CANRD

CANRD: Creating Avenues for New Research Development

Outline

01. Canrd profile

02. Business introduction

03. Appendix (patent list)

Canrd profile

Company profile

Company profile

- ✓ 2015.2.11 was established in Songshan Lake High-tech Zone;
- ✓ Registered capital of 1000W;
- ✓ Main business of new energy technology development
- ✓ **(Customization / Analysis / New material / Research(pack) / Device, etc.);**
- ✓ In 2017, it was approved as **a national high-tech enterprise;**
- ✓ **120 + invention patents; 100 + authorized;**
- ✓ The plant area is 6,000 m 2, with 100 employees (the core team is from Ningde ATL / Foxconn).

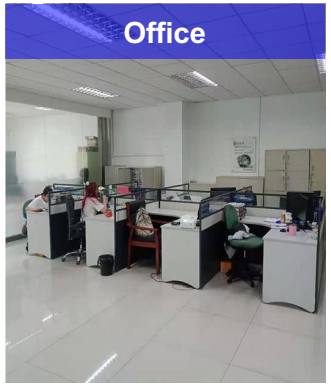
Company culture

- ✓ **Vision: the world's top one-stop service provider in the field of new energy research**
- ✓ **Mission:** Build a "industry-university-research" high-speed channel
- ✓ **Values:** burn yourself and contribute to the society

- Scientific research and innovation is the soil of canrd survival
- Achievement of yourself and serve the society
- Talent is the cornerstone of canrd growth

Business license

Office



Battery workshop

Equipment workshop

Milestone

2015

Canrd established

2017

National high-tech enterprise

2018

Customers exceed 2000+

2020

- Customization division
- Testing division(Xia Men)

2021

Equipment division

2022

- R&D center(Houjie)
- Pack division

Organization chart

Chairman

TJU Master
12+ experience (**ATL5**) Process

General Manager

GM
THU Doctor
12+ experience **(ATL4)** Material

Customization	Analysis & Testing	New Energy Materials	Research for application	Device
12+(**ATL**4)	12+ **calibration**	11+(**ATL**7) PRJ	12+(**ATL**8) Pack	20+ (**Foxconn**)
				

- The company has a total of **100 employees**, including 9 master, 17 bachelor;
- Company members have rich working experience: **8 peoples are from ATL**;
- **Complementary expertise**, reasonable collocation, strong execution force, high team combat effectiveness

Core team

Blaze，Initiator / Chairman; Double bachelor / **Master** of Xian Jiaotong University, 10 + years of lithium battery industry technology and management experience, once worked in **ATL**; won three president awards, two director awards, authorized nearly 70 patents, good at battery process development and project management

Ben, co-founder / General Manager; Head of Li Fun R&D, **PhD** of Tsinghua University, 10 + years of technology and management experience in lithium battery industry, **ATL**; KT and excellent management team, 20 patents, good at battery material development and project management

Tina, co-founder / head of materials sector; **Master** of Xiangtan University, 10 + years of technology and management experience in lithium battery industry, **ATL**; won one president award, more than 10 authorized patents, good at the development and integration of experimental materials such as chemical / battery materials

The core team possesses extensive management experience and solid professional skills.

Peter, Head of Analysis & testing; General Manager of Sichuan Approved Xinjiang Company, Master / senior engineer of Southwest Petroleum, 10 + quality technology and management experience in inspection and testing industry; 15 authorized patents, first batch of Qingma engineering professionals in Sichuan Province, good at qualification system construction, testing and calibration

Yuan KM, Head of Canrd device; served successively as intelligent general Manager of Dongguan League, 15 + years of automation equipment development technology and management experience, worked at Foxconn; authorized more than 20 patents, good at automation equipment development, battery manufacturing process optimization and integration and project management

Cai JJ, Head of research for application (pack); successively served as general manager of Dongguan Jieyou, master of HIT, 10 + years of technical management experience in lithium battery industry, once worked in **ATL / Huawei**; won excellent management team award, authorized more than 10 patents, good at sodium power R & D and pack R & D design

R&D ability

Team

Core team members are all from ATL/Foxconn
12+working experience

Patents

More than 120 invention patents, covering materials, design, process, equipment and so on

Hardware

Independent battery pilot line and equipment production line

- The combination of hardware and software creates strong research and development capabilities;
- **The invention patents cover new materials** such as silicon carbon, graphene, lithium sulfur, sodium electricity and lithium metal, as well as gel process, pre-lithium process and flexible battery design.

Business introduction

Business introduction

Business

Customization

- Material evaluation
- R&D foundry
- Chemical system
- Semi product customization

Analysis & Testing

- Electrochemical performance
- Reliability testing
- FA testing
- Calibration

New Energy Materials

- Energy materials
- Universal consumables
- Others

Research for application

- Power bank
- Energy storage
- Others

Device for R&D

- Coin cell line
- Pouch cell pilot line
- Layout & decoration
- Fixture

- **Canrd is aimed to be the world's top one-stop service provider in the field of new energy research**
- Dedicated, professional, and quick response/solution

Customized hardware

Customization--Hardware

- Coin cell preparation line with different machine such as mixing, coating, calendaring, cutting, assembly and testing

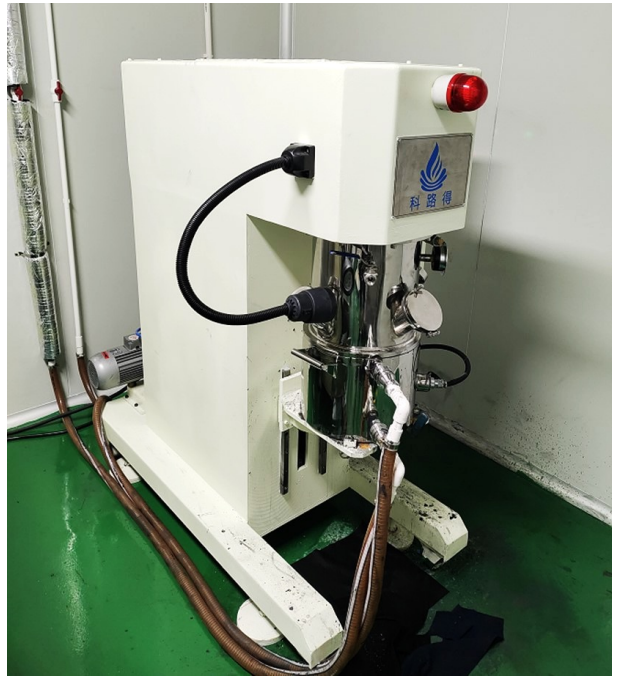
Customization--Hardware

Canrd Pouch/Cylindrical cell line

- Pouch cell pilot line with different humidity control requirement
- Dry room for mixing and coating with -30℃ humidity
- Dry room for other process(before electrolyte injection) with -40℃ humidity

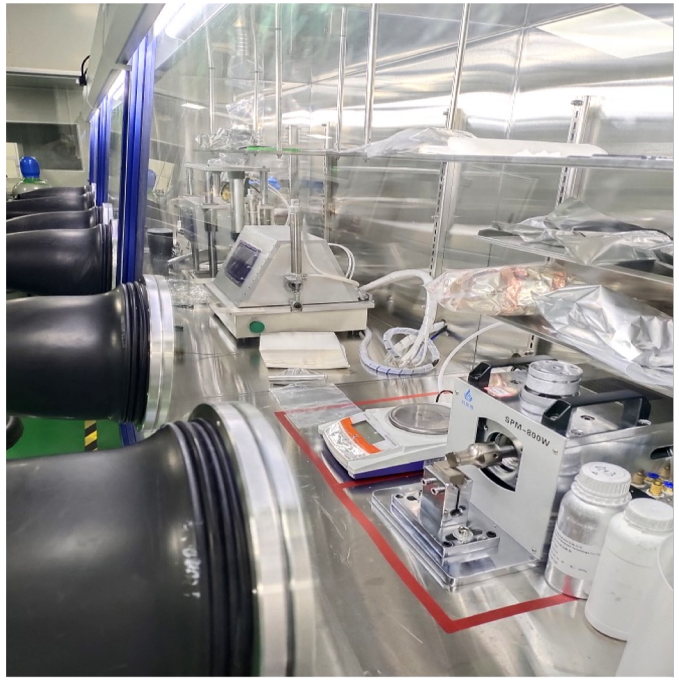
Customization--Hardware

5L mixing



30L mixing

Li metal pouch cell

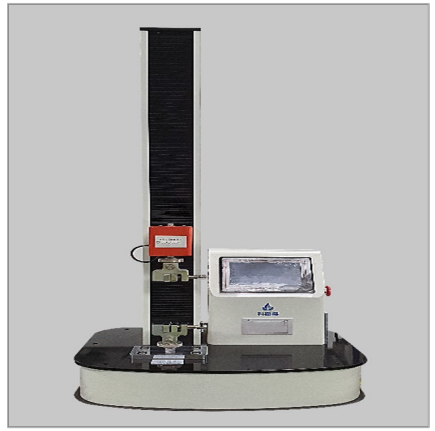


- There are different **capacity for mixing**（5L, 10L and 30L）
- Dry room for **high Ni cathode pouch cell** preparation(-30℃ humidity)
- Different solution to prepare lithium metal pouch cell
- **(glove box with 0.1ppm condition or -50℃ dry room)**

Customization--Hardware

Viscosity test

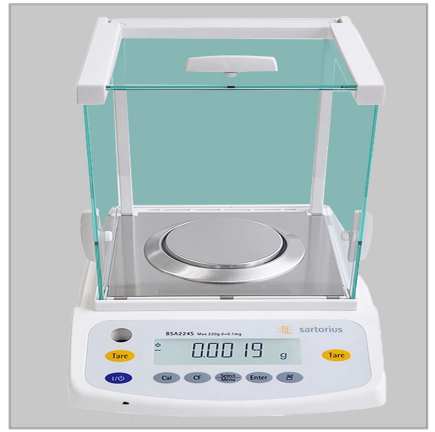
Film resistance



Film adhesion

CCD test

Moisture



Weight test

- Comprehensive testing method to ensure the quality meets the requirements.

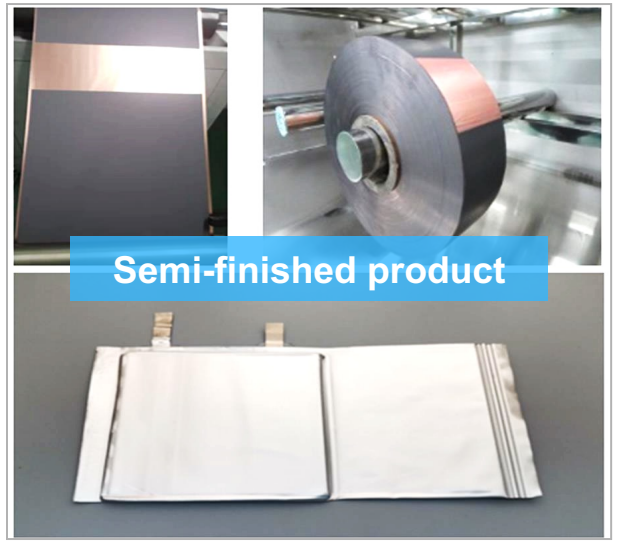
Customization--Hardware

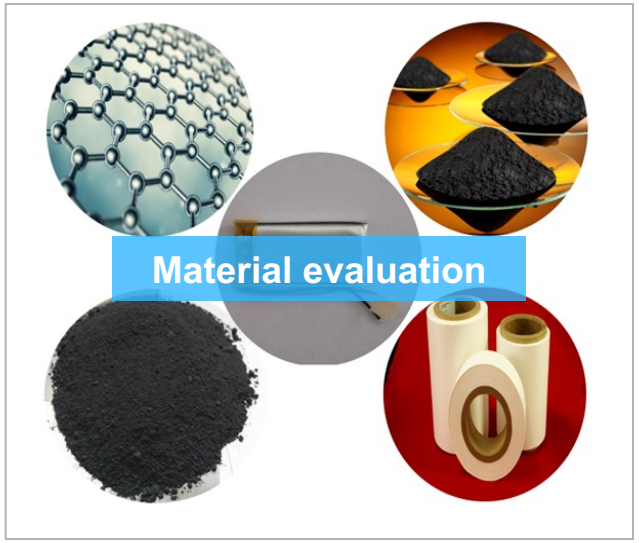
Number	Process	Dew point
1	Mixing、Coating	-30℃
2	Calendaring to sealing	-40℃
3	Electrolyte filling	-50℃
4	Lithium metal	-50℃
5	Lithium metal (glove box)	<0.1PPM

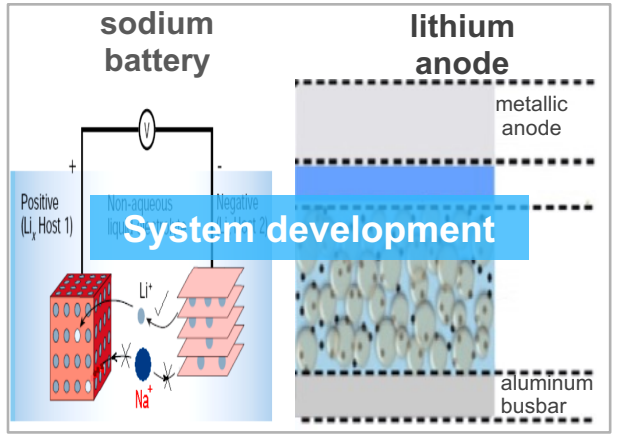
- Dry room for high nickel cathode(Ni83, Ni90)、sodium ion battery、lithium metal battery and so on.
- Clean room to control the particle.

