging industries and serves as a key foundational material for the development of new energy, new materials, new energy vehicles, and energy storage sectors. Based on China's "carbon peaking and carbon neutrality" goals, and catalyzed by regulations such as the EU's ban on the sale of fuel vehicles by 2035 and the U.S. Inflation Reduction Act, the lithium battery industry continues to follow the long-term positive development trend of the global new energy vehicle industry.

In 2024, the global new energy vehicle market continues to show an overall growth trend. According to EVTank data, global new energy vehicle sales reached 18.236 million units in 2024, a year-on-year increase of 24.4%. Among these, the Chinese market performed particularly well, with new energy vehicle sales reaching 12.866 million units in 2024, a year-on-year increase of 35.5%, raising its share of global sales from 64.8% in 2023 to 70.5%. This significant growth is mainly due to the far-exceeding expectations of China's vehicle trade-in program, coupled with continuous upgrades and new model introductions, as well as reduced vehicle prices, driving the annual EV penetration rate to exceed 40%. In contrast, Europe and the United States saw new energy vehicle sales of 2.89 million and 1.573 million units respectively in 2024, with year-on-year growth rates of -2.0% and 7.2%.

Driven by the robust development of the new energy vehicle market, the power battery market also exhibits a stable growth trend. In 2024, driven by the strong performance of the Chinese market, global power battery installations also increased. According to SNER data forecasts, the total global installation capacity of power batteries was expected to reach 894.4 GWh in 2024, a year-on-year increase of 27.2%. When the time frame is extended from 2017 to 2024, the power battery installation capacity has surged significantly, with the global total in 2017 being just 59GWh, and the compound annual growth rate during this period reaching as high as 47.99%. Overall, as a key foundational material industry for the development of new energy vehicles and other sectors, the lithium battery industry is showing strong and long-term growth trends against the backdrop of the continuous positive development of the global new energy vehicle industry and relevant policy catalysts. This is closely linked to the development prospects of the lithium-ion battery cathode material field that the Company focuses on, which, as an important part of strategic emerging industries, plays an indispensable role in the development of new

energy, new materials, new energy vehicles, and energy storage sectors.

## (2) Fundamental Characteristics

In 2024, the mainstream cathode materials in the global power battery sector are ternary and lithium iron phosphate. According to the statistics from ICCSINO, global ternary material production reached 953,000 tons, down 1.6% year-on-year. The total production of lithium iron phosphate reached 2.38 million tons, up 50.2% year-on-year.

Despite the slowdown in new energy vehicle sales growth in European and American markets affecting the ternary material market's performance in 2024, the global market share of Chinese companies increased from 61.3% in 2023 to 64.4% in 2024, with a sharp decline in shipments from mainstream Japanese and Korean cathode material manufacturers. In overseas markets outside of China, ternary materials still occupy about 90% of the market share. Globally, the trend towards high-nickelization continues to advance synchronously. In 2024, global production of high-nickel ternary materials reached 530,000 tons, a year-on-year increase of 3.3%. This is strongly correlated with the mainstream automakers' positioning of ternary products towards the mid-to-high-end segment. With the large-scale installation on vehicles of 4680 large cylindrical batteries, the accelerated industrialization of solid-state batteries, and the rapid development of emerging markets such as humanoid robots and low-altitude economy, new support points will be provided for the future market demand of high-nickel ternary materials.

Additionally, previously high lithium salt prices were a significant factor affecting the cost and pricing of ternary materials. However, as lithium salt prices fall to 70,000-80,000 yuan/ton in 2024, the cost gap between ternary batteries and lithium iron phosphate batteries is further narrowing, which is favorable for ternary batteries to further expand their market space.

## (3) Major technical barriers

The high-nickel ternary cathode material industry faces significant technical barriers, mainly in three aspects: development technology barriers, production technology barriers, and quality certification barriers. The high R&D technological barriers are reflected in the fact that developing high-nickel ternary cathode materials requires technical modifications such as doping and coating, but also calcination in an oxygen atmosphere. This places high demands on a company's production line design, personalized product development, and technical service capabilities. It also imposes strict requirements for humidity control in the production environment, as well as corrosion resistance and automation levels of equipment. Moreover, high-nickel ternary cathode materials are one of the most crucial raw materials in power batteries, significantly impacting various core performance and safety aspects of power batteries. From the perspective of ensuring product stability and safety, automakers and power battery companies have more complex certification testing procedures for products. These not only require long-term product performance testing but also involve detailed assessments of the comprehensive supply capabilities, automated production management levels, low-cost and quality stability and consistency under mass production of manufacturers. The overall certification cycle can

exceed 1.5 years.

Lithium manganese iron phosphate cathode material is an upgraded product of lithium iron phosphate. In terms of product performance, by adjusting the proportion of manganese, lithium manganese iron phosphate offers higher voltage and energy density compared to lithium iron phosphate batteries. As lithium iron phosphate progresses to the fourth generation, the capacity and compaction issues of lithium manganese iron phosphate urgently need improvement to fully leverage its capacity advantages. From the perspective of blending effects, there are significant technical barriers in ensuring that different ternary materials can maximize the role of lithium manganese iron phosphate. According to analysis of Gaogong Industrial Institute (GGII), the balanced improvement in cost and performance of lithium manganese iron phosphate is more about providing more differentiated products for lithium battery end-use scenarios. In recent years, in addition to the EV market, sectors such as energy storage, humanoid robots, aviation, and commercial vehicles have become new growth points, also demanding more compatible lithium battery products. Lithium manganese iron phosphate products will benefit from this development process.

The Company's EV products are being validated in multiple high-end vehicle models, with volume expected to gradually increase from 2025; simultaneously, low-cost, high-performance second-generation products have broken through technical bottlenecks, achieving long cycle life while further reducing costs, meeting power battery pure application requirements. They have already secured commercial vehicle designation from market leaders, potentially becoming the lowest watt-hour cost material in the cathode field after scaling up.

### **2.3.2 Analysis of the Company's industry position and its changes**

In 2024, in the ternary material segment, the Company's annual sales volume reached 120,000 tons, achieving a counter-trend growth of over 20%. The Company's global market share in ternary materials exceeded 12%, a further increase of 2 percentage points from 2023, maintaining its global leadership for four consecutive years. With the large-scale installation on vehicles of 4680 large cylindrical batteries, the accelerated industrialization of solid-state batteries, and the rapid development of emerging markets such as humanoid robots and low-altitude economy, new support points will be provided for the future market demand of high-nickel ternary materials.

As a leader in high-nickel ternary materials, the Company has seen a significant increase in shipment proportion of high-nickel and ultra-high-nickel products due to the gradual vehicle installation of high-energy density batteries such as large cylindrical batteries and solid-state batteries. Cumulative sales of 27,000 tons of 9-series ultra-high-nickel products have achieved a new breakthrough, significantly strengthening the Company's competitive advantages and profitability in the high-nickel field. Additionally, in 2024, the Company's lithium manganese iron material sales doubled. Based on the

original small power market, with the development of commercial vehicle markets such as electric trucks, lithium manganese iron products have also seen a significant increase in sales in the large power sector. In the sodium-ion field, the Company's layered oxide and polyanionic products are at the industry-leading level in terms of comprehensive indicators such as performance, process stability, and cost control, securing key positions with top customers at home and abroad. The production line has passed customer audits and certifications and is expected to achieve large-scale mass production and delivery in 2025.

During the reporting period, the Company accelerated the advancement of its globalization strategy and achieved significant results. The Company has established cooperative relationships with five of the world's top six most valuable battery and electric vehicle customers, with cumulative overseas customer sales exceeding 20,000 tons. Meanwhile, as overseas customers favor high-nickel and ultra-high-nickel materials in their product structures, with the Company's international customer development making positive progress, the Company's 9-series ultra-high-nickel products have also achieved a breakthrough. Given the Company's mid-nickel high-voltage series products gaining recognition from top customers in the market, this will further optimize the Company's product structure, providing a new growth driver for the stable increase in ternary material sales.

In 2024, the Company's overseas layout yielded fruitful results. The Company's phase-I base, with a 20,000-ton annual production capacity at the Korean factory, passed the international customer certification audit. With continuously increasing capacity, it achieved full production in a single month during the fourth quarter and turned profitable for the first time. To meet international customer needs, the phase-II 40,000-ton/year production line will further improve line efficiency and manufacturing levels, and it is expected to start pilot production in the first half of 2025. After commissioning, this production line, together with the phase-I project, will create a scale effect, further helping the Company enhance its profitability. During the reporting period, the Company completed the acquisition of the Poland project at low cost and began feasibility studies for the phase-I 20,000-ton project, gaining a first-mover advantage in the European cathode capacity layout. During the same period, the Company completed the registration of its North American subsidiary, made steady progress in factory site selection and capital operations in the North American region, and established stable cooperative relationships with international customers. On this basis, the Company actively promotes inspections and site selection in other global regions, further solidifying its leading advantage in globalization.

In 2025, with the high-nickelization of ternary materials, the industrialization of lithium manganese iron phosphate, the mass production of mid-nickel high-voltage series, and the accelerated volume growth of European, American, Japanese, and South Korean customers, the Company expects its sales to continue growing. The product and customer structure is expected to continue optimizing. While becoming a comprehensive supplier of cathode materials covering the entire market, the Company is committed to becoming a provider of overall solutions in the cathode material industry, fully leveraging its first-mover advantage in the global new energy industry chain, optimizing product sales strategies,

strengthening joint research and development with customers, deepening existing international markets, and exploring emerging markets. The Company continuously innovates technology, refines its industrial chain layout, collaborates with upstream and downstream partners, and strives towards the goal of becoming a global leader in the new energy industry.

### **2.3.3 Development status and future trends of new technologies, new industries, new business patterns, and new models during the reporting period**

During the reporting period, the performance requirements for power batteries and energy storage batteries continued to increase. Meanwhile, with the continuous growth of the new energy vehicle market, more attention was directed to the recycling industry. The following is the development status and future trends of new technologies and new business patterns during the reporting period:

#### **(1) Semi-/All-solid-state battery technology routes**

Due to the use of solid electrolytes, all-solid-state lithium batteries, when compared to conventional lithium batteries, offer higher safety, increased energy density, and improved temperature adaptability. There are three mainstream technology routes: polymer solid-state batteries, oxide solid-state batteries, and sulfide solid-state batteries. Most global leading battery manufacturers and automakers consider the sulfide route as the ultimate mass production route for all-solid-state batteries. This is because sulfide electrolyte materials possess extremely high intrinsic ionic conductivity, demonstrating a broader range of application scenarios in the field of all-solid-state batteries. Ouyang Minggao, Academician of the Chinese Academy of Sciences and Professor at Tsinghua University, stated that the current technical route for all-solid-state batteries should focus on using sulfides as the main electrolytes, matched with high-nickel ternary cathodes and silicon-carbon anodes. The performance targets are to achieve a specific energy of 400 watt-hours per kilogram and a cycle life of over 1,000 cycles, ensuring small-scale installation on cars by 2027 and mass production by 2030.