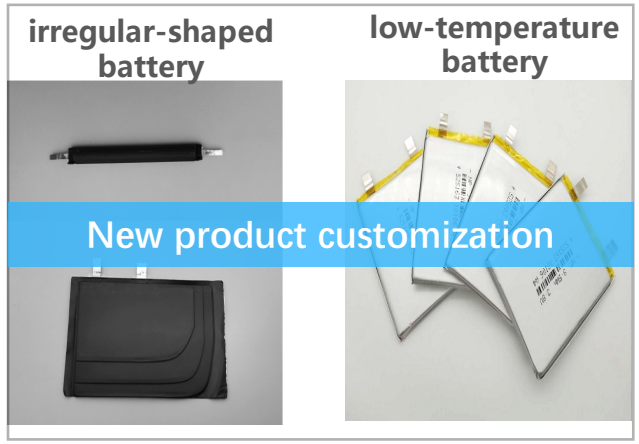
customization Business scope

Customization—case





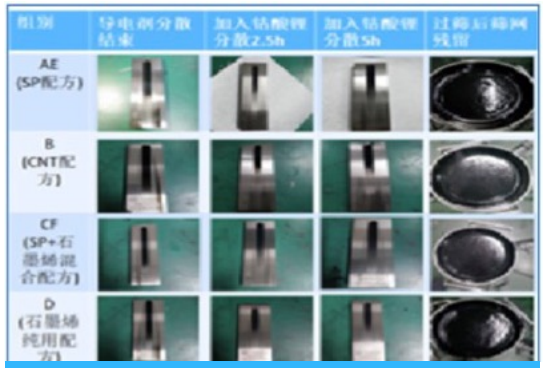




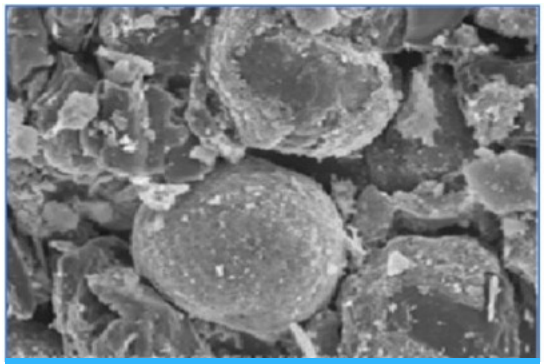
Customization—case

- **Material evaluation**

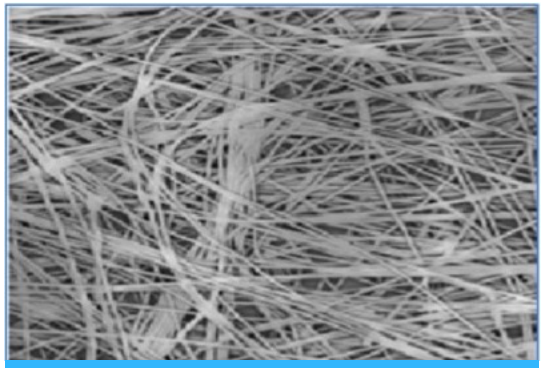
Cathode	Anode	Electrolyte	Separator	Conductive carbon
LCO/NCM/LFP	Graphite/Silicon-Carbon/LTO	Conventional/5V/Lithium Metal	PE/PP/Non-woven fabric	SP/CNT/Graphene
Lithium-rich / High-voltage Nickel Manganese / Sodium-ion	Hard Carbon / Lithium Metal	Semi-solid / Solid-state Electrolyte	Ceramic / PVDF Membrane	Few-walled / Single-walled CNT



Graphene Material Development



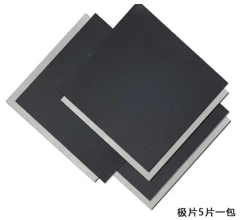
Silicon-Carbon Anode Material Development

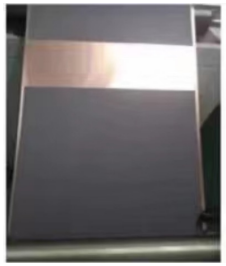


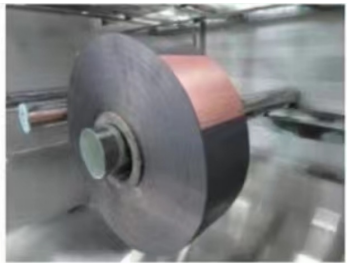
Development of High-Security Separator

- **System development**
  - - **High temperature:** mine safety helmet
  - - **Low temperature:** outdoor extreme cold application
  - - **Fast charging** system development: fast charging power bank
  - - **Water system** battery development: new system development

Customization - Product Introduction - Electrode Sheet/Electrode Sheet Roll



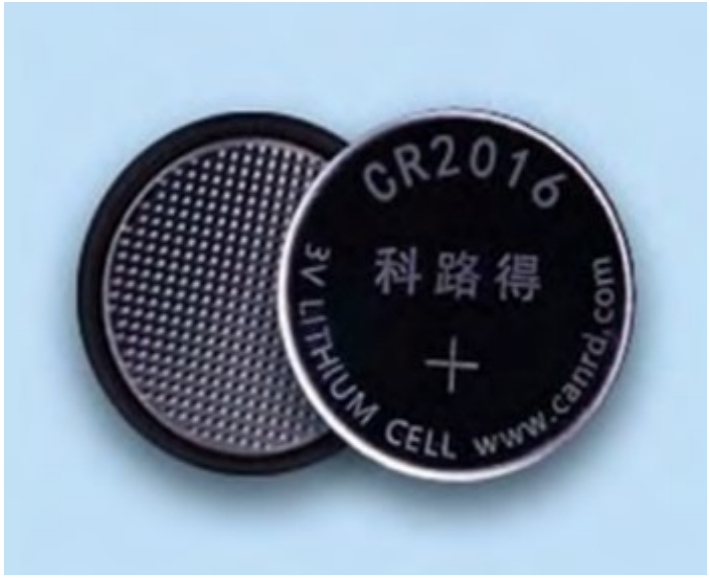




- 10*10cm Single Electrode Sheet
- Electrode Sheet Roll (Customizable Sizes)
- Different Foil Materials (Carbon-Coated Foil, New Composite Foil, etc.)

Number	Material Type		Electrode Formula Materials	Areal Density Range (mg/cm2)	Areal Capacity (mAh/cm2)
1	Lithium-ion Battery Cathode	NCM523	523、SP、KS-6、PVDF; loading94%	5.0-20.0	0.8-3.2
2		NCM622	622、SP、PVDF、CNT; loading96.5%	5.0-25.0	0.8-4.2
3		NCM811	811、CNT、SP、PVDF; loading94.5%	4.0-25.0	0.8-4.5
4		Lithium Iron Phosphate - LFP	LFP、SP、CNT、PVDF; loading91.5%	4.0-20.0	0.6-2.7
5		Lithium Cobalt Oxide - LCO	LCO、SP、PVDF; loading96.4%	6.0-25.0	1.1-4.3
6		Lithium Manganese Oxide - LMO	LMO、SP、PVDF; loading95%	5.0-25.0	0.6-2.8
7	Lithium-ion Battery Anode	Graphite	Graphite 、SP、CMC、SBR; loading95.7%	4.0-15.0	1.5-5.0
8		Silicon Carbon - Si/C	Silicon Carbon、SP、CMC、SBR; loading95%	4.0-15.0	1.5-5.0
9		Lithium Titanate - LTO	LTO、SP、PVDF; loading90%	6.0-15.0	0.8-2.0
10	Sodium-ion Battery System	Sodium Nickel Iron Manganese Oxide	Sodium Nickel Iron Manganese Oxide、SP、PVDF; loading94%	5.0-20.0	0.7-2.3
11		Sodium Vanadium Phosphate	NVP、SP、PVDF; loading90%	4.0-30.0	0.5-3.2
12		Hard Carbon	Hard Carbon、SP、CMC、SBR; loading95.5%	4.0-15.0	1.2-4.2

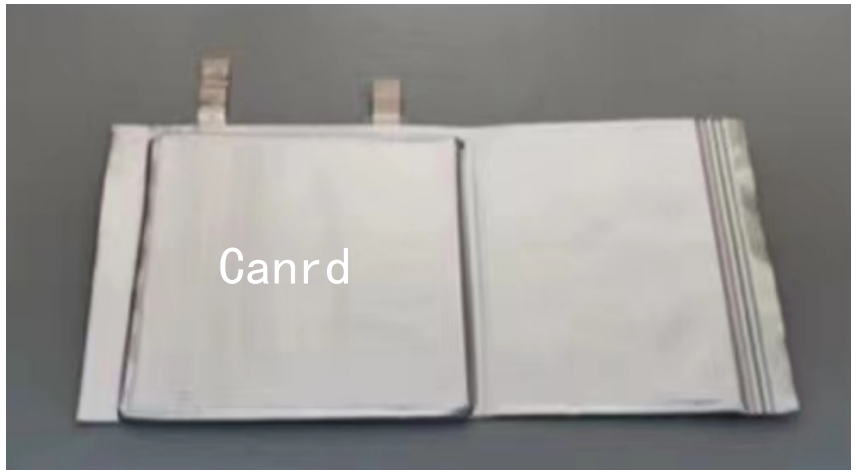
Customization - Product Introduction - Coin Cell Battery



- Customizable Half-Cells and Coin-Type Full-Cells for Various Materials
- Offer relevant testing based on customer requirements

Number	Model	Collocation
1	2032 (Half-Cell)	2032 Negative Shell - Spring (15.4*1.1mm)-Gasket (15.8*1.0mm)-Electrode Sheet 2500 Separator-Lithium Sheet (16*0.6mm)-2032 Positive Shell
2	2025 (Full-Cell)	2025Negative Shell - Spring (15.4*1.1mm)-Gasket (15.8*0.8mm)-Negative Electrode Sheet 2500 Separator-Positive Electrode Sheet-Gasket (15.8*0.5mm)-2025Positive Shell

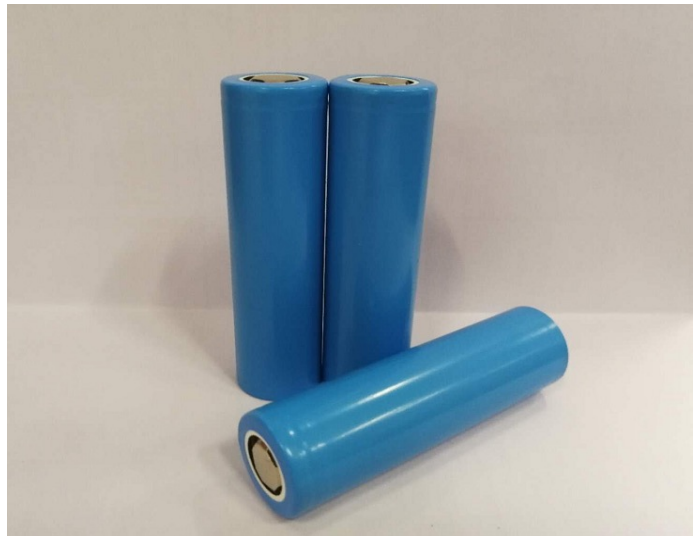
Customization - Product Introduction - Soft Pack Battery



- Customizable high-nickel, lithium metal, solid-state, sodium-ion, and other new battery systems
- Capable of customizing cells with a capacity ranging from 200mAh to 20Ah
- Able to mold and customize new models based on customer requirements

Number	Model	Dimensions (Length * Width * Thickness) / mm	Capacity/Ah	Structure	Minimum Order Quantity
1	402528	28*25*4.0	0.2	Winding	50
2	425868	68*58*4.2	1~3	Winding / Stacking	30
3	6060100	100*60*6.0	3~5	Winding / Stacking	20
4	60100134	134*100*6.0	5~20	Stacking	20

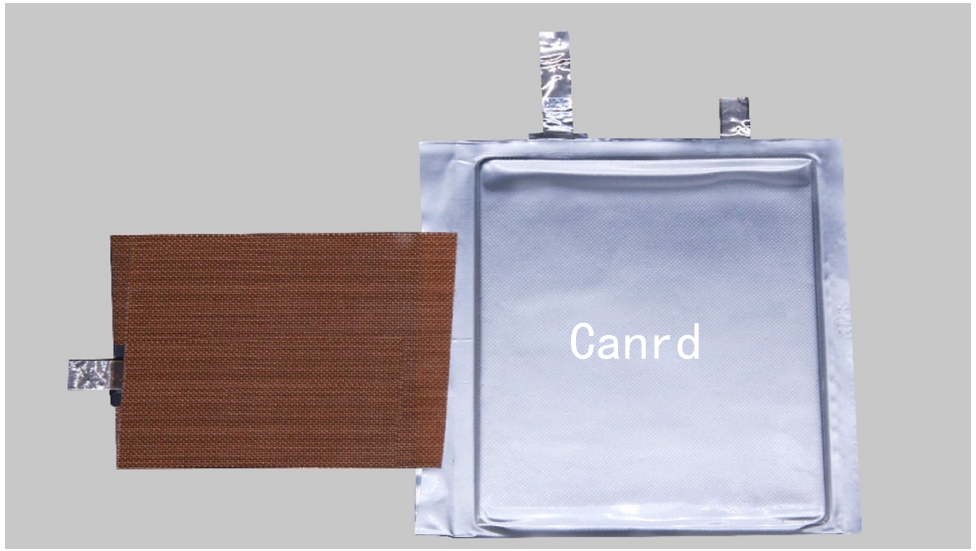
Customization - Product Introduction - Small Cylindrical Battery

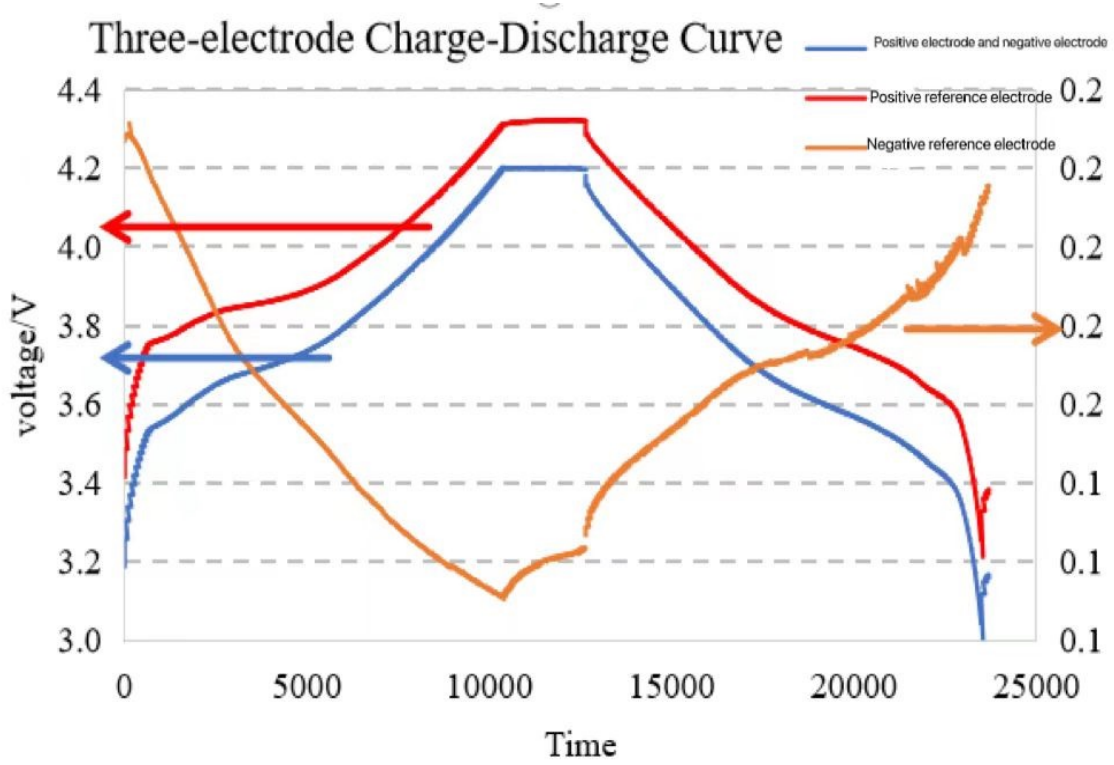


- Customizable Sodium-ion Battery System
- Capable of Customizing Cells with a Capacity Range of 1000mAh to 5000mAh

Number	Model	Dimensions (Length * Width * Thickness) / mm	Capacity/Ah	Structure	Minimum Order Quantity
1	18650	65*18	1~3	Winding	30
2	21700	70*21	3~5	Winding	20

Customization - Product Introduction - Three-electrode Battery



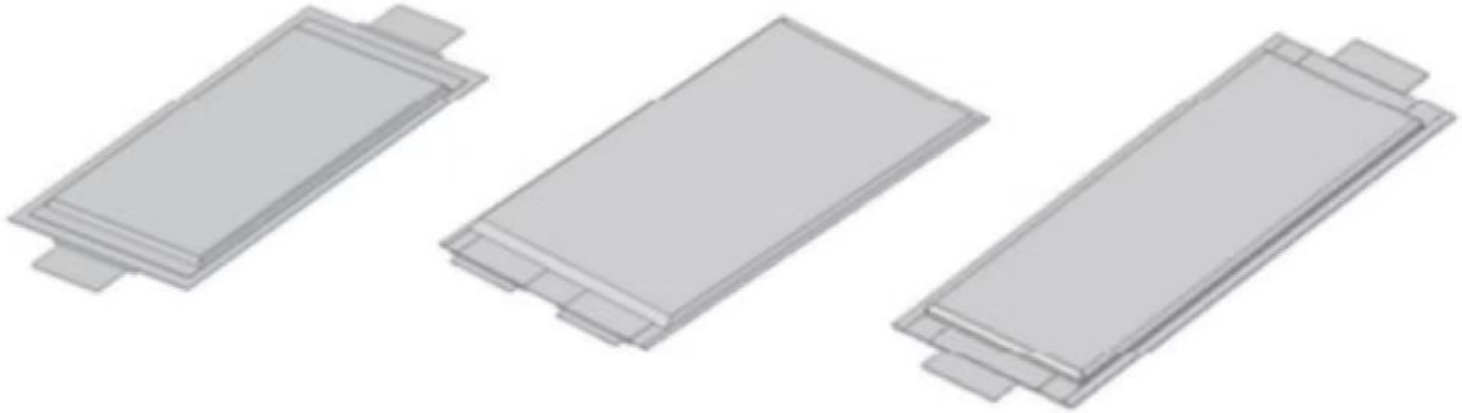


- **Offer customization of three-electrode batteries for soft-packed batteries. By introducing a reference electrode (metal lithium electrode/metal sodium electrode), effectively monitor the performance of both the positive and negative electrodes in the full cell.**
- **The currently prepared three-electrode batteries can stably monitor for 10 weeks, making them suitable for the application development and evaluation of fast charging and new material systems.**

Customization - Product Introduction - Special-shaped and Other Batteries

- **Customize various high-quality lithium-ion batteries covering areas such as regular, low-temperature, high-temperature, fast-charging, high-power, and high safety reliability.**
- **Strong expertise in specialized battery technologies: including ultra-low temperature, ultra-high temperature, fast-charging high-rate, and safety battery technologies.**
- **Robust research and development capabilities: with key personnel possessing over 10 years of development experience.**
- **Rapid response: we have provided over 100 custom solutions and served more than 50 customers.**

Customization - Product Introduction - Large Soft Pack



Dimensions and model	VDA 243*121	VDA 227*165	MEB 309*117
Length /mm	243	227	309
Width /mm	121	165	117
Thickness /mm	6-18	6-18	6-18
Capacity/Ah	6-10	25-80	50-70
Energy density/wh/kg	100-330	250-350	250-350

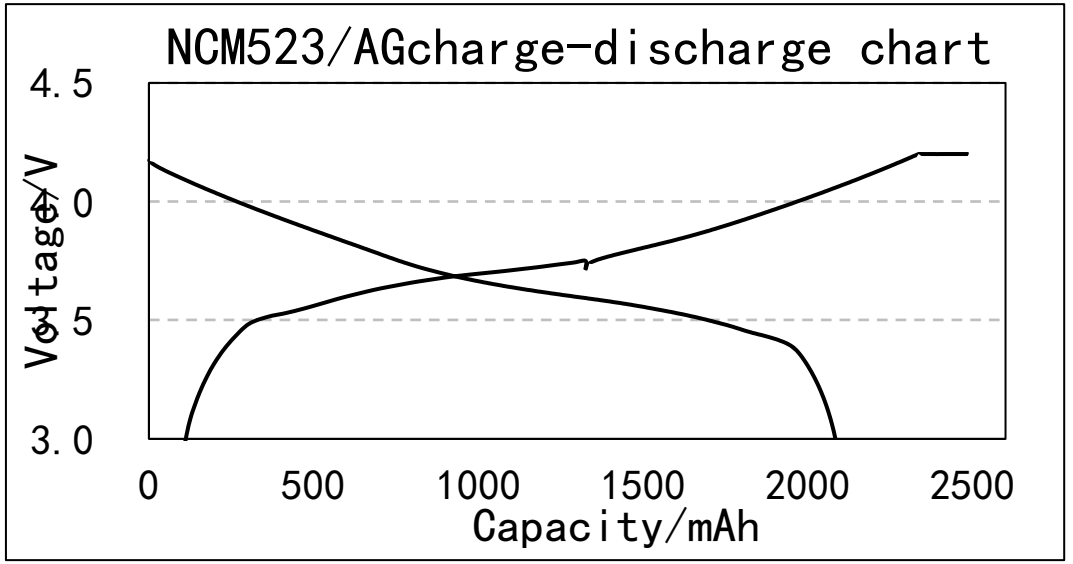
customization
System and performance

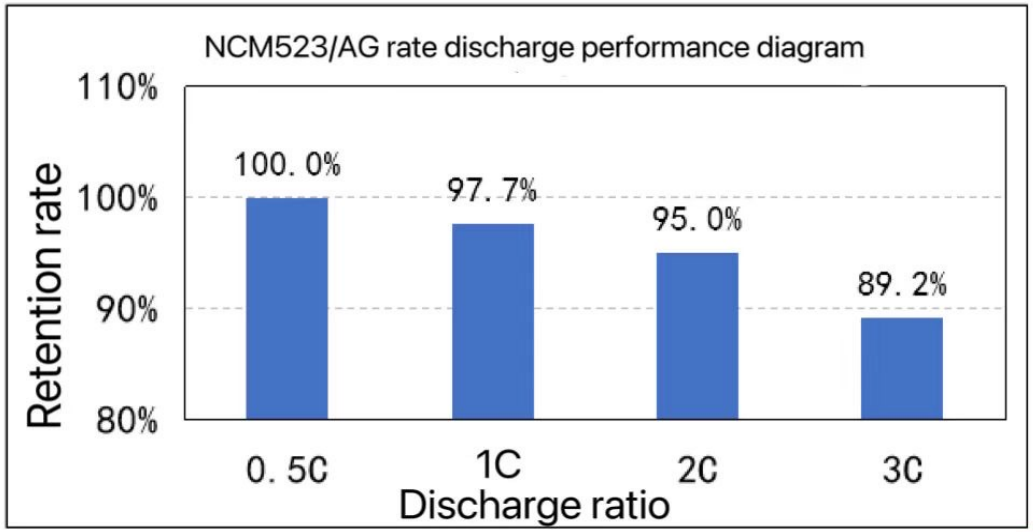
Customization - System Introduction - NCM523/AG - Design Information

Project	Cathode	Anode
Formula	NCM523（ZH5000BDH）：SP：KS-6：PVDF（5130）=94：2：2：2	AML400：SP：CMC（2200）：SBR（BM430B）=96：1：1：2
Areal density	18.06mg/cm2	9.71ng/cm2
Compaction density	3.35g/cm3	1.5g/cm3
Gram capacity of material	158mAh/g	340mAh/g
Foil thickness	Aluminum foil, 14um thick	Copper foil, 8um thick
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	KLD-1230C	
Injection volume	3g/Ah	
CB value	1.18	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	12 layers	
Voltage range	3.0-4.2V	
Design capacity	2100mAh	