While continuous R&D trials are conducted on all-solid-state batteries, semi-solid-state batteries have become a transitional technology solution chosen by the market. Semi-solid-state batteries use a solid-liquid hybrid electrolyte, with the electrolyte content accounting for 5%-10%. By optimizing the proportion of liquid electrolyte and increasing the content of solid electrolyte, they achieve a balance between safety, energy density, and cost-effectiveness, making them an ideal transitional solution from liquid to all-solid-state batteries.

According to the China Inorganic Salts Industry Association, due to the needs for cost reduction and energy density improvement, high-nickel ternary and lithium-rich manganese-based cathode materials will become the main research directions for future solid-state battery cathode materials. As a comprehensive supplier of cathode materials covering the entire market, the Company's R&D technology for high-nickel and ultra-high-nickel multi-product sequences is industry-leading and can be applied to solid-state battery systems. Its performance indicators are at the leading level in the industry,

gaining widespread customer recognition.

The Company consistently invests in the field of solid-state batteries, achieving positive progress in the development of new products. While maintaining stable shipments of ultra-high-nickel ternary cathodes for semi-solid-state batteries, the Company is collaborating with downstream customers on projects to continuously develop next-generation cathode materials and oxide solid electrolyte materials for higher energy density semi-solid-state batteries. In addition to the semi-solid-state direction, the Company's investment in the all-solid-state direction is even greater, including the simultaneous development of cathode materials and electrolyte materials for all-solid-state batteries and key raw materials for electrolytes. Among these, ultra-high-nickel ternary cathode materials and sulfide electrolyte materials for all-solid-state batteries have been certified by multiple domestic and international customers. The capacity and cycle performance of the all-solid-state battery cathode materials remain leading, and the sulfide electrolyte exhibits excellent ionic conductivity and air stability. The Company has begun preparing all-solid-state soft-pack batteries with Ah-level capacity density, demonstrating outstanding energy density performance.

#### (2) Mass production and installation of large cylindrical batteries in vehicles

Large cylindrical batteries, which offer advantages such as high energy density, low cost, increased safety, and long life, have entered the capacity expansion phase. The combination of large cylindrical cells with high-nickel ternary materials can fully leverage the synergistic advantages of both high energy density and good thermal stability. Currently, large cylindrical batteries mainly use NCM811 and ultra-high-nickel Ni90 cathode materials. In the future, replacing NCM811 with ultra-high-nickel Ni90 can further achieve cost reduction and efficiency improvement.

According to the GGII's 2024 China Large Cylindrical Lithium Battery Industry Development Blue Book, large cylindrical batteries are in high demand in the energy storage field, especially in scenarios like portable energy storage and household energy storage where higher battery rate requirements are needed. The shipment growth rate in these two areas is expected to exceed 100% in 2024, and it is projected that by 2030, the shipment volume will reach 100 GWh. Facing the differentiated requirements of power large cylindrical batteries, the industry still needs time to further address issues such as the high-nickel cathode + silicon-doped anode material system, dry electrode process, and steel shell cylindrical welding. Looking ahead to 2025, international automakers like Tesla and BMW are accelerating the launch of models equipped with large cylindrical batteries, driving leading battery companies to release their 46-series large cylindrical reserve capacity. Considering the large cylindrical capacity plans of companies like CATL, EVE Energy, LG Energy Solution, Samsung SDI, Gotion High-Tech, and BAK Power, each battery company is expected to achieve 10 GWh-level mass production of large cylindrical batteries in 2025. The first half of 2025 is anticipated to be a key milestone for the global release of power large cylindrical battery capacity plans, with further expansion expected in 2026. As a leading producer of cathode materials that has first achieved mass production of high-nickel and ultra-high-nickel series products and applied them in major international terminal

automakers, the Company will gain extensive market opportunities.

### (3) Application of lithium manganese iron phosphate (LMFP) in vehicles

Lithium manganese iron phosphate is a new type of phosphate lithium-ion battery cathode material formed by doping a certain proportion of manganese into lithium iron phosphate. It is the next-generation upgrade product of lithium iron phosphate, offering higher energy density, lower cost, and better low-temperature performance. According to GGII data, under -20°C conditions, the energy density of lithium manganese iron phosphate can theoretically be 10%-20% higher than that of lithium iron phosphate, and under -20°C conditions, it is about 25% better than lithium iron phosphate.

In 2023, the blended application of lithium manganese iron phosphate and ternary materials has been implemented in terminal models. In 2024, the market demand for lithium manganese iron phosphate is gradually becoming clear. In terms of pure application, lithium manganese iron phosphate, with its volume energy density advantage of 450 Wh/L (a 12.5% increase over lithium iron phosphate), has achieved phased progress in terminal automakers and has begun mass production. Regarding blending, lithium manganese iron phosphate first obtained designation certification in commercial light truck models. Leveraging its significant watt-hour cost advantage, it has been successfully applied in 100~130kWh high-capacity battery packs, achieving delivery for multiple vehicle models within the year. Although the current market size of lithium manganese iron phosphate is small, industry attention continues to rise. According to the statistics from ICCSINO, by the end of 2024, the domestically constructed capacity of lithium manganese iron phosphate has exceeded 1 million tons.

In 2022, the Company achieved mass production of lithium manganese iron phosphate through the acquisition of Tianjin Skyland Technology Co., Ltd. (now renamed Tianjin Ronbay Skyland Technology Co., Ltd.), maintaining the industry's number one position in shipments. In 2024, the Company's lithium manganese iron phosphate product shipments grew by more than 100% year-on-year, and it is expected to continue to maintain the highest market share in the industry. Based on the original small power market, with the development of commercial vehicle markets such as electric trucks, lithium manganese iron products have also seen a significant increase in sales in the large power sector. The Company's lithium manganese iron products hold the primary supplier status among multiple customers and have secured orders for nearly ten thousand vehicles from leading power battery enterprises.

## **3. Core Technology and R&D Progress**

### **3.1 Core technology and its advancement, as well as changes during the reporting period**

Since its establishment in 2014, the Company has been deeply involved in the R&D and manufacturing of lithium/sodium-ion battery cathode materials and precursors. Leveraging its outstanding capabilities in technological innovation and industrial mergers and acquisitions, the Company has successfully secured multiple industry-leading core technologies.

During the reporting period, the Company actively focused on technological layouts in the forefront

of lithium/sodium battery materials. The main core technologies cover lithium/sodium-ion cathode materials, precursors, resource recycling, and solid-state battery-related materials, including cathode material atmosphere sintering technology, precursor co-precipitation technology, NiCoMn metal recycling technology, and production technologies for ultra-high-nickel (Ni mol%  $\geq 90$ ) cathode materials, sodium-ion layered oxide cathode materials, sodium polyanionic cathode materials, lithium manganese iron phosphate cathode materials, and high-voltage single-crystal materials. The Company is continuously improving preparation technologies for different types of solid-state electrolytes, high-voltage nickel-manganese, lithium-rich manganese, and lithium supplementation agents. The Company is committed to the cultivation, development, transformation, and industrialization of core technologies. The next-generation ultra-high-nickel products, sodium-ion layered oxide and polyanionic cathode materials, and second-generation lithium manganese iron phosphate have all achieved large-scale stable preparation, with small-batch supplies to domestic and international customers in fields including power batteries, energy storage batteries, high-power batteries, semi-solid-state batteries, and 3C.

Name of Core Technology	Source of Technology	Application in Main Business and Products
Precursor Co-Precipitation Technology	Independent R&D	This technology achieves uniform co-precipitation of various elements in precursors and directional crystal growth, enhancing the cycle life and safety performance of corresponding cathode materials. During the reporting period, this technology has been widely applied in the production of the Company's high-nickel NCM811 series, NCA series, and ultra-high-nickel series precursor products.
Cathode Material Doping Technology	Independent R&D	This technology has improved the structural stability of ternary cathode materials, effectively reducing structural degradation during the recycling process, and significantly enhancing the high-temperature cycle life of ternary materials. During the reporting period, this technology has been widely applied in the production of the Company's mid-nickel high-voltage products, as well as NCM811 series, NCA series, and Ni90 and above ultra-high-nickel series cathode products.
Cathode Material Atmosphere Sintering Technology	Independent R&D	This technology has reduced the Li/Ni mixing degree in the crystal structure of ternary cathode materials, thereby enhancing the material's structural stability and cycle life. During the reporting period, this technology has been widely applied in the production of the Company's mid-nickel series, NCM811 series, NCA high-nickel series, and Ni90 and above ultra-high-nickel series cathode products.
Cathode Material Surface Treatment Technology	Independent R&D	This technology has reduced the residual lithium in ternary cathode materials, enhancing the material's surface stability, electrode processing performance, and cycle life. During the reporting period, this technology has been widely applied in the production of the