Customization - System Introduction - NCM523/AG - Test Performance 1

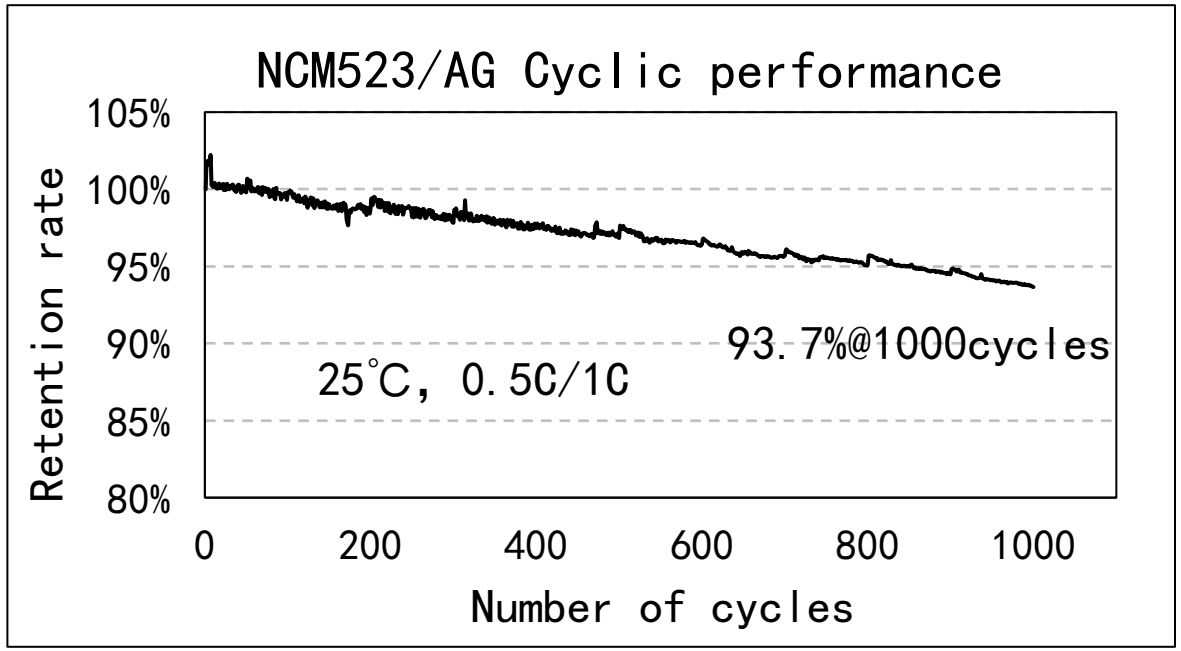
Project	NCM523/AG
First effect (RT)	84.5%
Capacity (RT, 0.2C)	2080mAh
Gram capacity (RT, 0.2C)	160mAh/g
Internal resistance	29mΩ
Fluid retention coefficient	3.0g/Ah
Weight energy density	202.20Wh/Kg
Volume energy density	475.80Wh/L
Voltage platform	3.69V
Cycle performance (RT, 0.5C/1C)	93.7%@1000cycles
Magnification performance	89.2%@3C
DCR (25℃、50%SOC、3C DC 30S)	61mΩ





- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased. ;
- When the discharge rate is 3C, the capacity retention rate reaches about 89.2%.

Customization - System Introduction - NCM523/AG - Test Performance 2



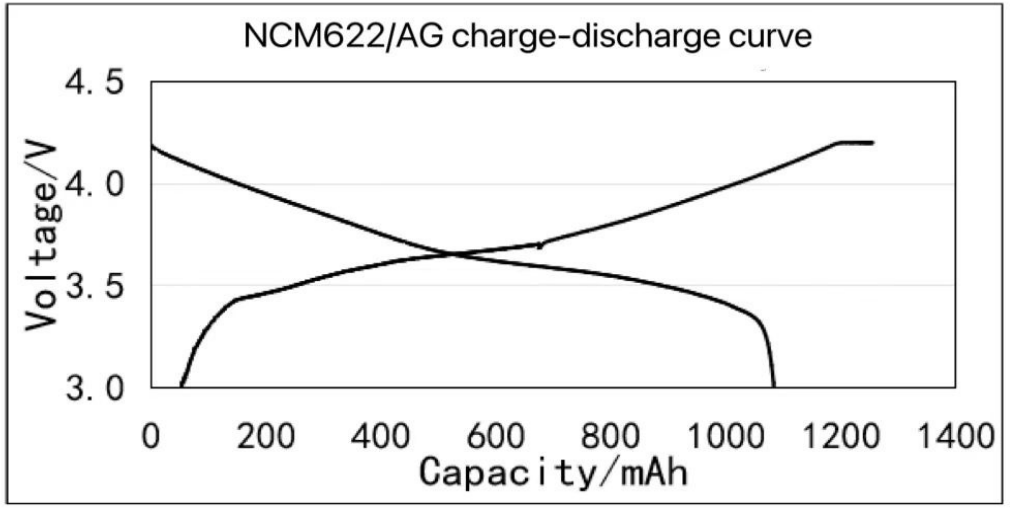
- Tested at 5° C, 0.5C/1C
- 1000 cycles, capacity retention rate of 93.7%

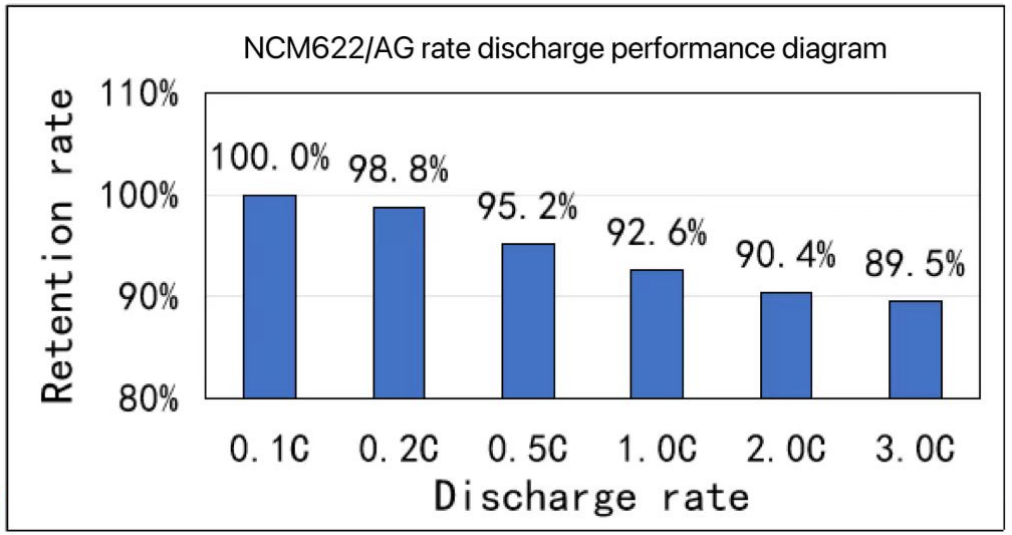
Customization - System Introduction - NCM622/AG - Design Information

Project	Cathode	Anode
Formula	NCM622 (NCM622-C(single crystal)) : SP: CNT: PVDF (5130) =96.7: 1.5: 0.5: 1.3	AML400: SP: CMC (2200) : SBR (BM430B) =95.7: 1.5: 1.2: 1.6
Areal density	15.5mg/cm2	9mg/cm2
Compaction density	3.35g/cm3	1.5g/cm3
Gram capacity of material	168mAh/g	340mAh/g
Foil thickness	Aluminum foil, 12um thick	Copper foil, 8um thick
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	KLD-1230C	
Injection volume	3g/Ah	
CB value	1.16	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	8 layers	
Voltage range	3.0-4.2V	
Design capacity	1100mAh	

Customization - System Introduction - NCM622/AG - Test Performance 1

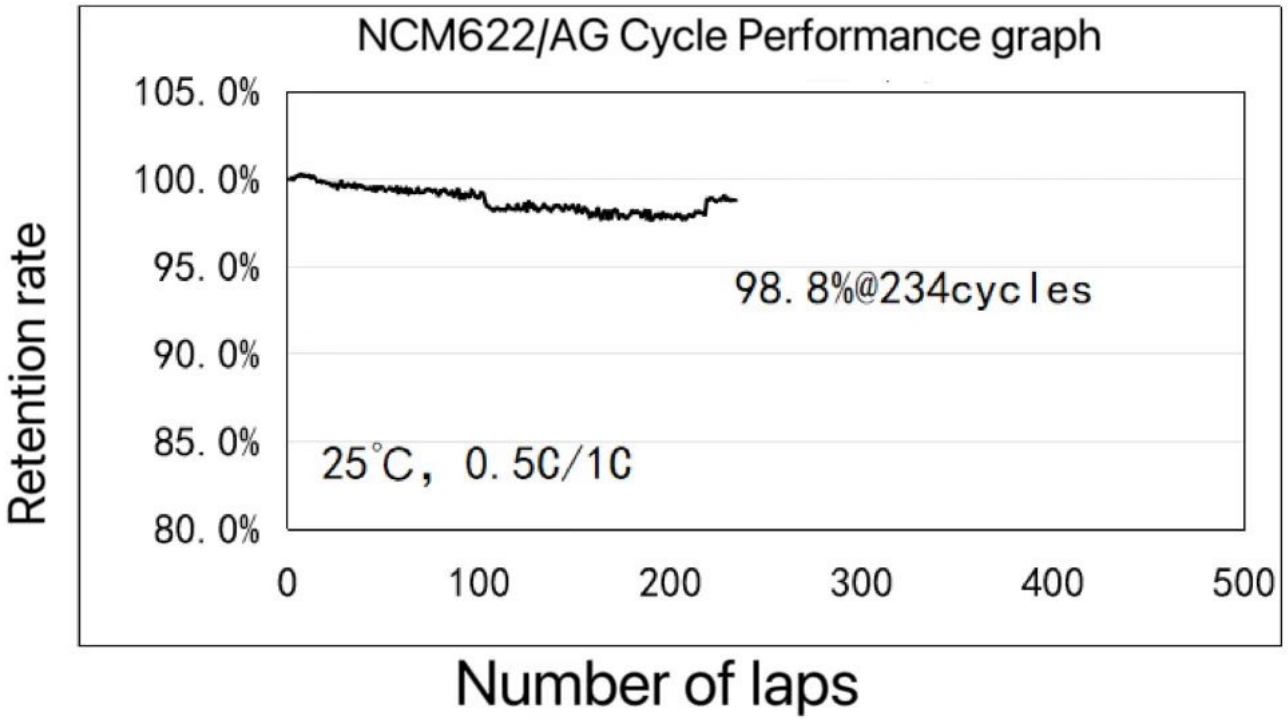
Project	NCM622/AG
First effect (RT)	86.3%
Capacity (RT, 0.2C)	1080mAh
Gram capacity (RT, 0.2C)	167mAh/g
Internal resistance	28.6mΩ
Fluid retention coefficient	3.2g/Ah
Weight energy density	185.4Wh/Kg
Volume energy density	338.1Wh/L
Voltage platform	3.70V
Cycle performance (RT, 0.5C/1C)	(进行中)
Magnification performance	89.5%@3C
DCR (25℃、50%SOC、3C DC 30S)	70.7mΩ
High temperature discharge performance	45℃(0.2C)&25℃(0.2C)=104.6%
Low temperature discharge performance	-20℃(0.2C)&25℃(0.2C)=73.5%
High temperature storage	60℃7day@retention&recovery=92.1%&96.5%





- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased. ;
- When the discharge rate is 3C, the capacity retention rate reaches about 89.5%.

Customization - System Introduction - NCM622/AG - Test Performance 2



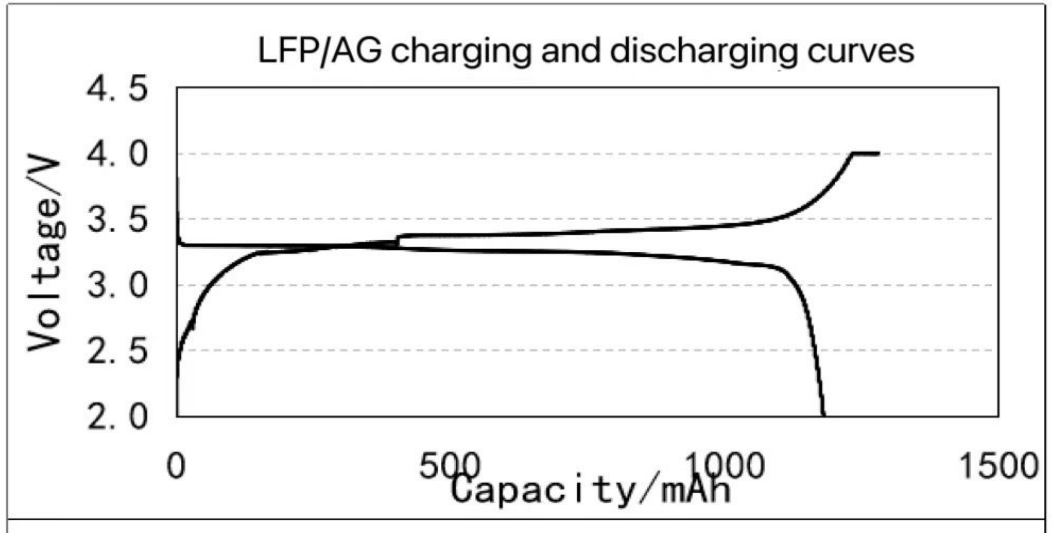
- Tested at 5° C, 0.5C/1C
- 234 cycles, capacity retention rate of 98.8%