		Company's mid-nickel series, NCM811 series, NCA high-nickel series, and Ni90 and above ultra-high-nickel series cathode products.
High-Voltage Single-Crystal Material Production Technology	Independent R&D	This technology, by controlling the particle growth of materials, optimizing morphology and crystal structure, has enhanced the performance of ternary cathode materials under high-voltage systems, significantly improving capacity, cycle life, and storage characteristics. During the reporting period, this technology has been applied to the Company's mid-nickel high-voltage product production.
NiCoMn Metal Recycling Technology	Independent R&D	This technology uses an inorganic acid dissolution-purification co-precipitation method to recover nickel, cobalt, and manganese elements from cathode materials, eliminating the need for extraction processes, resulting in a short process flow, minimal environmental pollution, and low production costs. During the reporting period, this technology has been put into production at the Company's Korean factory; meanwhile, the Company has successfully applied for the Ningbo 2025 Major Project "Lithium Battery Cascade Utilization and Recycling Technology" and is fully optimizing this recycling technology.
Li <sub>2</sub> CO <sub>3</sub> recycling technology	Independent R&D	During the reporting period, this technology has been applied in mass production in the South Korean factory. It has successfully been declared as a major project under "Ningbo 2025" – Lithium Battery Cascade Utilization and Recycling Technology. The Company is fully committed to building a new generation of resource recycling pilot production lines and strives to realize the commissioning of new-generation resource recycling lines in domestic production bases as soon as possible.
Ultra-high-nickel Cathode Material Production Technology	Independent R&D	This technology enhances the thermal stability, cycle life, and safety performance of Ni90 and above ultra-high-nickel ternary cathode materials. By increasing the compaction density, it further improves the battery energy density and reduces costs. During the reporting period, this technology has been widely applied in the production of the Company's Ni90 and above ultra-high-nickel products.
High-Nickel Non-Washing Technology	Independent R&D	This technology optimizes production and preparation processes and equipment solutions, adopts a new type of single-crystal product technology, controls the alkalinity of the cathode material surface, and eliminates the washing process for high-nickel single crystals, thereby improving the comprehensive performance of the product and reducing production costs.
Sodium-Ion Layered Oxide Cathode	Independent R&D	This technology enhances the capacity, cycle, and air stability of sodium-ion layered oxide cathode materials, suppresses gas generation behavior within the battery, and further improves battery

Material Production Technology		energy density by optimizing morphology and increasing compaction density. During the reporting period, this technology has been applied to the production of the Company's sodium-ion layered oxide cathode materials.
Sodium-Ion Polyanionic Cathode Material Production Technology	Independent R&D	This technology enhances the compaction, capacity, rate, cycle, and air stability of sodium-ion polyanionic cathode materials. By optimizing morphology, increasing compaction density, and finely controlling particle size, it improves battery energy density while optimizing processing performance, enhancing low-temperature and cycle performance. During the reporting period, this technology has been applied to the production of the Company's sodium-ion polyanionic cathode materials.
Lithium Manganese Iron Phosphate Cathode Material Production Technology	Independent R&D	This technology improves the electronic conductivity of lithium manganese iron phosphate materials, and enhances the diffusion rate of lithium ions in the material. Through ion doping, carbon coating, and nanotechnology, it achieves improvements in capacity, cycle rate, and low-temperature performance of lithium manganese iron phosphate materials, enabling power cathode materials to open up a third route between lithium iron phosphate and nickel-cobalt-manganese ternary materials. During the reporting period, this technology has been applied in the mass production of lithium manganese iron phosphate materials by Skyland Company.

### 3.2 R&D Achievements Obtained During the Reporting Period

During the reporting period, the Company filed 245 patent applications and obtained 150 patent authorizations. The Company's total cumulative patent applications have reached 1,206, with a total of 597 patents granted both domestically and internationally. The Company's patent portfolio includes low-nickel, mid-nickel, high-nickel, and ultra-high-nickel ternary cathode materials, as well as lithium manganese iron phosphate and sodium-ion cathode materials, precursors, and other key products. It also encompasses cutting-edge products such as solid-state battery materials, spinel nickel-manganese oxide cathodes, and lithium-rich manganese-based cathodes, spanning the entire industry chain from upstream engineering equipment, testing, recycling, to downstream electrode sheets, and batteries. In March 2024, the Company obtained Level 3 certification of the ISO 56005 intellectual property system, becoming the first enterprise in the industry to receive this certification. The Company will align with its global development strategy by implementing comprehensive protection for intellectual property generated during the innovation process, mitigating and resolving intellectual property risks, safeguarding its own intellectual property, respecting others' intellectual property, and becoming a global enterprise that meets international standards.

During the reporting period, the Company added 150 authorized patents. Among them, 59 are domestic invention patents, and 91 are domestic utility model patents, with details as follows:

<b>Serial Number</b>	<b>Publication (Announcement) Number/Application Number</b>	<b>Title</b>	<b>Patent Type</b>	<b>Legal Status</b>
1	202011644054.3	A method for preparing nano-solid electrolyte powder materials	Invention	Granted
2	202110949205.4	NCMA precursor material, preparation method, and NCMA cathode material	Invention	Granted
3	202111175981.X	A polyhedral composite phase precursor and its preparation method and lithium-rich cathode material	Invention	Granted
4	202111612180.5	A surface-modified high-nickel ternary cathode material and its dry preparation process	Invention	Granted
5	202111645270.4	Synthesis method, device, electronic equipment, and storage medium for cathode material precursor	Invention	Granted
6	202210009295.3	Soft-pack cell housing and soft-pack cell	Invention	Granted
7	202210191368.5	A high-nickel lithium-ion battery cathode material with thermal safety and its preparation method	Invention	Granted
8	202210216759.8	A high-voltage nickel-manganese material with high single-crystal dispersion and its preparation method and application	Invention	Granted
9	202210246513.5	A ternary composite material for all-solid-state batteries, its preparation method, and application	Invention	Granted
10	202210262675.8	A high-nickel multi-element cathode material, its preparation method, and application	Invention	Granted
11	202210277545.1	A high-nickel ternary cathode material, its preparation method, and application	Invention	Granted

12	202210359720.1	Nickel-cobalt-manganese ternary precursor and its preparation method, nickel-cobalt-manganese cathode material and its preparation method, and lithium-ion battery	Invention	Granted
13	202210459908.3	Coated modified high-nickel ternary cathode material, its preparation method, and lithium-ion battery	Invention	Granted
14	202210512168.5	A lithium nickel manganese oxide cathode material and its preparation method and application	Invention	Granted
15	202210673589.6	A ternary cathode material and its preparation method	Invention	Granted
16	202210723077.6	A long-life cathode material, its preparation method, and lithium-ion battery	Invention	Granted
17	202210779706.7	A nickel-cobalt-aluminum cathode material precursor and its preparation method	Invention	Granted
18	202210871328.5	A cathode active material, cathode slurry, cathode sheet, and secondary battery	Invention	Granted
19	202210912244.1	A low-cost high-nickel ternary cathode material and its preparation method	Invention	Granted
20	202211051947.6	A lithium circulation system and preparation method for cathode material precursor	Invention	Granted
21	202211144581.7	A small-particle nickel-cobalt-manganese ternary precursor with narrow particle size distribution and its preparation method	Invention	Granted
22	202211234588.8	A lithium metal oxide precursor and its preparation method and application	Invention	Granted
23	202211268050.9	A cathode precursor material and its preparation method and application	Invention	Granted

24	202211318671.3	A composite precursor and its preparation method, cathode material and its preparation method	Invention	Granted
25	202211438449.7	A lithium metal oxide precursor, its preparation method, and lithium battery cathode material	Invention	Granted
26	202310345963.4	A cathode material precursor and its preparation method and application	Invention	Granted
27	202310353801.5	Broad distribution cobalt-free lithium-rich manganese-based precursor and its preparation method	Invention	Granted
28	202310825219.4	Cathode active material and its preparation method, cathode sheet, and sodium-ion battery	Invention	Granted
29	202310942864.4	A cathode material and its preparation method and application	Invention	Granted
30	202310948628.3	A cathode material and its preparation method and application	Invention	Granted
31	202310995711.6	A method for cyclic organic reduction solvent subcritical lithium replenishment repair of phosphate cathode materials	Invention	Granted
32	202311199268.8	Ammonium manganese iron phosphate, lithium manganese iron phosphate, and their preparation methods and applications	Invention	Granted
33	202311296382.2	Cathode active material and its preparation method, cathode electrode, battery, and electrical device	Invention	Granted
34	202311329049.7	A cathode material and its preparation method and lithium-ion battery	Invention	Granted
35	202311329052.9	A ternary precursor and its preparation method and cathode material	Invention	Granted

36	202311329054.8	A cathode material and its preparation method and lithium-ion battery	Invention	Granted
37	202311329051.4	A ternary cathode material and its preparation method and lithium-ion battery	Invention	Granted
38	202311390637.1	Sodium-ion battery cathode material and its preparation method and application	Invention	Granted
39	202311574096.8	High-nickel cathode material and its preparation method and application	Invention	Granted
40	202311756250.3	Oxide precursor and its preparation method and application	Invention	Granted
41	202311775694.1	Cathode active material and its preparation method and application	Invention	Granted
42	202311785186.1	A cathode material and its preparation method and sodium-ion battery	Invention	Granted
43	202311785185.7	A polycrystalline cathode material and its preparation method and lithium-ion battery	Invention	Granted
44	202311849186.3	Sodium-ion layered cathode material and its preparation method and application	Invention	Granted
45	202410023036.5	High-nickel cathode material and its preparation method and application	Invention	Granted
46	202410419648.6	Copper-based carbonate precursor and its preparation method, cathode material and application	Invention	Granted
47	202410420040.5	Self-supporting electrode and its preparation method and sodium-ion battery	Invention	Granted
48	202410645192.5	Cathode material and its preparation method and application	Invention	Granted
49	202410728882.7	Dry electrode film and method for detecting the degree of binder fibrillation therein	Invention	Granted

50	202410854158.9	Sodium-ion battery cathode material and its preparation method and application	Invention	Granted
51	202410880091.6	High-nickel cathode material and its preparation method and application	Invention	Granted
52	202410894673.X	Cathode material precursor and its preparation method and application	Invention	Granted
53	202410880061.5	Modified lithium-rich manganese-based material, its preparation method, cathode material, cathode sheet, and battery	Invention	Granted
54	202410417501.3	A solid-state electrolyte film, its preparation method, and lithium-ion battery	Invention	Granted
55	202410939416.3	A single-crystal cathode material and its preparation method and lithium-ion battery	Invention	Granted
56	202410600177.9	An efficient and energy-saving internal heating type airflow sintering combined kiln	Invention	Granted
57	202311294059.1	A lithium manganese iron phosphate material and its preparation method	Invention	Granted
58	202311648461.5	A cathode material and its preparation method, cathode sheet, and battery	Invention	Granted
59	202311734179.9	A cathode sheet and its application	Invention	Granted

## List of intellectual property rights obtained during the reporting period

	Newly added this year		Cumulative quantity	
	Number of applications (patents)	Number of grants (patents)	Number of applications (patents)	Number of grants (patents)
Invention patent	137	59	629	162
Utility model patent	108	91	577	435
Total	245	150	1206	597