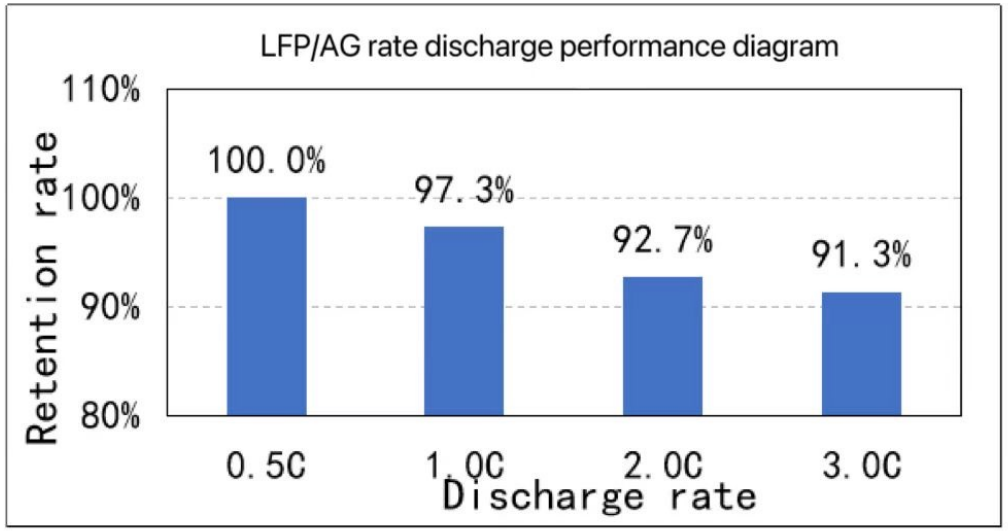
Customization - System Introduction - LFP/AG - Design Information

Project	Cathode	Anode
Formula	LFP（D-3）：SP：CNT（LB117-44）：PVDF（5130）=91.5：2.8：1.2：4.5	AML400：SP：CMC（2200）：SBR（BM430B）=95.7：1.5：1.2：1.6
Areal density	10.74mg/cm2	4.85mg/cm2
Compaction density	2.1g/cm3	1.5g/cm3
Gram capacity of material	142mAh/g	340mAh/g
Foil thickness	Coated carbon aluminum foil, 12+1+1um thick	Copper foil, 8um thick
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	KLD-LFP01	
Injection volume	5g/Ah	
CB value	1.13	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	12 layers	
Voltage range	2.0-4.0V	
Design capacity	1120mAh	

Customization - System Introduction - LFP/AG Test Performance 1

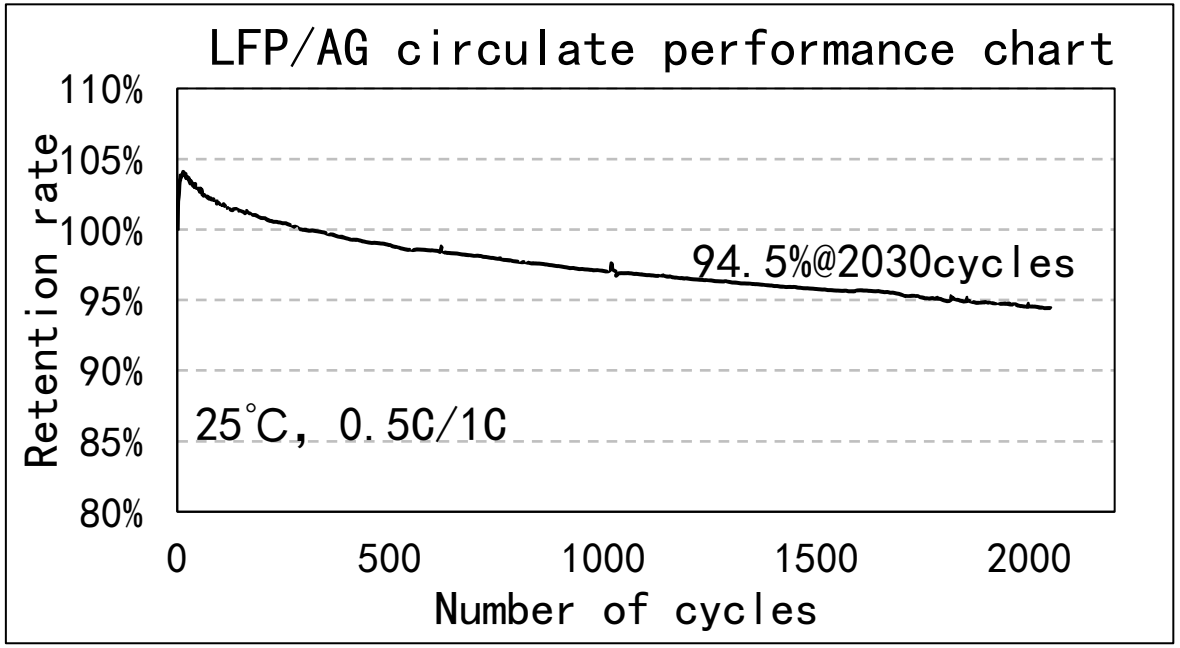
Project	LFP/AG
First effect (RT)	92.3%
Capacity (RT, 0.2C)	1180mAh
Gram capacity (RT, 0.2C)	145mAh/g
Internal resistance	31mΩ
Fluid retention coefficient	5.0g/Ah
Weight energy density	134.16 Wh/Kg
Volume energy density	258.35 Wh/L
Voltage platform	3.19V
Cycle performance (RT, 0.5C/1C)	94.5%@2030cycles
Cycle performance (45℃, 0.5C/1C)	86.2%@1850cycles
Magnification performance	91.3%@3C

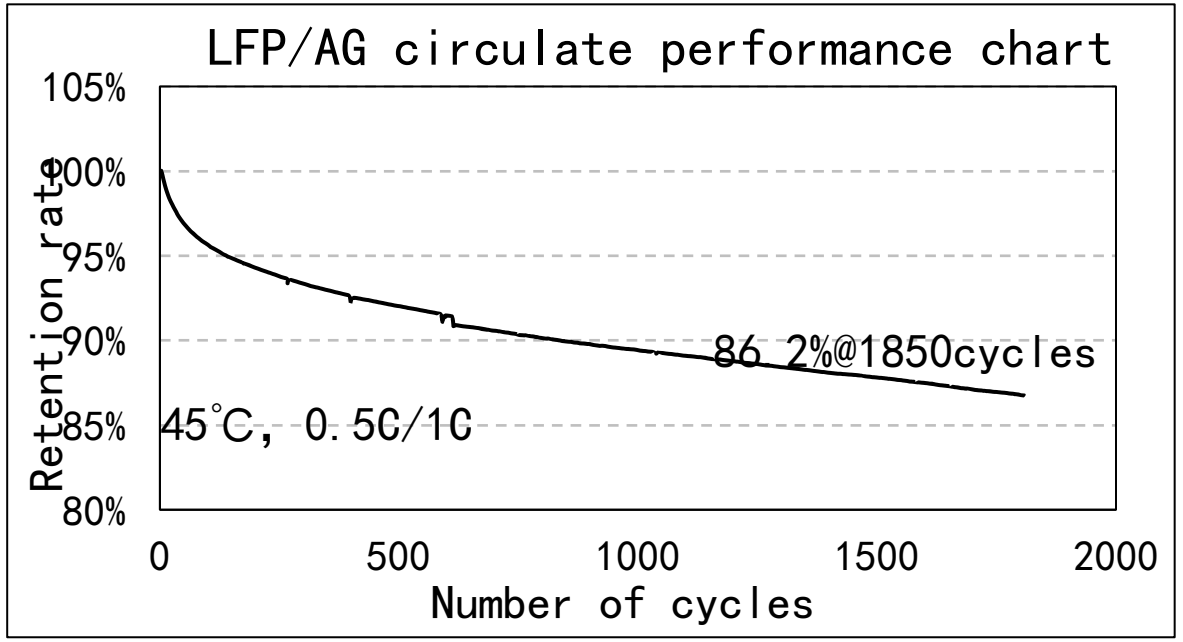




- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased.
- When the discharge rate is 3C, the capacity retention rate reaches about 91%.

Customization - System Introduction - LFP/AG Test Performance 2





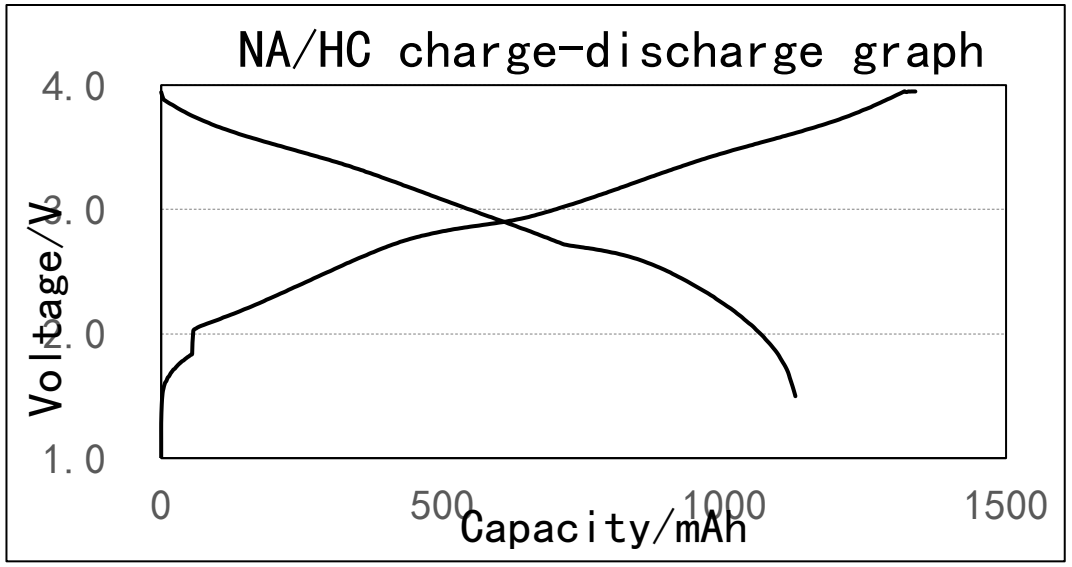
- Tested at 25° C, 0.5C/1C, 2030 cycles, with a capacity retention rate of 94.5%
- Tested at 45° C, 0.5C/1C, 1850 cycles, with a capacity retention rate of 86.2%

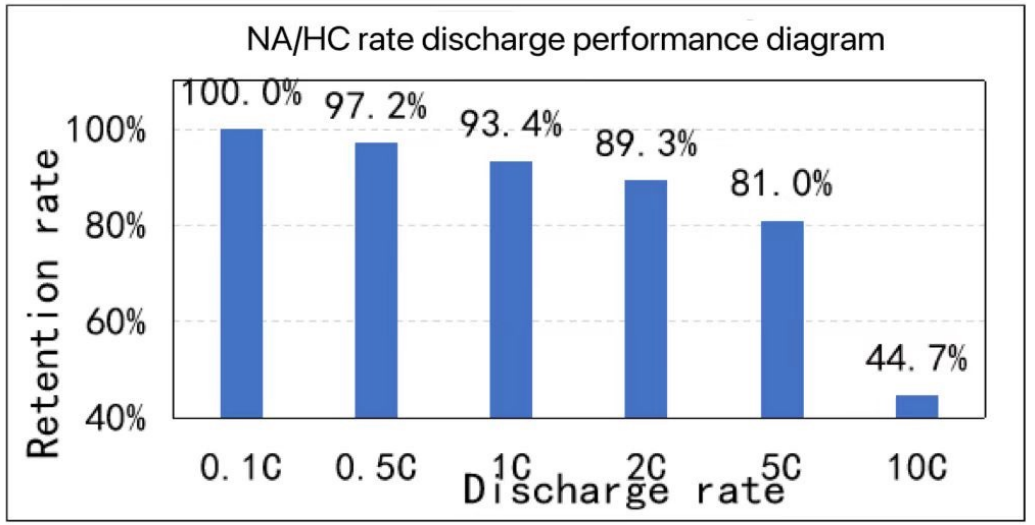
Customization - System Introduction - NA/HC - Design Information

Project	Cathode	Anode
Formula	Active materials: SP: CNT: PVDF=95.5: 1.7: 0.8: 2	Active materials: SP: CMC: SBR: NB1=94.5: 1: 1: 2.5: 1
Areal density	13.84mg/cm2	7.4mg/cm2
Compaction density	2.8g/cm3	0.9g/cm3
Gram capacity of material	120mAh/g	280mAh/g
Foil thickness	Aluminum foil, 12um	
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	NF96	
Injection volume	6g/Ah	
CB value	1.16	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	12 layers	
Voltage range	1.5-4.0V	
Design capacity	1100mAh	

Customization - System Introduction - NA/HC - Test Performance 1

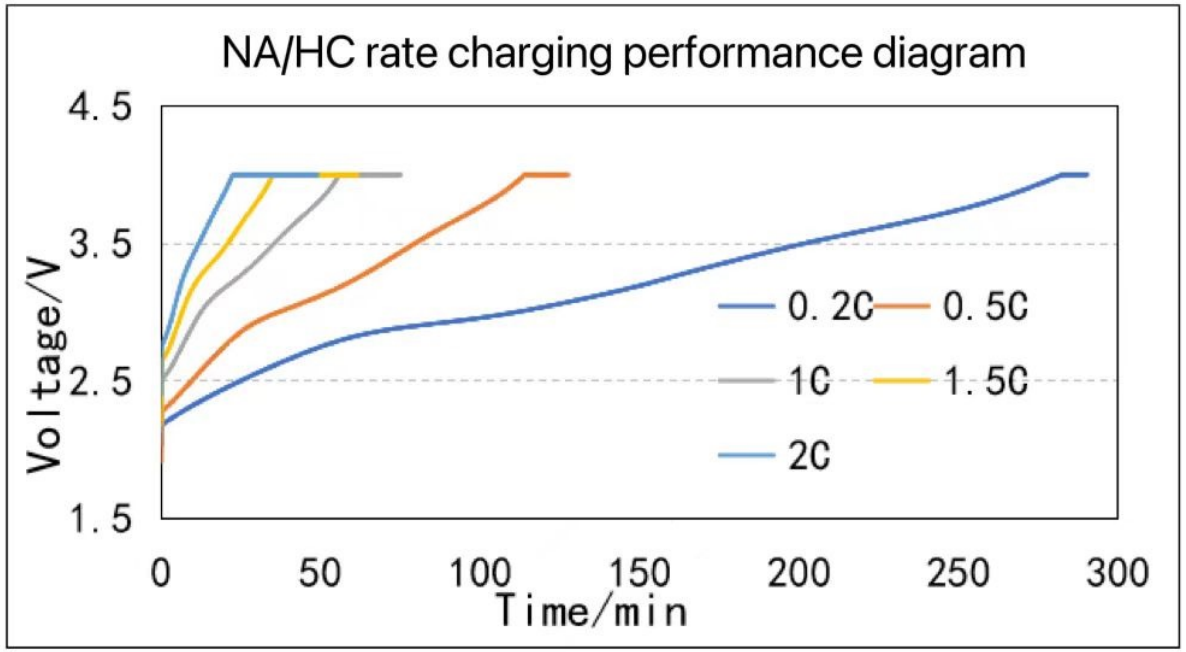
Project	NA/HC
First effect (RT)	84%
Capacity (RT, 0.2C)	1126mAh
Gram capacity (RT, 0.2C)	127mAh/g
Internal resistance	31mΩ
Fluid retention coefficient	6g/Ah
Weight energy density	117Wh/kg
Volume energy density	217Wh/L
Voltage platform	3.05V
Cycle performance (RT, 0.5C/1C)	85%@600cycles
Magnification performance	81%@5C
Low temperature discharge performance	-20℃(0.5C)&25℃(0.5C)=80%





- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased. ;
- When the discharge rate is 1C, the capacity retention rate reaches about 93%.

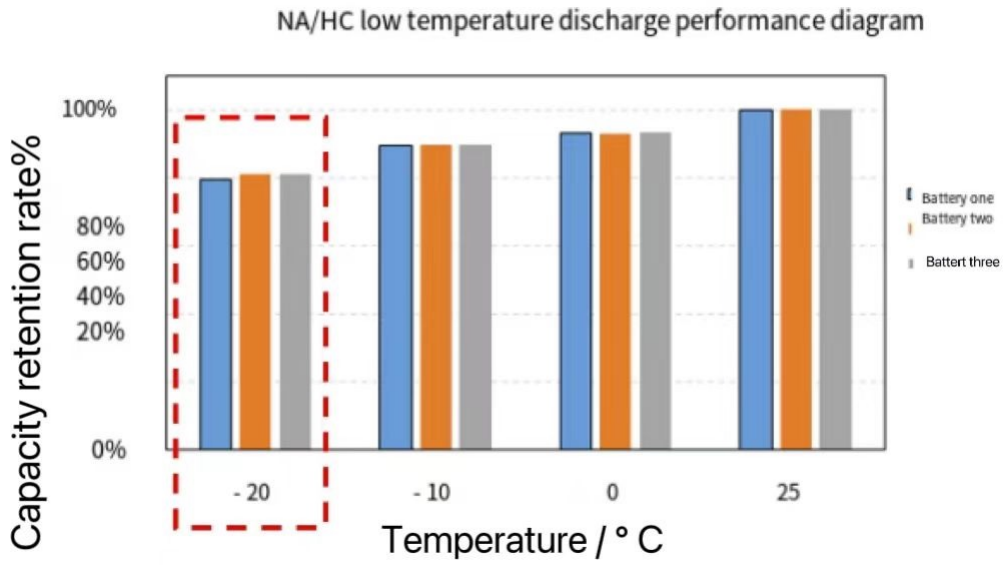
Customization - System Introduction - NA/HC - Test Performance 2



- The sodium pouch battery can achieve 2C fast charging, and charge 83% of the capacity in 22 minutes

Charging rate	Total charging time	Constant current charging time	Constant voltage charging time	Constant current time ratio	Total capacity	Constant current charging capacity	Constant voltage charging capacity	Constant current capacity ratio
0.2C	290	283	7	97%	1418	1398	20	99%
0.5C	128	114	14	89%	1469	1414	55	96%
1.0C	75	56	19	74%	1486	1384	102	93%
1.5C	61	35	26	57%	1471	1301	170	88%
2.0C	49	22	27	46%	1326	1107	219	83%

Customization - System Introduction - NA/HC - Test Performance 3

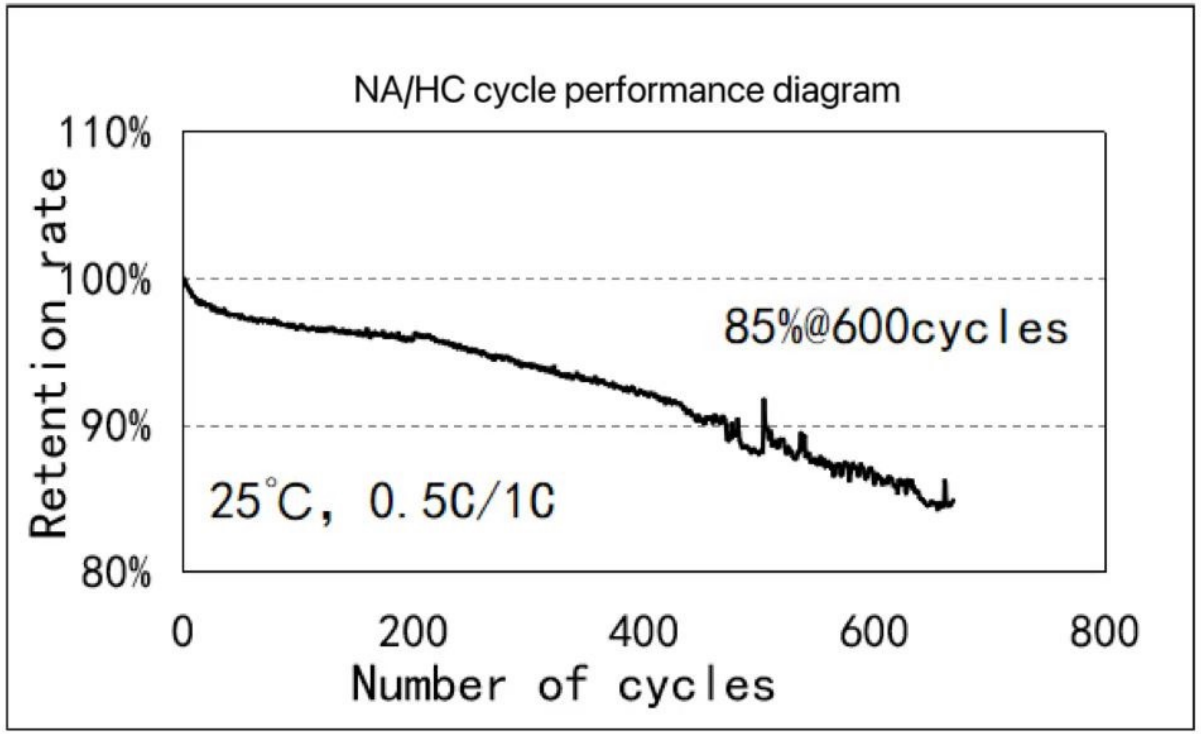


- The sodium soft pack has good low-temperature discharge performance, with a retention rate of 80% at -20° C/0.5C and 89% at -10° C/0.5C (~50% at the level of lithium iron)

Test conditions: **25°C 0.5C CC to 3.9V,CV to 0.02C; -20/-10/0/25°C 0.5C DC to 1.5V**

	Number one battery		Number two battery		Number three battery	
Temperature/ ° C	Discharge Capacity	Capacity Retention	Discharge Capacity	Capacity Retention	Discharge Capacity	Capacity Retention
-20	1050	79.3%	1063	80.8%	1071	80.8%
-10	1184	89.4%	1176	89.4%	1188	89.7%
0	1232	93.1%	1222	92.9%	1235	93.2%
25	1324	100.0%	1315	100.0%	1325	100.0%

Customization - System Introduction - NA/HC - Test Performance 4



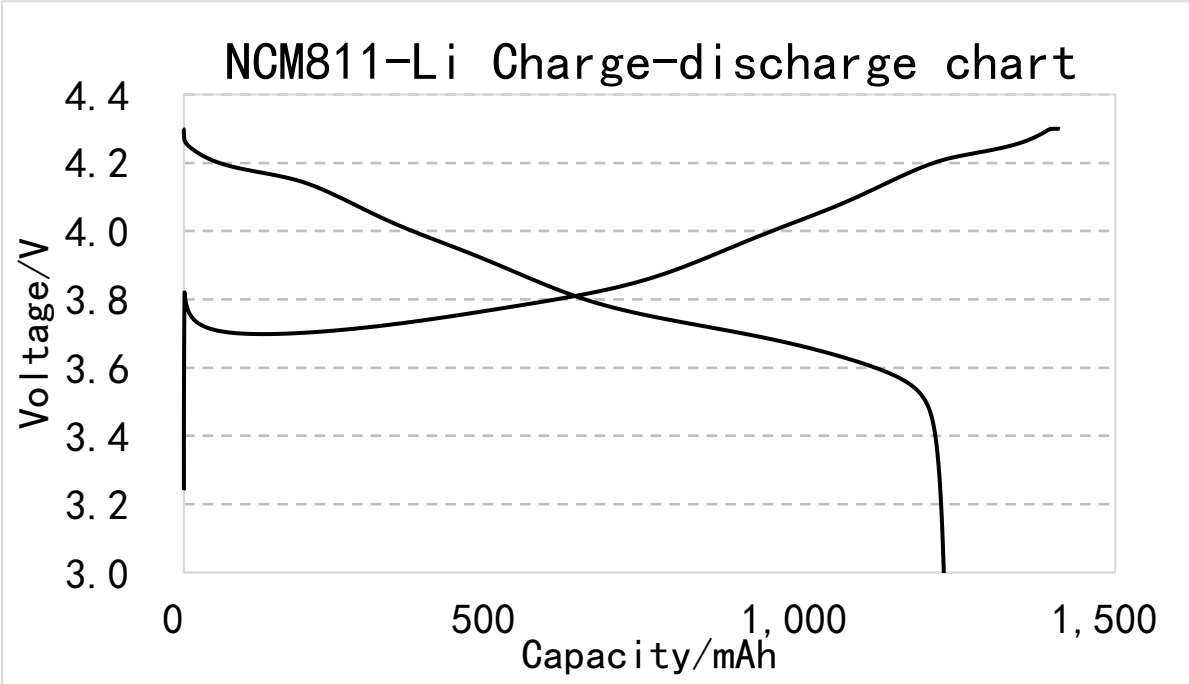
- Tested at 25° C, 0.5C/1C
- 600 cycles, 85% capacity retention