Note: Two utility model patents and one invention patent will expire in 2024

**3.3 Status of ongoing projects**

Serial No.	Project name	Estimated total investment scale	Current period investment amount	Cumulative investment amount	Progress or interim results	Target to be achieved	Technical level	Specific application prospects
1	Ultra-high-nickel single-crystal cathode development	2,950.00	33.51	1,920.86	Mass production stage	To develop a high-nickel 9-series single-crystal material with high energy density and excellent cycle performance to meet customer requirements for product performance.	Product's full-cell testing at 1/3C capacity $\geq 220\text{mAh/g}$ , rapid product iteration, matching different customer needs, with mass production supply achieved for some customers.	Mainly used in new energy vehicles, supplemented by digital products.
2	Ultra-high-nickel polycrystalline cathode development	6,409.00	948.17	3,767.40	Mass production stage	To develop 9-series high-nickel polycrystalline materials with high-energy density, excellent cycle performance to meet customers' requirements on product performance.	High product capacity; full-cell testing at 1/3C capacity $\geq 215\text{mAh/g}$ ; demands met in cycle, storage, and DCR growth; mass production supply achieved for multiple customers.	Mainly used in new energy vehicles, supplemented by electric tools/drones.
3	Multi-element high energy density NCMA cathode	2,970.00	210.58	2,642.91	Production line debugging stage	To develop a cathode material with high energy density, excellent cycle performance, and	Product's full-cell testing at 1/3C capacity $\geq 208\text{mAh/g}$ , significantly improved product thermal	Mainly used in new energy vehicles, supplemented by electric tools/drones.

	development					significantly improved safety compared to the NCM system, meeting customer requirements for energy density and safety.	stability, passing key customer evaluations.	
4	6-series cathode new product development	9,259.00	1,650.75	2,531.17	Production line debugging stage	To develop a single-crystal cathode material with high capacity, good cycle performance, increased safety, and favorable compaction performance, at relatively low manufacturing cost, in line with market expectations for energy density, safety, and low cost.	Under high-voltage systems, product 0.33C full capacity can reach 200 mAh/g, passing major customer tests, meeting requirements for high voltage, high capacity, long cycle, and low cost, with key customers entering the production line certification stage.	Mainly used in new energy vehicles, with coverage of digital products/drones and other fields.
5	9-series polycrystalline development	2,125.00	749.37	810.45	Mass production stage	To develop high-capacity, high-safety, low-internal-resistance NCM cathode materials, meeting customer requirements for product performance.	Product's full-cell testing at 1/3C capacity $\geq 210\text{mAh/g}$ ; the product features high capacity, increased thermal safety, and low initial internal resistance. Mass production supply achieved.	Mainly used in new energy vehicles, supplemented by electric tools/drones.

6	Development of new phosphate system products	1,158.00	177.17	191.63	Pilot stage	To prepare new phosphate cathode products with increased safety, low cost, and comprehensive energy density advantages.	Product's full-cell testing at 1/3C capacity $\geq 160\text{mAh/g}$ , further balancing material-end safety, cost, and cycling characteristics. With improved energy density compared to conventional phosphate materials.	Mainly used in new energy vehicles, electric two-wheelers, etc.
7	Low-cost 5-series development	1,422.00	725.93	747.87	Production line debugging stage	To develop cost-effective 5-series cathode products.	Product's full-cell testing at 0.5C gram capacity $\geq 154\text{mAh/g}$ ; low cost, excellent rate performance, comprehensive performance meeting customer requirements.	Mainly used in 3C digital products.
8	Development of sodium-ion layered oxide cathode materials	2,888.00	9.29	2,241.29	Pilot production stage	To develop low-cost sodium-ion battery layered oxide cathode materials with excellent electrochemical performance.	The developed sodium-ion layered cathode materials have reached industry-leading levels in full-cell testing for capacity, cycling, and gas generation performance, meeting the needs of low-speed new energy vehicles, electric two-wheelers, and	Applied in new energy vehicles, small power fields with broad market prospects; with a certain blending application market in the energy storage field.

							household energy storage. Innovations in mass production process, significant breakthroughs in product stability control and cost reduction.	
9	Development of sodium-ion polyanionic cathode materials	3,016.74	971.80	1,077.55	Pilot production stage	To develop polyanionic cathode materials for sodium-ion batteries with low cost and excellent electrochemical performance.	Sodium-ion polyanionic cathode materials are at industry-leading levels in capacity, rate, and cycling. It is expected to meet the requirements for energy storage and low-speed vehicle applications.	Mainly used in the energy storage field.
10	Development of low-cobalt, long-cycle, lithium-rich, manganese-based cathode materials	875.00	205.48	840.55	Production line debugging stage	To develop lithium-rich cathodes with significant cost advantages and energy density and lifespan comparable to mid-nickel high-voltage Ni5-6 series.	Various technical indicators such as capacity, cycling, and power performance are at industry-leading levels.	Mainly used in new energy vehicles, supplemented by digital products.
11	Development of high-voltage nickel-manganese cathode materials	918.00	97.99	593.43	Pilot production stage	To develop high-energy density, low-cost high-voltage spinel nickel-manganese lithium cathode materials	The prepared spinel nickel-manganese lithium single-crystal materials have energy density close to low-nickel/mid-nickel	Mainly used in new energy vehicles, supplemented by electric two-wheelers,

						to replace low-nickel/mid-nickel ternary and lithium iron phosphate cathode materials.	ternary materials, with watt-hour cost comparable to lithium iron materials. It features low cost, high capacity, high stability, excellent low-temperature/rate performance, suitable for liquid and solid-state systems. To closely cooperate with multiple mainstream domestic and international cell and complete vehicle manufacturers, with sample performance consistently leading in multiple client applications, possessing strong competitive advantages.	electric tools, special equipment, and digital products.
12	Development of all-solid-state battery cathode materials	827.00	74.58	424.41	Production line debugging stage	To develop all-solid-state battery cathode materials suitable for sulfide systems, meeting high energy density and high safety requirements.	The developed all-solid-state cathode exhibits excellent compatibility with solid-state electrolytes in terms of interface contact and stability, achieving	It is primarily applied in high-energy-density electric vehicles, drones, and other fields.

							outstanding capacity, initial efficiency, rate performance, and cycle performance under high load and high cathode ratio conditions. It is collaboratively developed with multiple domestic and international cell and complete vehicle manufacturers, reaching industry-leading levels in performance and production scale.	
13	Development of 9-series polycrystalline precursors	4,205.00	482.43	2,156.00	Pilot production stage	To develop high-capacity and excellent cycle performance high-nickel precursors, improving gas generation, internal resistance, and high-temperature cycling performance.	The precursor materials have good sphericity, no cracked spheres, corresponding to high capacity and good cycling performance of the cathode products.	It is mainly used in new energy vehicles.
14	Development of ultra-high-nickel precursors	5,270.00	897.13	3,543.43	Pilot stage	To develop ultra-high-nickel precursors with high capacity and excellent cycle performance, improving gas	The product has good crystallinity, dispersion, wide particle size distribution, no cracked spheres. The final cathode material features high	Mainly used in new energy vehicles, supplemented by digital products.

						generation, internal resistance, and high-temperature cycling performance.	capacity and excellent cycling performance, suitable for use in soft-pack cells.	
15	Development of next-generation 8-series precursors	2,724.00	223.92	2,375.03	Pilot stage	To develop low-cost, high-capacity, high-safety, and long-cycle-life 8-series NCM precursor products.	The product has reasonable primary particle and pore design, good sphericity, and no cracked spheres, solving capacity and cycle issues of the next-generation high-nickel cathode materials.	Mainly used in new energy vehicles, supplemented by digital products.
16	High-rate product development project	555.00	120.40	506.54	Pilot stage	To develop materials with high-rate performance, while ensuring leading cost competitiveness.	The rate performance is optimized by improving material conductivity and element doping, and the most cost-effective solution is verified.	Mainly used in two-wheeled vehicles and new energy vehicles.
17	Power-type product development project	812.00	477.57	477.57	Pilot stage	To enhance the cycling stability of the product, develop high-capacity and high-compaction materials, and improve electrical performance levels. Maintain industry-leading levels.	Process improvements and raw material optimizations are carried out based on existing products to meet EV customer requirements.	It is mainly used in new energy vehicles.
Total	/	48,383.74	8,056.07	26,848.09	/	/	/	/

## **4. Discussion and Analysis on the Company's Future Development**

### **4.1 Industry Landscape and Trends**

According to GGII's data, China's lithium battery shipments reached 1175 GWh in 2024, a year-on-year increase of 32.6%, with power, energy storage, and digital battery shipments being over 780 GWh, 335 GWh, and 55 GWh, respectively, a year-on-year increase of 23%, 64%, and 14%, respectively. It is expected that China's lithium battery shipments will exceed 1400 GWh in 2025.

Compared to China's current nearly 50% penetration rate of new energy passenger vehicles, European and American markets are still in the early stages of development, with a new energy penetration rate in 2024 at 22.7% in Europe and at only 9.6% in the US. With the gradual reduction of geopolitical factors such as the Russia-Ukraine war and the accelerated implementation of carbon emission assessment policies, it is expected that the overseas new energy market, represented by Europe, will enter a recovery phase, offering significant potential for future growth based on its low penetration rate. To seize overseas market opportunities, leading companies in the new energy industry chain are integrating into local supply chains through technology and capacity exports, strengthening global industry chain and supply chain services. Lithium battery enterprises have gone through overall exploration, trial implementation, and comprehensive overseas expansion, with their international operations becoming increasingly mature.

In the ternary material sector, the high-nickel route continues to advance globally, while the development of new technologies and businesses brings new incremental opportunities for high-nickel ternary materials. Solid-state batteries, as one of the important development directions for future battery technology, align well with the technical characteristics of high-nickel ternary materials, and are expected to further drive market growth. The rise of low-altitude economies, such as drones and low-altitude flying vehicles, places higher demands on battery performance. High-nickel ternary materials can meet these devices' needs in terms of energy density and endurance, showcasing broad application prospects. The development of humanoid robots similarly imposes high requirements on battery performance and safety. The excellent energy density performance of high-nickel ternary materials makes them one of the ideal choices for humanoid robot batteries.