Customization - System Introduction - NCM811/Li - Design Information

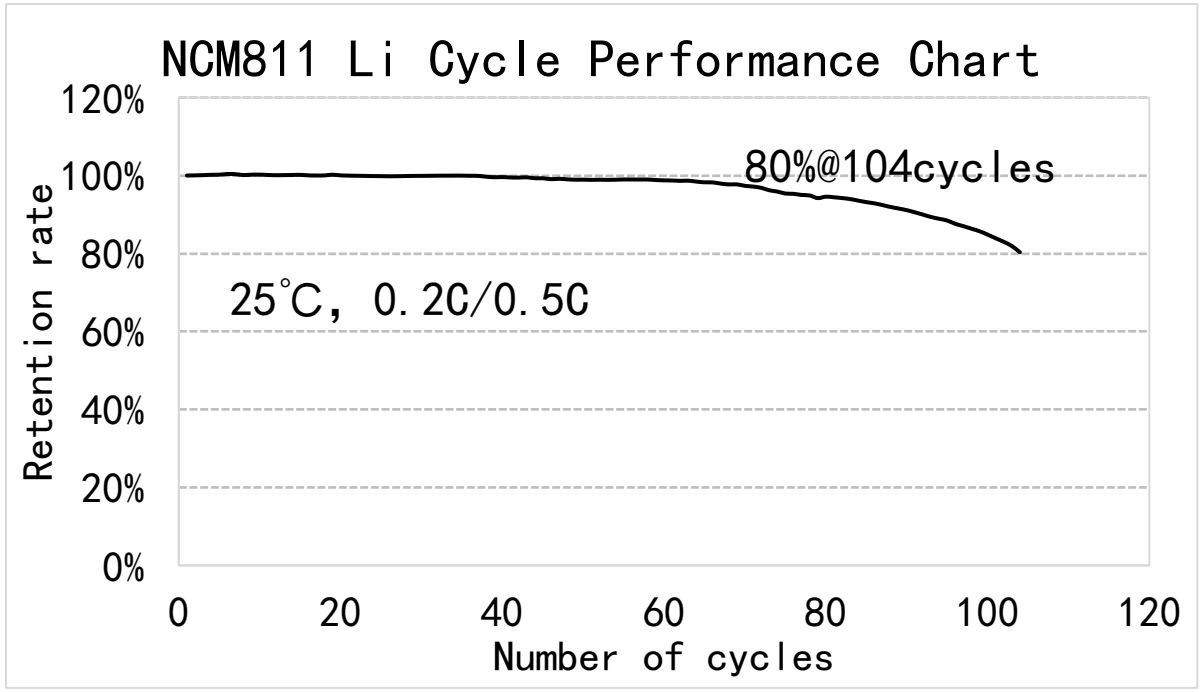
Project	Cathode	Anode
Formula	NCM811（ZH8000D）：SP：CNT（LB117-44）：VW770=94.5：2.0：0.5：3.0	Copper-lithium composite strip
Area density	17.7mg/cm2	20um thick
Compaction density	3.35g/cm3	/
Gram capacity of material	190mAh/g	3860mAh/g
Foil thickness	Aluminum foil, 12um	Copper foil, 8um
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	FS22	
Injection volume	2g/Ah	
CB value	1.34	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	6 layers	
Voltage range	3.0-4.3V	
Design capacity	1180mAh	

Customization - System Introduction - NCM811/Li - Test Performance 1

Project	NCM811/Li
First effect (25℃)	86.6%
Capacity (RT, 0.1C)	1223mAh
Gram capacity (RT, 0.1C)	197mAh/g
Internal resistance	12mΩ
Fluid retention coefficient	1.97g/Ah
Weight energy density	306Wh/kg
Volume energy density	394Wh/L
Voltage platform	3.86V
Cycle performance (RT, 0.2C/0.5C)	80%@104cycles



Customization - System Introduction - NCM811/Li - Test Performance 2



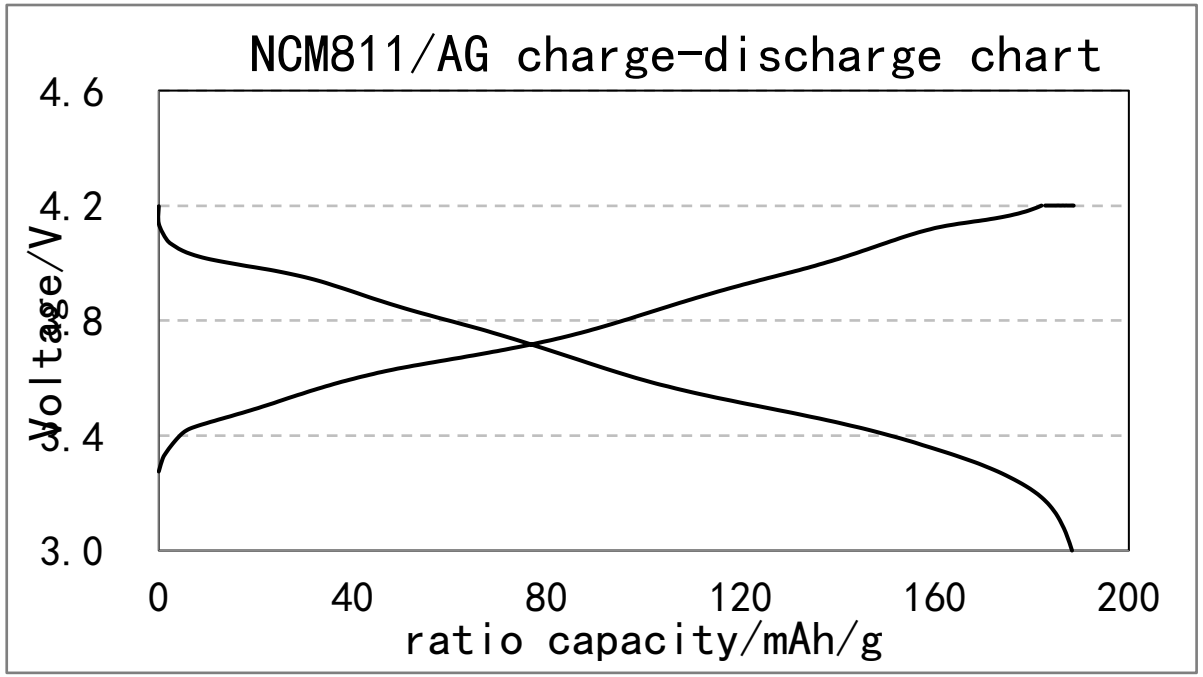
- Tested at 25° C, 0.2C/0.5C
- 104 cycles, capacity retention rate is still 80%

Customization - System Introduction - NCM811/AG - Design Information

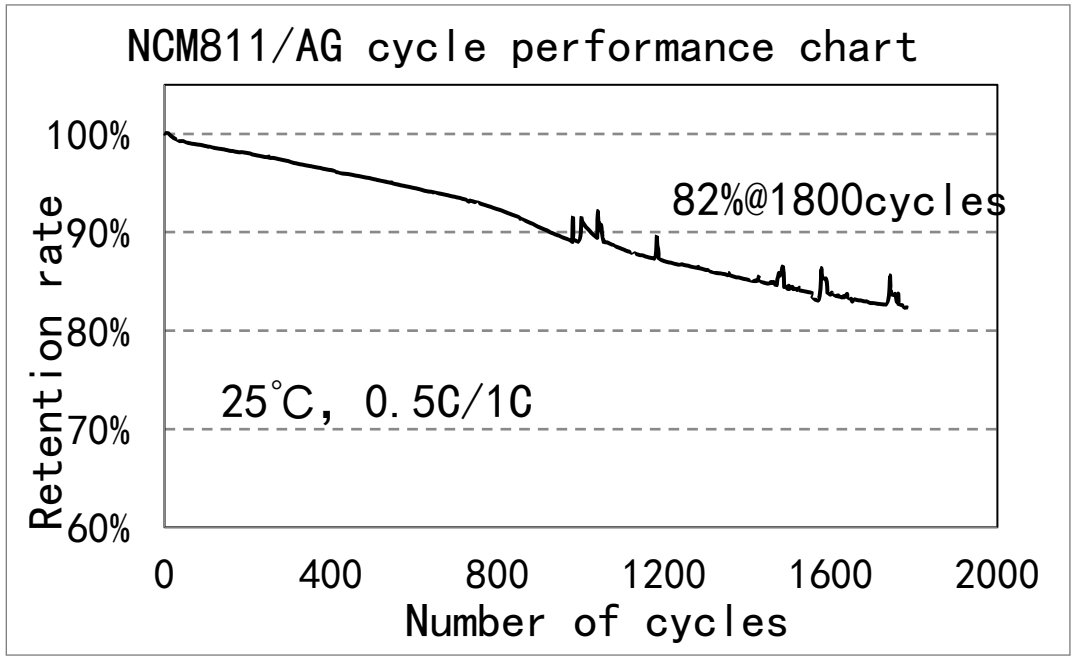
Project	Cathode	Anode
Formula	NCM811: Binder: SP: SWCNT=98.52: 1: 0.4: 0.08	AG: CMC: SP: SBR=95.7: 1.2: 1.5: 1.6
Areal density	14mg/cm2	10.06mg/cm2
Compaction density	3.35g/cm3	1.5g/cm3
Gram capacity of material	200mAh/g	350mAh/g
Foil thickness	Aluminum foil, 16um	Copper foil, 10um
Separator	12umPE+4um ceramic +2um glue	
Injection volume	4.5g	
CB value	1.16	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	9 layers	
Voltage range	3.0-4.2V	
Design capacity	1500mAh	

Customization - System Introduction - NCM811/AG - Test Performance 1

Project	NCM811/AG
First effect (45℃)	90.3%
Capacity (45℃, 0.2C)	1524mAh
Gram capacity (45℃, 0.2C)	200mAh/g
Internal resistance	30.79mΩ
Fluid retention coefficient	2.607g/Ah
Weight energy density	175Wh/kg
Volume energy density	485Wh/L
Voltage platform	3.67V
Cycle performance (RT, 0.5C/1C)	82%@1800cycles
Magnification performance	57%@4C
High temperature discharge performance	60℃(0.5C)&25℃(0.5C)=106.2%
Low temperature discharge performance	-20℃(0.2C)&25℃(0.5C)=74.7%
High temperature storage	60℃7day@retention&recovery=87.0%&77.9%



Customization - System Introduction - NCM811/AG - Test Performance 2



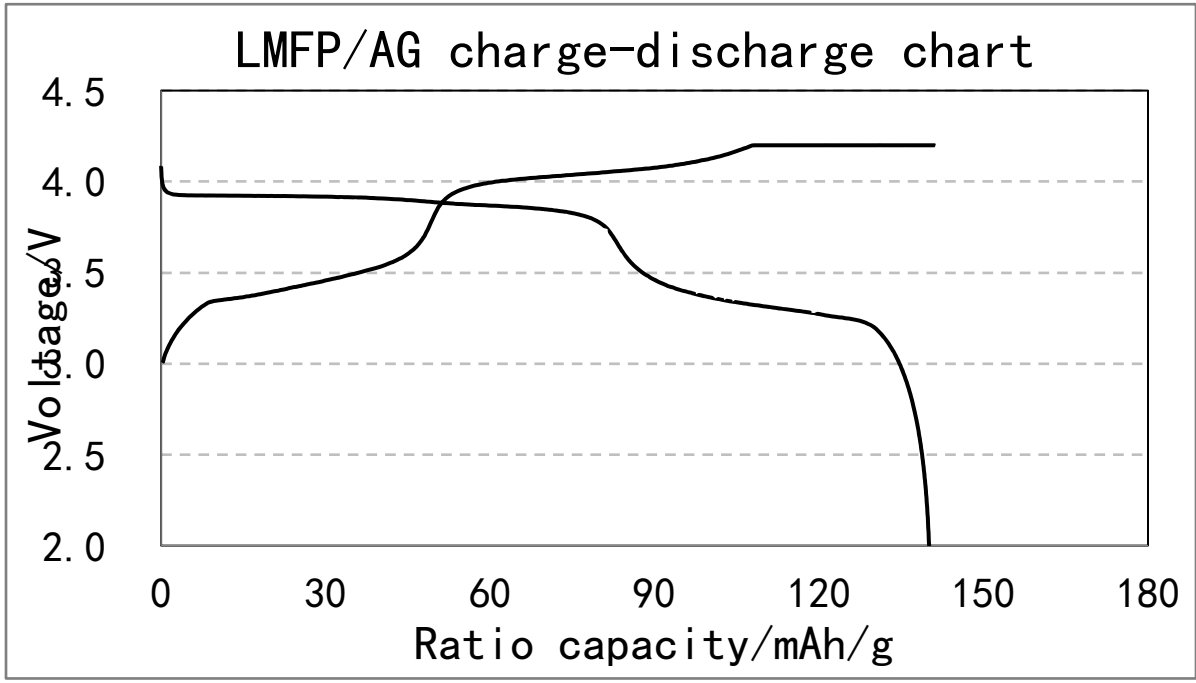
- The test was carried out at 25° C, 0.5C/1C
- 1800 cycles, capacity retention rate is still 82%