With the growth of the new energy market, application scenarios are becoming increasingly diverse, bringing new opportunities for new materials such as sodium batteries and lithium manganese iron phosphate. Sodium batteries, with their advantages of abundant resources, low cost, and strong low-temperature resistance, are expected to be widely used in the power and energy storage sectors. Lithium manganese iron phosphate can offer customers various solutions, including pure use and blending with ternary materials. In pure use scenarios, its energy density is 15%-20% higher than that of lithium iron phosphate, making it a potential upgraded iteration product of lithium iron phosphate. In applications of blending with ternary materials, lithium manganese iron phosphate can effectively

enhance battery safety and reduce costs. With continuous technological advancements and cost reductions, the application scenarios for lithium manganese iron phosphate will continue to expand.

#### **4.2 The Company's Development Strategy**

The Company adheres to the development mission of "developing the new energy industry, improving the human living environment, creating a bright future for the Company and its employees, and giving back to society," with the vision of "establishing a new energy industry cluster with first-class innovation capabilities and a high degree of commercial civilization."

In 2021, the Company launched the "New Integration" strategy of "being the strongest, cooperating with the strongest, and mutual growth," which encompasses specialization, integration, platformization, ecologicalization, intelligent digitalization, globalization, and organization. Guided by the "New Integration" strategy, the Company has strengthened its cooperative relationships with upstream and downstream enterprises through strategic partnerships and equity participation, ensuring stable development and long-term competitive advantages in the fiercely competitive new energy materials sector.

In 2022, the Company proposed a full-coverage strategy for the cathode market, aiming to transform into a platformized, group-oriented comprehensive supplier of cathode materials, with products covering high-nickel materials, lithium manganese iron phosphate, and sodium-ion materials, and application areas spanning high, medium, and low-end power, small power, energy storage, and digital markets.

In 2023, amid the booming development of the overseas new energy vehicle industry and intensifying domestic industry competition, the Company held a global strategy launch event, clarifying that the "globalization" strategy is the focal point of the "New Integration" strategy at this stage. The details of the U.S. Inflation Reduction Act have been further clarified, providing a larger market for the Company's overseas expansion. The Company's strategic advantages in overseas regions like South Korea is becoming increasingly apparent.

In 2024, the Company has made significant progress in its globalization strategy, with the phase-I 20,000 tons/year ternary material capacity in South Korea fully operational and the phase-II 40,000 tons/year ternary material capacity nearing commissioning, further enhancing the energy efficiency and manufacturing level of the production lines. The Company successfully completed the acquisition of a factory in Poland and commenced the construction of a phase-I project with a capacity of 20,000 tons, gaining a first-mover advantage in the European cathode material capacity layout. The Company has completed the registration of its North American subsidiary and established long-term stable partnerships with international clients, planning to build a relatively complete industry chain from precursor to cathode materials in North America.

Looking ahead to 2025, the Company will continue to accelerate its globalization strategy, focusing on cathode materials as its main business, extending R&D forward to smelting, urban, and natural mines, and backward to material electrochemical systems, cell design, and battery dismantling; relying on

global capital operation capabilities, it will possess the ability to develop, manage, and operate the entire industrial chain. The Company will transition from "digitalization" to "intelligent digitalization", comprehensively accelerating its development through the extensive application of AI technologies in R&D, engineering, manufacturing, supply chain management, and organizational culture building. It will construct its own vertical AI model and create an intelligent collaboration platform across the globe to accelerate cross-regional cultural integration and innovative collaboration. All these measures aim to build a data intelligence ecosystem that enhances operational efficiency and core competitiveness of the enterprise.

Additionally, the Company will further improve the diversified incentive mechanism to ensure that all regions at home and abroad can attract talents and build excellent talent echelons to meet the growing needs of the Company's international business. In the future, the Company will increase its efforts in training and cultivating employees and cadres, accelerate digital and intelligent transformation and artificial intelligence applications in various fields, and build an efficient global management platform.

Through the effective implementation of the above development strategies, the Company is confident in achieving its strategic goal of becoming the first in the global cathode material industry in the future.

### **4.3 Business Plan**

In 2025, the Company will continue to strengthen cooperation with key customers, focus on core technology breakthroughs and product iteration upgrades, enhance industrial chain collaboration and resource integration, solidify the achievements of its global layout, and transform strategic advantages into strategic victories.

#### **(1) Consolidate the leading position in ternary materials and achieve large-scale applications of lithium manganese iron phosphate and sodium batteries**

In 2025, the Company will continue to consolidate its barrier advantages in the high-nickel and ultra-high-nickel fields, deepen cooperation with international customers, and further increase the proportion of overseas customers. It will deepen collaborative innovation with major strategic customers, complete large-scale production of mid-nickel high-voltage series products, enrich the Company's product matrix, and further enhance profitability.

The Company's lithium manganese iron phosphate products will further explore the automotive power battery market, achieve large-scale sales, and further solidify its industry-leading advantage. In terms of sodium-ion cathodes, the Company's layered oxide products and polyanionic products will consolidate key positioning advantages with top domestic and international customers, and will gradually increase production to meet customer demands in 2025, achieving large-scale production and delivery.

#### **(2) Increase R&D investment, continuously enhance basic technology, and gradually expand cutting-edge technology**

In 2025, the Company will continuously increase R&D investment, enhance product and

technology competitiveness, further strengthen the global intellectual property protection system, and quickly respond to market and customer needs. The R&D scope of products and technologies will gradually extend from cathode material research upstream to precursor preparation, smelting, and recycling, and downstream to material electrochemical systems, cell design, battery pack design, battery application, and battery dismantling and recycling.

**(3) Increase the market share of the Company's materials in the all/semi-solid battery field and explore the low-altitude economy and robotics markets**

In 2025, the Company will further leverage its leading advantages in the high-nickel field, consolidate and increase the market share of its high-nickel/ultra-high-nickel products in the solid-state battery field, achieve batch pilot production of ultra-high-nickel cathode materials for solid-state batteries with key customers, and also push forward small-batch shipments of sulfide electrolytes. At the same time, the Company will utilize its leading advantages in high-nickel/ultra-high-nickel products to actively explore the low-altitude and robotics markets, seizing market share in emerging sectors.

**(4) Continuously implement the "New Integration" strategy to build a competitive supply chain globally**

In the current competitive environment of the new energy lithium battery industry, the Company will continue to advance its "New Integration" strategy, establishing a global supply chain that meets international battery act requirements based on an interconnected entire industry chain from resources to products. It will gradually build trading networks in Southeast Asia, Europe, North America, South America, and Africa, deepen cooperation with resource and processing enterprises in various global regions, and leverage respective industrial advantages, ensuring raw material security and cost advantages and creating a competitive supply chain system globally.

**(5) Seize market development opportunities to build a global top-tier talent team**

In 2025, the Company will comprehensively optimize the group's organizational management system, construct a minimalist structure, and implement effective incentive mechanisms such as 3P (position, pay, and performance), pay incentive systems, and a four-tier partnership mechanism to attract top global talents and seize industry development opportunities.

**(6) From "digitalization" to "intelligent digitalization," comprehensively accelerate corporate development**

In recent years, the rapid development of artificial intelligence technology has brought profound changes to all aspects of human society. By 2025, the Company will prioritize intelligent digitalization as its top strategy, deeply integrating informatization, digitalization, and intelligence. Through the extensive application of AI technologies in R&D, engineering, administrative transformation, supply chain, and organizational culture building, it will construct its own vertical AI model and create a intelligent collaboration platform across the globe to accelerate cross-regional cultural integration and innovative collaboration. All these measures aim to build a data intelligence ecosystem that enhances operational efficiency and core competitiveness of the enterprise.

## Section V Corporate Governance

### 1. Explanation of company governance-related matters

During the reporting period, the Company continuously improved its corporate governance structure and standardized its operations in accordance with the requirements of laws, regulations, rules, and normative documents such as the *Company Law*, *Securities Law*, and *Shanghai Stock Exchange Science and Technology Innovation Board Stock Listing Rules*. The actual situation of corporate governance complies with the requirements of normative documents such as the *Code of Corporate Governance for Listed Companies* issued by China Securities Regulatory Commission.

(1) Regarding shareholders and shareholders' general meetings: The Company has formulated rules of procedure for shareholders' general meetings and strictly convenes and holds meetings in accordance with the requirements of the shareholders' general meeting norms. The choice of venue and meeting format is designed to allow as many shareholders as possible to attend the shareholders' general meeting and exercise their voting rights; the Company treats all shareholders equally, ensuring they can exercise their rights.

(2) Regarding the relationship between the controlling shareholders and listed companies: The controlling shareholders' behaviors are standardized, without directly or indirectly intervening in the Company's decision-making and business operations beyond the shareholders' general meeting; the Company and the controlling shareholders achieve "five independences" in terms of personnel, assets, finance, institutions, and business, with the Company's Board of Directors, Board of Supervisors, and internal bodies operating independently. The Company's related-party transactions are legal, prices are fair, and all have fulfilled information disclosure obligations.

(3) Regarding directors and the Board of Directors: The Company strictly follows the director recruiting procedure stipulated in *the Articles of Association* to elect directors. During the reporting period, the Company completed the election of a new board of directors, improving the staffing of the corporate governance body. The number and composition of the Company's board of directors meet the requirements of laws and regulations; the Company's board of directors has formulated rules of procedure for board meetings, and all directors are able to earnestly attend board and shareholders' general meetings; familiarize themselves with relevant laws and regulations; understand the rights, obligations, and responsibilities of directors; and exercise their voting rights seriously. The Board of Directors has established a Strategic Committee, Audit Committee, Nomination Committee, Compensation and Evaluation Committee, with all committee members being directors. Each committee fully leverages its professional strengths, utilizing their expertise to propose scientifically sound and reasonable suggestions on major matters.

(4) Regarding supervisors and the Board of Supervisors: The Company's Board of Supervisors strictly adheres to the provisions of *the Company Law and the Articles of Association*. During the reporting period, the Company completed the election of a new board of supervisors, with the number and composition of the Board of Supervisors meeting the requirements of laws and regulations. The Board of Supervisors has formulated rules of procedure. The supervisors are able to earnestly fulfill their duties, acting with a commitment to accountability to shareholders by overseeing the company's finances and ensuring the legality and compliance of directors and senior management in the execution of their duties.

(5) Regarding performance evaluation and incentive and constraint mechanisms: The Company has established fair and transparent standards and procedures for evaluating the performance and fulfillment of duties of directors, supervisors, and senior management. It has set up a performance assessment mechanism linking compensation with company performance and individual achievements, ensuring a certain degree of stability among senior management and core employees, thereby safeguarding the Company's sustainable development.

(6) Regarding stakeholders: The Company fully respects the legal rights of stakeholders including shareholders, employees, customers, suppliers, and investors. It has established diversified communication channels based on the categories of stakeholders, ensuring the effectiveness and regularity of communication. Meanwhile, it actively responds to the expectations and demands of various stakeholders. The Company enhances communication with shareholders and investors through channels such as shareholders' general meetings, performance briefings, and investor hotlines, listening to their demands and suggestions; strengthens the protection of employee rights, supports the Workers' Congress and trade union organizations in exercising their powers according to law, jointly promoting the Company's sustainable and healthy development; conducts on-site assessments and technical training for suppliers to maintain close ties, aiding in the quality improvement of supplied products, and fostering a win-win business atmosphere; actively holds customer communication meetings and conducts customer satisfaction surveys to protect customer rights.

(7) Regarding information disclosure and transparency: The Company designates the China Securities Journal, Shanghai Securities News, Securities Daily, Securities Times, and the Shanghai Stock Exchange website as its information disclosure media. The Company strictly adheres to relevant laws, regulations, and rules, fully fulfilling its obligations of information disclosure as a listed company. The directors, supervisors, and senior management ensure that the information disclosed by the Company is true, accurate, complete, timely, and fair, actively safeguarding the legitimate rights and interests of the Company and its investors.

## 2. Directors, supervisors, and senior management

### 2.1 Current and retired directors, supervisors, senior management, and core technical personnel

Name	Position	Gender	Age	Term Start Date	Term End Date
Bai Houshan	Chairman, General Manager, and core technical personnel	Male	61	3/9/2018	8/2/2027
You Sangyul	Vice Chairman and core technical personnel	Male	65	3/9/2018	8/2/2027
Zhang Huiqing	Director and Deputy General Manager	Male	58	3/9/2018	8/2/2027
Song Wenlei	Director	Male	59	6/29/2021	8/2/2027
Zhao Xinyan	Director (Retired)	Male	63	4/18/2023	8/2/2024
Feng Tao	Director	Female	37	4/18/2023	8/2/2027
Fu Linjun	Director	Male	51	8/3/2024	8/2/2027
Yu Qingjiao	Independent Director (Retired)	Male	55	3/9/2018	8/2/2024
Jiang Hui	Independent Director (Retired)	Female	48	3/9/2018	8/2/2024
Zhao Yiqing	Independent Director (Retired)	Female	43	3/9/2018	8/2/2024
Li Yunjiao	Independent Director	Female	62	8/3/2024	8/2/2027
Mei Yuexin	Independent Director	Female	61	8/3/2024	8/2/2027
Nie Xin	Independent Director	Male	53	8/3/2024	8/2/2027
Zhu Yan	Chairman of the Board of Supervisors (Retired)	Male	50	3/9/2018	8/2/2024
Shen Cheng	Supervisor (Retired)	Female	42	6/29/2021	8/2/2024
Chen Ruitang	Employee Representative Supervisor (Retired)	Male	62	3/9/2018	8/2/2024
Jiang Hui	Chairman of Board of Supervisors	Female	48	8/3/2024	8/2/2027
Zhang Mingxiang	Employee Representative Supervisor	Male	49	8/3/2024	8/2/2027
Chen Ruitang	Supervisor	Male	62	8/3/2024	8/2/2027
Yu Jiyun	Secretary of the Board of Directors	Male	40	8/5/2023	8/2/2027
Yang Yang	Chief Financial Officer	Female	42	8/3/2024	8/2/2027

Liu Dexian	Deputy General Manager	Male	51	3/24/2018	8/2/2027
Sun Hui	Deputy General Manager	Male	44	8/3/2024	8/2/2027
Lee Jonghee	Deputy General Manager	Male	50	8/3/2024	8/2/2027
Lee Jonghee	Core technical personnel	Male	50	3/12/2018	To date
Chen Mingfeng	Core technical personnel (Retired)	Male	40	12/31/2018	8/2/2024
Yuan Xujun	Core technical personnel	Male	41	3/12/2018	To date
Mo Jiguo	Core technical personnel	Male	57	8/3/2024	To date
Wang Zunzhi	Core technical personnel	Male	34	8/3/2024	To date
Yuan Yong	Core technical personnel	Male	45	8/3/2024	To date

Note:

1. Chairman Bai Houshan also serves as the Company's General Manager; his term as General Manager is from August 3, 2024 to August 2, 2027.
2. Former core technical personnel, Mr. Chen Mingfeng is no longer recognized as core technical personnel of the Company due to adjustment of work responsibilities, and currently serves as an expert at the Sodium Battery Technology Research Institute of the Central Research Institute. For details, please refer to the Announcement on the Adjustment of Core Technical Personnel and the Additional Recognition of Core Technical Personnel (2024-061) disclosed on the Shanghai Stock Exchange website ([www.sse.com.cn](http://www.sse.com.cn)) on August 3, 2024.
3. The shareholding numbers in the above table represent direct holdings.
4. The Company has completed the re-election of its new Board of Directors and Board of Supervisors. For details, please refer to the Announcement on the Completion of Board of Directors and Supervisors Re-election and Appointment of Senior Management (2024-060) disclosed on the Shanghai Stock Exchange website ([www.sse.com.cn](http://www.sse.com.cn)) on August 3, 2024.

## 2.2 Resumes of current and retired directors, supervisors, senior management, and core technical personnel during the reporting period

Name	Main work experience
Bai Houshan	Bai Houshan, male, born in 1964, Chinese nationality, with permanent residency in the United States. Mr. Bai Houshan graduated from Central South University with a major in Non-Ferrous Metallurgy, Northeastern University with a major in Heavy Metal Pyrometallurgy, and obtained an

	<p>MBA from Tsinghua University. From September 1984 to July 1987, Mr. Bai Houshan worked as a technician in the Metallurgy Department at Shenyang Institute of Mining and Metallurgy; from September 1987 to March 1990, he studied Heavy Metal Pyrometallurgy at Northeastern University; from March 1990 to December 2001, he served in various roles including Assistant Engineer, Engineer, Senior Engineer, Professor-Level Senior Engineer, and Project Team Leader of Metallurgy Department, Beijing General Research Institute of Mining &amp; Metallurgy (BGRIMM)y; Factory Manager of Electronic Powder Material Factory; Manager of the Electronic Center of BGRIMM; and Deputy Director of the Metallurgy Department at BGRIMM; from December 2001 to March 2012, he served as Director and General Manager of Beijing Easpring Material Technology Co., Ltd.; from 2013 to the present, he has been Chairman and General Manager of Ronbay Holdings; from October 2015 to the present, he has been Chairman of the Company; and from August 2024 to the present, he has been serving as General Manager of the Company. From May 2022 to June 2024, he served as director of Zowee Technology.</p>
You Sangyul	<p>You Sangyul, male, born in 1960, South Korean nationality. Mr. You Sangyul graduated from the Graduate School of Physics at Hanyang University, South Korea. From August 1984 to November 2002, he held positions including Researcher at Samsung SDI Comprehensive Research Institute and Head of Samsung SDI Material Drug Manufacturing Department; from January 2003 to April 2005, he served as Technical Advisor and General Manager at JAMR (a Sino-Canadian joint venture); from May 2005 to December 2009, he served as General Manager of the Lithium-Ion Cathode Material Division at South Korea's L&amp;F; in 2010, he founded EMT Co., Ltd. and served as Chairman and General Manager; from October 2014 to the present, he has been serving as the Company's Vice Chairman.</p>
Zhang Huiqing	<p>Zhang Huiqing, male, born in 1967, Chinese nationality, without overseas permanent residency. Mr. Zhang Huiqing graduated from Beijing University of Chemical Technology and obtained an MBA from University of Science and Technology Beijing. From 1989 to 1998, Mr. Zhang Huiqing held positions at Jinan San'ai Fufu Chemical Co., Ltd., including Production Scheduler, Deputy Director and Director of Production Planning Department, Manager of Production Department, and Manager of General Management Department; from January 1999 to February 2000, he served as Production Manager at Vicome Greenland Group of Shandong Shengli Co., Ltd.; from March 2000 to December 2001, he served as Production Manager at Beijing Furunda Chemical Co., Ltd.; from 2002 to July 2012, he held various roles at Beijing Easpring Material Technology Co., Ltd., including Factory Production Manager, Assistant to the General Manager, Production Director, Operations Director, Deputy General Manager and Production Director; from 2013 to 2014, he served as Deputy General Manager of Ronbay Holdings; from 2014 to the present, he has</p>

	been serving as Director and Deputy General Manager of the Company.
Song Wenlei	Song Wenlei, male, born in 1966, Chinese nationality, without overseas permanent residency. Mr. Song Wenlei graduated from School of Economics and Management, Tsinghua University with a Master's Degree in Finance. From November 1997 to December 2009, he served as General Manager of the Research Department, General Manager of Venture Capital Department, and General Manager of Mergers and Acquisitions at CITIC Securities Co., Ltd.; from January 2010 to July 2013, he served as Managing Director of Goldstone Investment Limited; from August 2013 to April 2018, he served as Chief Investment Officer and Managing Director of China Capital Management Co., Ltd., and General Manager of China Securities Funds Management Limited; from May 2018 to the end of 2023, he served as General Manager of the Strategic Investment Development Division and Chief Investment Officer of Strategic Equity Investment at Sunshine Insurance. From June 2021 to the present, he has been serving as Director of Ronbay Technology.
Feng Tao	Feng Tao, female, Chinese nationality, without overseas permanent residency. She holds a Bachelor's Degree in Finance and Bachelor of Economics. She previously served as Securities Affairs Representative and Head of the Securities Department at BGRIMM Magnetic Materials & Technology Co., Ltd., and as Securities Affairs Representative and Deputy General Manager at Beijing Sumavision Technologies Co., Ltd. Since April 2023, she has served as director at Ronbay Technology.
Fu Linjun	Fu Linjun, male, Han ethnicity. Mr. Fu Linjun graduated from China Pharmaceutical University with a major in Pharmaceutical Analysis, holds a master's degree from China Pharmaceutical University, and an EMBA from Cheung Kong Graduate School of Business. From July 1998 to September 2000, he taught at Guangxi Medical University; from June 2003 to March 2004, he served as Investment Manager at Guangzhou Technology Venture Capital Co., Ltd.; from March 2004 to September 2006, he served as Senior Investment Manager at Shenzhen Leaguer Venture Capital Co., Ltd.; from October 2006 to June 2010, he served as Executive Director at Shenzhen Cowin Venture Capital Investments Co., Ltd.; from June 2010 to March 2011, he served as Partner at Kunwu Jiuding Investment Holding Co., Ltd.; from March 2011 to the present, he has been serving as Chairman and General Manager of Shenzhen Wuyue Capital Management Co., Ltd.; from April 2020 to December 2023, he served as Partner at Hongtai Aplus. He previously served as supervisor at Beijing Easpring Material Technology Co., Ltd., director at Honz Pharmaceutical Co., Ltd., and director at Jiangsu Asia-Pacific Light Alloy Technology Co., Ltd.
Nie Xin	Nie Xin, male, Han ethnicity, born in 1972. Mr. Nie Xin graduated from the Department of Statistics at Renmin University of China, obtaining a

	<p>Bachelor's Degree in Economics. From July 1996 to May 1998, he worked at Statistical Research Magazine; from June 1998 to July 2001, he worked at Beijing Huanxin Consulting Co., Ltd., engaged in soft research projects; from August 2001 to March 2004, he engaged in new material industry consulting services; from April 2004 to March 2009, he worked at Beijing New Material Development Center (one of the member units under the Beijing Organizing Committee for the Olympic Games), participated in the 2008 Beijing Olympic Electric Bus Project, responsible for relevant research on the Chinese lithium battery industry. From April 2009 to the present, he has been providing consulting and market research services to lithium battery companies; in September 2010, he registered and established Beijing Huaqing Zhengxing Technology Development Co., Ltd., creating the brand RealLi Research, focusing on lithium battery industry research, market research, and consulting services.</p>
Li Yunjiao	<p>Li Yunjiao, female, Han ethnicity, born in 1963. Ms. Li Yunjiao graduated from the Department of Nonferrous Metallurgy at Central South University of Technology, obtaining a Master's Degree in Engineering, and later stayed at the university as a faculty member. In 2002, she obtained a Doctorate in Engineering in Nonferrous Metallurgy from Central South University. From September 1987 to September 2004, she served successively as Assistant Teacher, Lecturer, Associate Professor, Professor, and Doctoral Supervisor at Central South University of Technology; from October 2004 to October 2009, she served as Visiting Professor at McGill University in Canada, Postdoctoral Fellow and Associate Researcher at the University of Toronto, and Senior Metallurgist at the Bio-Industrial Process Research Centre; from October 2009 to the present, she serves as Professor (Level 2) and Doctoral Supervisor at the School of Metallurgy and Environment, Central South University. Ms. Li Yunjiao has long been engaged in scientific research related to new energy materials and non-ferrous metal hydrometallurgy, dedicating herself to the preparation of new energy materials such as lithium-ion battery cathode materials, as well as the development of new technologies and processes in the field of tungsten and molybdenum hydrometallurgy, achieving significant results.</p>
Mei Yuexin	<p>Mei Yuexin, female, Han ethnicity, born in 1964. Ms. Mei Yuexin graduated from Hangzhou Electronic Industry College with a major in Financial Accounting, holding a Bachelor's Degree in Economics and an EMBA from Peking University. Ms. Mei Yuexin is a Senior Accountant and a Certified Public Accountant. From July 1986 to July 1995, she served as Lecturer at Hangzhou Electronic Industry College; from July 1995 to January 1999, she served as Senior Project Manager at Shenzhen Zhonghua Certified Public Accountants; from January 1999 to August 2002, she served as Senior Manager at Shenzhen Tongren Certified Public Accountants; from August 2002 to August 2012, she served as Senior Manager and Deputy Chief Accountant at Shenzhen Pengcheng Certified Public Accountants; from August 2012 to December 2019, she served as Partner, Deputy</p>

	<p>Chief Accountant, Member of the Risk Control Committee, and Member of the Internal Control Committee at Ruihua Certified Public Accountants. Ms. Mei Yuexin has previously served as Independent Director for multiple listed companies, including Shenzhen Agricultural Power Group Co., Ltd., Shenzhen Tongchan Lixing Technology Group Co., Ltd., Shenzhen ZQGame Co., Ltd., Shenzhen Batian Ecotypic Engineering Co., Ltd., and Shenzhen New Trend International Logis-Tech Co., Ltd.</p>
Jiang Hui	<p>Jiang Hui, female, born in 1977, Chinese nationality, without overseas permanent residency. Ms. Jiang Hui holds a Master's degree in Finance from the University of Sydney. From 2004 to 2010, she served as Management Department Director at SEMITEC Corporation in Japan; from 2010 to 2014, she served as Human Resources Director at Beijing Easpring Material Technology Co., Ltd.; from 2015 to the present, she has been serving as Deputy General Manager at Shanghai Dingyi Intelligent Technology Co., Ltd.; from March 2018 to August 2024, she serves as Independent Director of the Company.</p>
Chen Ruitang	<p>Chen Ruitang, male, born in 1963, Chinese nationality, without overseas permanent residency. Mr. Chen Ruitang graduated from Central South University with a major in Non-Ferrous Metallurgy, obtaining a Bachelor of Engineering. From July 1984 to March 1989, he served as Engineer at Guiyang Aluminium Magnesium Design &amp; Research Institute, Aluminum Corporation of China; from March 1989 to March 2013, he served as Chief Engineer at Zhengzhou Non-Ferrous Metals Research Institute, Aluminum Corporation of China; from April 2013 to October 2015, he served as Deputy Chief Engineer at Hunan Zhongda Metallurgical Design Institute Co., Ltd.; from October 2015 to the present, he serves as Chief Engineer of the Engineering Design Research Institute of the Company; from July 2017 to the present, he has been serving as Supervisor of the Company.</p>
Zhang Mingxiang	<p>Zhang Mingxiang, male, Han ethnicity, born in 1976. Mr. Zhang Mingxiang graduated from Wuhan Automotive Polytechnic University with a major in Fine Chemical Engineering. From 2010 to 2015, he served in various positions at Beijing Easpring Material Technology Co., Ltd., including Deputy Manager of Quality Department, Director of the Tongzhou Factory, and Manager of the Yanjiao Branch. Since 2016, he has held various positions, including Production Director, Factory Manager, and Deputy General Manager of Hubei Ronbay Lithium Battery Material Co., Ltd.; Deputy General Manager and General Manager of Xiaocao'e branch of Ningbo Ronbay New Energy Technology Co., Ltd.; General Manager of Linshan branch and Deputy General Manager of Manufacturing Division of the branch.</p>
Liu Dexian	<p>Liu Dexian, male, born in 1974, Chinese nationality, without overseas permanent residency. Mr. Liu Dexian graduated from Beijing Institute of Technology with a Master's Degree in Materials Science and Engineering. From January 1999 to May 2004, he held various positions at Beijing</p>

	Easpring Material Technology Co., Ltd., including Marketing Engineer, Marketing Department Manager, and Assistant to the General Manager; from June 2004 to July 2017, he served as Sales Manager and Regional Sales Director for VALE Base Metals Business Unit in China; from July 2017 to the present, he has successively held positions as General Manager, Assistant President, and Deputy General Manager of the International Trade Division of the Company.
Sun Hui	Sun Hui, male, Han ethnicity, born in 1981, Chinese nationality, without overseas permanent residency. Mr. Sun Hui graduated from Fudan University with a major in Applied Chemistry and obtained a Master's degree in Chemical Engineering and Technology from Zhejiang University. From September 2007 to April 2019, he held various positions at Wanhua Chemical Group Co., Ltd., including R&D Engineer, Project Manager, Process Optimization Center Manager, Quality Manager, and Quality and Supply Chain Manager; from April 2019 to May 2022, he served as General Manager of the Quality, Environment, and Safety Center, Deputy General Manager of the Precursor Division and concurrently as President of Korean EMT, Assistant President and concurrently as Executive Deputy Dean of Central Research Institute; from November 2022 to June 2024, he successively held positions as General Manager of the Precursor Division, Co-President of the Market System, Co-President of the R&D System, concurrently as General Manager of the Precursor Division, President of the Precursor Business and concurrently as President of the Market System; since June 2024, he has been serving as Executive Vice President of the Company.
Lee Jonghee	Lee Jonghee, male, born in 1975, South Korean nationality. Mr. Lee Jonghee graduated from Kyushu University in Japan with a major in Applied Chemistry and obtained a Doctor of Engineering degree. From 2002 to 2004, he served as Research Engineer at Korea Institute of Energy Research; from 2004 to 2007, he served as Research Assistant at Japan Institute of Applied Chemistry; from 2007 to 2012, he worked as Senior Engineer at Samsung SDI Battery Development Center; from 2012 to 2016, he served as Chief Engineer at Battery Materials Research Center of GS Energy Corporation; from 2017 to the present, he has successively held positions as Deputy Dean of Central Research Institute and President of the R&D System of the Company.
Yu Jiyun	Yu Jiyun, male, born in 1985, Chinese nationality, graduated with a Bachelor's degree in Powder Materials Science and Engineering from Central South University, and holds qualifications as Board Secretary for Shanghai Stock Exchange Science and Technology Innovation Board and Fund Industry Qualification Certificate. From July 2007 to June 2013, he served as the marketing manager and investment manager at Beijing Easpring Material Technology Co., Ltd.; from June 2013 to July 2014, he was the investment director at Beijing Ronbay Investment Holdings Co., Ltd.; from

	<p>March 2020 to July 2023, he served as general manager of investment at Beijing Ronbay New Energy Investment Management Co., Ltd. From July 2022 to the present, he has been serving as Supervisor at the Company's holding subsidiary, Tianjin Skyland Technology Co., Ltd.; from August 2023 to the present, he has been the Board Secretary of the Company; from January 2024 to August 2024, he served as Financial Director of the Company.</p>
Yang Yang	<p>Yang Yang, female, Han ethnicity, born in 1983, Chinese nationality. Ms. Yang Yang graduated with a Bachelor's Degree in Management from the Guanghua School of Management, Peking University. From July 2006 to May 2011, she served as Financial Assistant Manager at Daimler Greater China Ltd. (Fortune Global 500); from May 2011 to June 2015, she served as Financial Manager at Volvo (China) Investment Co., Ltd.; from June 2015 to March 2021, she served as Financial Director at Dongfeng Infiniti Motor Co., Ltd.; from March 2021 to January 2023, she served as Chief Financial Officer at Zhejiang Soterea Technology Group Co., Ltd. (Pre-IPO); from February 2023 to July 2023, she served as Financial Director at Zhi Xing (Beijing) Information Technology Co., Ltd. (NIO Investment); from November 2023 to the present, she has been serving as General Manager of the Company's Financial Operations Center; from August 2024 to the present, she has been serving as the Company's Chief Financial Officer.</p>
Yuan Xujun	<p>Yuan Xujun, male, born in 1984, Chinese nationality, without overseas permanent residency. Mr. Yuan Xujun graduated from Ningbo University with a Bachelor of Science degree in Chemistry. From July 2007 to June 2008, he served as Research Assistant in the Fuel Cell Division of the Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences; from July 2008 to September 2014, he successively held positions as R&amp;D Engineer and R&amp;D Manager at Jinhe New Materials; from October 2014 to the present, he has been engaged in the R&amp;D of lithium-ion battery cathode materials at the Company, serving as Deputy General Manager of Cathode Division and General Manager of Ternary Cathode Division.</p>
Mo Jiguo	<p>Mo Jiguo, male, Han ethnicity, born in 1968, Chinese nationality. Mr. Mo Jiguo graduated from Sichuan University (formerly Chengdu University of Science and Technology) with a Bachelor of Engineering in Chemical Engineering; from July 1992 to October 2002, he served as Senior Engineer and Project Manager at China Carbon Black Institute; from October 2002 to March 2004, he served as Project Manager in the Engineering Department of Beijing Easpring Technology; from April 2004 to June 2017, he served as Senior Process Engineer and Project Manager at Worley China (Beijing Worleyparsons Engineering Technology Co. Ltd.); from July 2017 to the present, he has successively held positions as General</p>

	<p>Manager of the Company's Engineering Research and Design Institute, Deputy Dean of the Engineering Academy and General Manager of the Engineering Institute, Deputy Dean of the Central Research Institute and General Manager of the Engineering Institute, and Executive Deputy General Manager of the Engineering Business Division.</p>
Wang Zunzhi	<p>Wang Zunzhi, male, Han ethnicity, born in 1991, Chinese nationality. Mr. Wang Zunzhi graduated from the School of Science, Tianjin University with a major in Chemistry; he obtained a Ph.D. in Chemistry in 2018; from 2019 to 2021, he conducted postdoctoral research at the School of Materials Science and Engineering, Zhejiang University, focusing on the development and application of high-energy-density lithium-ion battery cathode material lithium nickel oxide. Since joining Ronbay Technology in July 2018, he has successively served as development engineer at the Central Research Institute, head of the Multi-Product Development Department, assistant to director of the Cathode Research Institute, general manager of the Product Development Center of the Cathode Division, and general manager of the Sodium Battery Division.</p>
Yuan Yong	<p>Yuan Yong, male, Han ethnicity, born in 1980, Chinese nationality. Mr. Yuan Yong graduated from Henan University of Science and Technology, majoring in Chemical Engineering and Technology; from July 2003 to December 2006, he was lithium-ion battery R&amp;D engineer and project supervisor at Henan Huanyu Group's R&amp;D Center; from January 2007 to April 2009, he served as chief engineer and deputy general manager at Jiaozuo Yixing Lithium Battery Technology Co., Ltd.; from May 2009 to October 2019, he was the R&amp;D Department manager and chief engineer at Tianjin STL Energy Technology Co., Ltd.; since January 2020, he has been the chief engineer and deputy general manager at Tianjin Ronbay Skyland Technology Co., Ltd.</p>

## Section VI Share Changes and Shareholders

### 1. Changes in shareholding

Unit: Shares

	Before this change		Increase/Decrease in this change (+, -)					After this change	
	Quantity	Ratio (%)	New shares issued	Bonus shares	Capital reserve capitalization	Miscellaneous	Subtotal	Quantity	Ratio (%)
I. Restricted shares	200,485,578	41.4				-32,908,751	-32,908,751	167,576,827	34.69
1. State-owned shares									
2. State-owned legal person shares	4,678,223	0.97				-4,678,223	-4,678,223		
3. Other domestic shares	188,942,205	39.02				-21,365,378	-21,365,378	167,576,827	34.69
Including: Domestic non-state-owned legal person shares	187,613,129	38.75				-20,137,729	-20,137,729	167,475,400	34.67
Domestic natural person shares	1,329,076	0.27				-1,227,649	-1,227,649	101,427	0.02
4. Foreign shares	6,865,150	1.42				-6,865,150	-6,865,150		
Including: Overseas legal person shares	6,865,150	1.42				-6,865,150	-6,865,150		
Overseas natural person shares									
II. Unrestricted circulating shares	283,738,010	58.60				31,714,822	31,714,822	315,452,832	65.31
1. RMB Common Shares	283,738,010	58.60				31,714,822	31,714,822	315,452,832	65.31
2. Domestic Listed Foreign Shares									
3. Overseas Listed Foreign Shares									
4. Miscellaneous									
III. Total Number of Shares	484,223,588	100.00				-1,193,929	-1,193,929	483,029,659	100.00

**2. Total number of ordinary shareholders, total number of preferred shareholders with voting rights restored, total number of shareholders holding special voting rights shares, and details of the top 10 shareholders**

Unit: Shares

Total number of ordinary shareholders (accounts) as of the end of the reporting period		25,788					
Total number of ordinary shareholders (accounts) as of the end of the previous month before the annual report disclosure date		27,221					
Total number of preferred shareholders (accounts) with voting rights restored as of the end of the reporting period		0					
Total number of preferred shareholders (accounts) with voting rights restored as of the end of the previous month before the annual report disclosure date		0					
Total number of shareholders (accounts) holding special voting rights shares as of the end of the reporting period		0					
Total number of shareholders (accounts) holding special voting rights shares as of the end of the previous month before the annual report disclosure date		0					
Shareholding status of the top 10 shareholders (excluding shares lent out through the securities lending and borrowing (SLB) mechanism)							
Name of Shareholder (Full Name)	Increase/Decrease During the Reporting Period	Number of Shares Held at the End of the Period	Ratio (%)	Number of Shares with Restrictive Conditions	Pledged, Tagged, or Frozen Status		Shareholder Nature
					Shares Status	Quantity	

Shanghai Ronbay New Energy Investment Enterprise (Limited Partnership)	0	129,000,000	26.71	129,000,000	None	0	Miscellaneous
Hong Kong Securities Clearing Company Limited	21,110,010	29,547,652	6.12	0	None	0	Overseas Legal Person
Beijing Ronbay New Energy Investment Development Co., Ltd.	0	13,957,800	2.89	13,957,800	None	0	Domestic Non-State-Owned Legal Person
Huzhou Haiyu Equity Investment Partnership (Limited Partnership)	0	10,094,835	2.09	0	None	0	Miscellaneous
Beijing Ronbay New Energy Investment Management Co., Ltd.	0	8,800,000	1.82	8,800,000	None	0	Domestic Non-State-Owned Legal Person
Beijing Ronbay New Energy Technology Investment Management Co., Ltd.	0	8,240,300	1.71	8,240,300	Frozen	1,843,842	Domestic Non-State-Owned Legal Person
Gongqingcheng Rongcheng Investment Management Partnership (Limited Partnership)	-762,323	8,144,980	1.69	0	None	0	Miscellaneous
Zunyi Ronbay New Energy Investment Center (Limited Partnership)	0	7,477,300	1.55	7,477,300	None	0	Miscellaneous

Hubei Yangtze River NIO New Energy Industry Development Fund Partnership (Limited Partnership)	0	6,978,961	1.44	0	None	0	Miscellaneous
Agricultural Bank of China Limited - CSI 500 Exchange Traded Open-End Securities Investment Fund	2,916,273	4,652,827	0.96	0	None	0	Miscellaneous
Statement on the Above Shareholders' Related Party Relationships or Concerted Actions	Shanghai Ronbay New Energy Investment Partnership (Limited Partnership), Beijing Ronbay New Energy Investment Development Co., Ltd., Beijing Ronbay New Energy Investment Management Co., Ltd., Beijing Ronbay New Energy Technology Investment Management Co., Ltd. and Zunyi Ronbay New Energy Investment Center are all controlled by Bai Houshan, the actual controller of the Company. Bai Houshan is one of the limited partners of Gongqingcheng Rongcheng Investment Management Partnership (Limited Partnership), the employee stock ownership platform of the Company.						
Explanation of preferred shareholders with voting rights restored and their shareholding quantity	None						



Purpose of Repurchase	Implementation of Employee Shareholding Plan or Equity Incentive
Number of Shares Repurchased (Shares)	3,147,658
Percentage of Repurchased Shares Relative to the Total Shares in the Equity Incentive Plan (%) (if applicable)	/
Progress of the Company's reduction of repurchased shares through centralized auction trading	/

Name of Share Repurchase Plan	Share Repurchase Plan via Centralized Auction Trading
Disclosure Date of Share Repurchase Plan	February 06, 2024
Planned Number of Shares to be Repurchased and Percentage of Total Share Capital (%)	0.30—0.59
Planned Repurchase Amount	75,000,000—150,000,000
Planned Repurchase Period	February 06, 2024 – May 06, 2024
Purpose of Repurchase	To maintain the Company's value and shareholders' interests
Number of Shares Repurchased (Shares)	2,640,970
Percentage of Repurchased Shares Relative to the Total Shares in the Equity Incentive Plan (%) (if applicable)	/
Progress of the Company's reduction of repurchased shares through centralized auction trading	/

Name of Share Repurchase Plan	Share Repurchase Plan via Centralized Auction Trading
Disclosure Date of Share Repurchase Plan	June 24, 2024
Planned Number of Shares to be Repurchased and Percentage of Total Share Capital (%)	0.25—0.49
Planned Repurchase Amount	50,000,000—100,000,000
Planned Repurchase Period	June 22, 2024 – September 22, 2024
Purpose of Repurchase	For employee shareholding plan or equity incentive
Number of Shares Repurchased (Shares)	4,301,807
Percentage of Repurchased Shares Relative to the Total Shares in the Equity Incentive Plan (%) (if applicable)	/
Progress of the Company's reduction of repurchased shares through centralized auction trading	/