Customization - System Introduction - LMFP/AG - Design Information

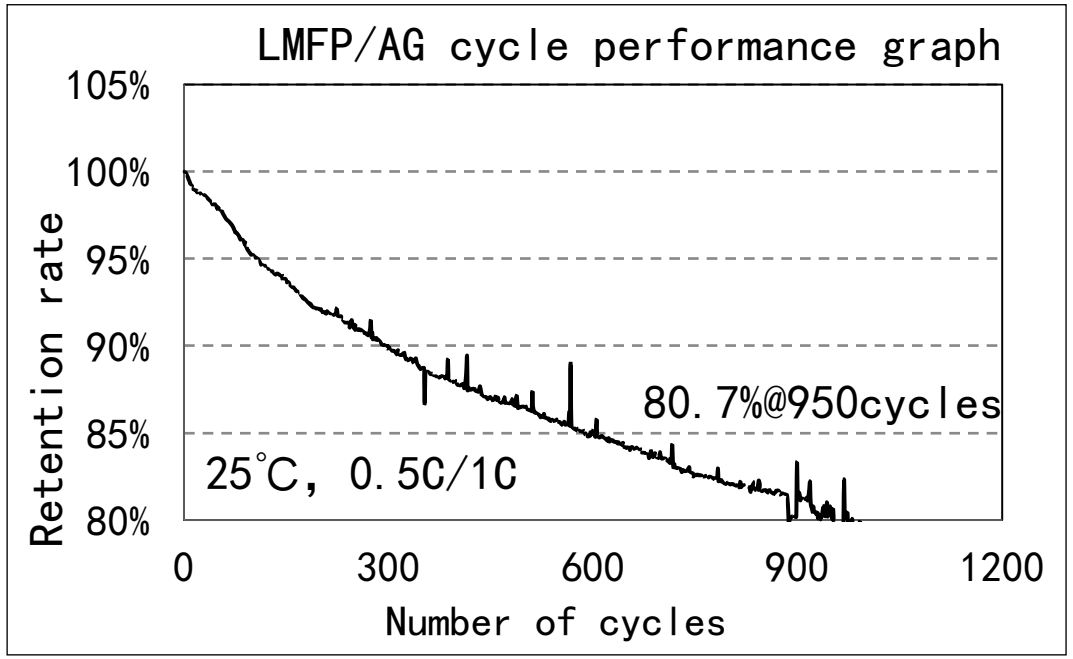
Project	Cathode	Anode
Formula	LMFP: Binder: SP: MWCNT=91.5: 4.5: 2.8: 1.2	AG: CMC: SP: SBR=95.7: 1.2: 1.5: 1.6
Areal density	13mg/cm2	5.7mg/cm2
Compaction density	2.2g/cm3	1.5g/cm3
Gram capacity of material	150mAh/g	350mAh/g
Foil thickness	Coated carbon aluminum foil, 16+1+1um	Copper foil, 10um
Separator	12umPE+4um ceramic +2um glue	
Injection volume	2.5g	
CB value	1.15	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	9 layers	
Voltage range	2.0-4.2V	
Design capacity	500mAh	

Customization - System Introduction - LMFP/AG - Test Performance 1

Project	LMFP/AG
First effect (RT)	91.4%
Capacity (RT, 0.2C)	499.7mAh
Gram capacity (RT, 0.2C)	139.3mAh/g
Internal resistance	23.7mΩ
Fluid retention coefficient	4.29g/Ah
Weight energy density	160.5Wh/kg
Volume energy density	309.1Wh/L
Voltage platform	3.63V
Cycle performance (RT, 0.5C/1C)	80.7%@950cycles
Magnification performance	89%@4C
High temperature discharge performance	60℃(0.5C)&25℃(0.5C)=100.6%
Low temperature discharge performance	-20℃(0.2C)&25℃(0.5C)=70.4%
High temperature storage	60℃7day@retention&recovery=89%&91%



Customization - System Introduction - LMFP/AG - Test Performance 2



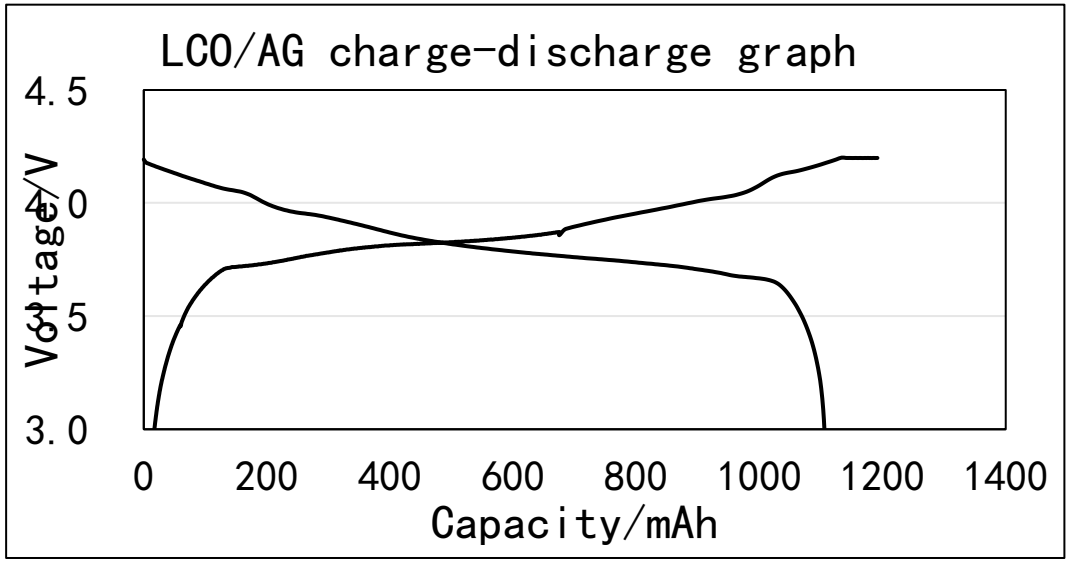
- Tested at 25° C, 0.5C/1C
- 950 cycles, capacity retention rate of 80.7%

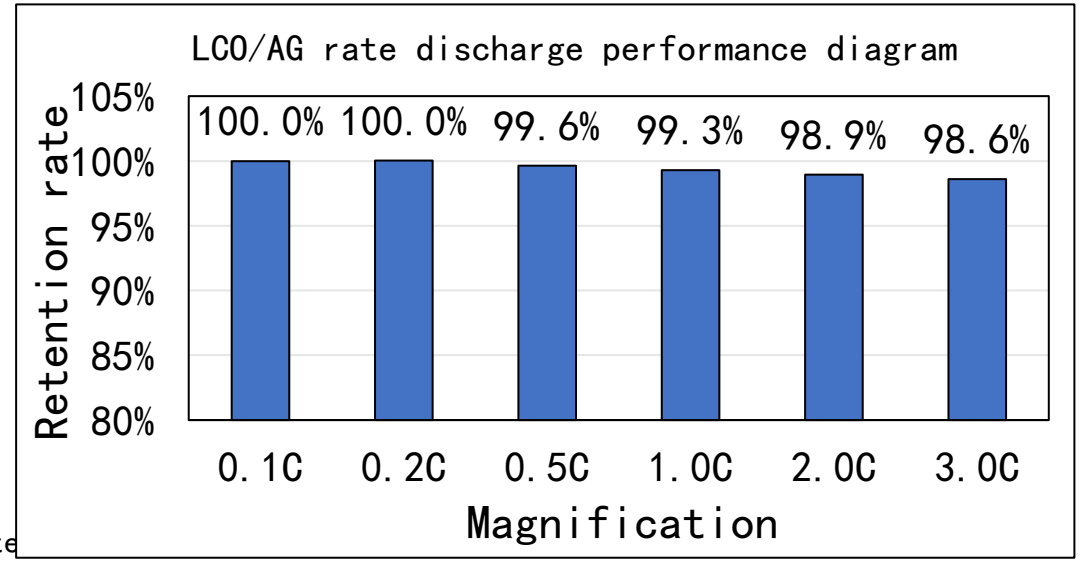
Customization - System Introduction - LCO/AG - Design Information

Project	Cathode	Anode
Formula	LCO (LCO-Multiplier type) : SP: CNT: PVDF (5130) =94: 2: 2: 2	AML400: SP: CMC (2200) : SBR (BM430B) =95.7: 1.5: 1.2: 1.6
Areal density	10.74mg/cm2	4.85mg/cm2
Compaction density	4.0g/cm3	1.5g/cm3
Gram capacity of material	142mAh/g	340mAh/g
Foil thickness	Aluminum foil, 12um thick	Copper foil, 8um thick
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	Lithium cobalt oxide electrolyte (KLD-1376)	
Injection volume	3g/Ah	
CB value	1.13	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	13 layers	
Voltage range	3.0-4.2V	
Design capacity	1100mAh	

Customization - System Introduction - LCO/AG - Testing Performance 1

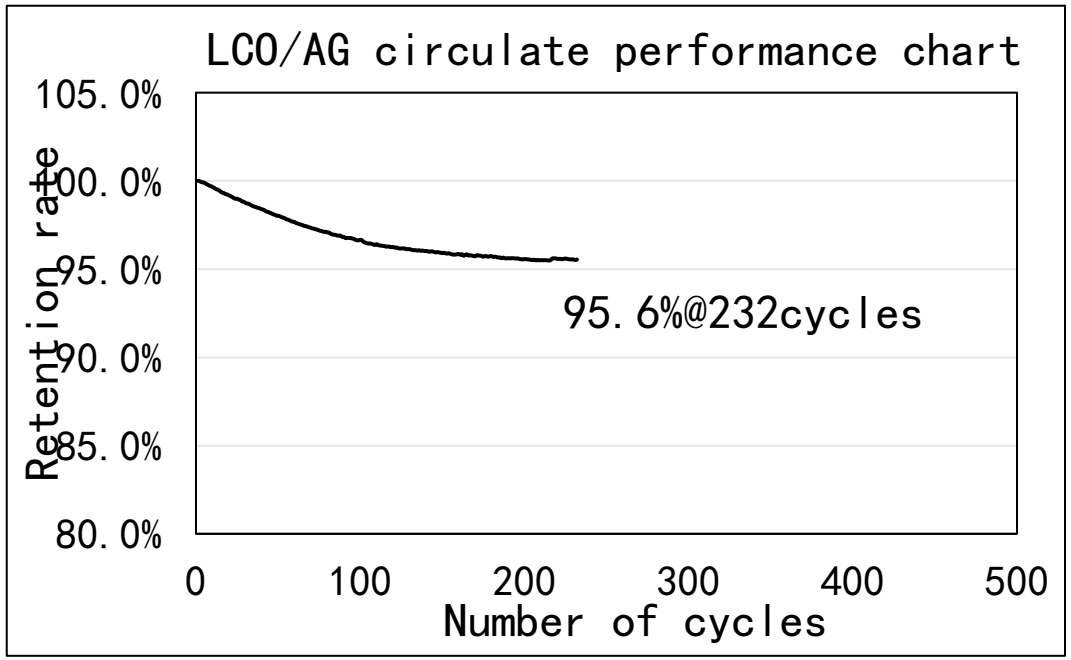
Project	LCO/AG
First effect (RT)	92.7%
Capacity (RT, 0.2C)	1103mAh
Gram capacity (RT, 0.2C)	137mAh/g
Internal resistance	14.0mΩ
Liquid retention factor	2.6g/Ah
Weight energy density	172.3Wh/Kg
Volume energy density	348.5Wh/L
Voltage platform	3.85V
Cycle performance (RT, 0.5C/1C)	(in progress)
Magnification performance	98.6%@3C
DCR (25℃、50%SOC、3C DC 30S)	51.5mΩ
High temperature discharge performance	45℃(0.2C)&25℃(0.2C)=96.8%
Low temperature discharge performance	-20℃(0.2C)&25℃(0.2C)=83.3%
High temperature storage	60℃7day@retention&recovery=86.8%&92.4%





- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased. ;
- When the discharge rate is 3C, the capacity retention rate reaches about 98.6%.

Customization - System Introduction - LCO/AG Testing Performance 2



- Tested at 25° C, 0.5C/1C
- 232 cycles, capacity retention rate of 95.6%

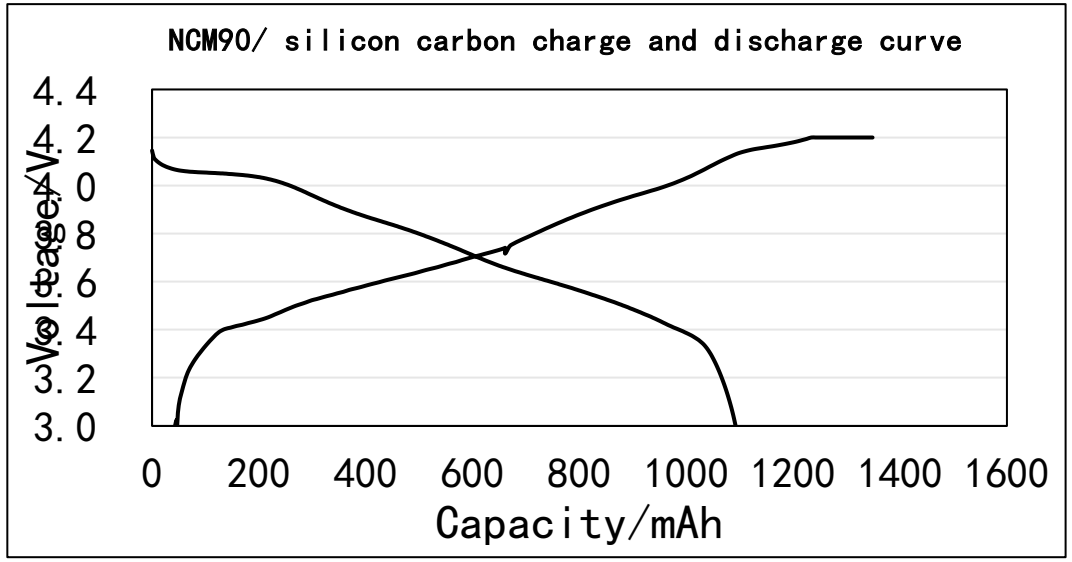
Customization - System Introduction - NCM90/Silicon Carbon - Design Information

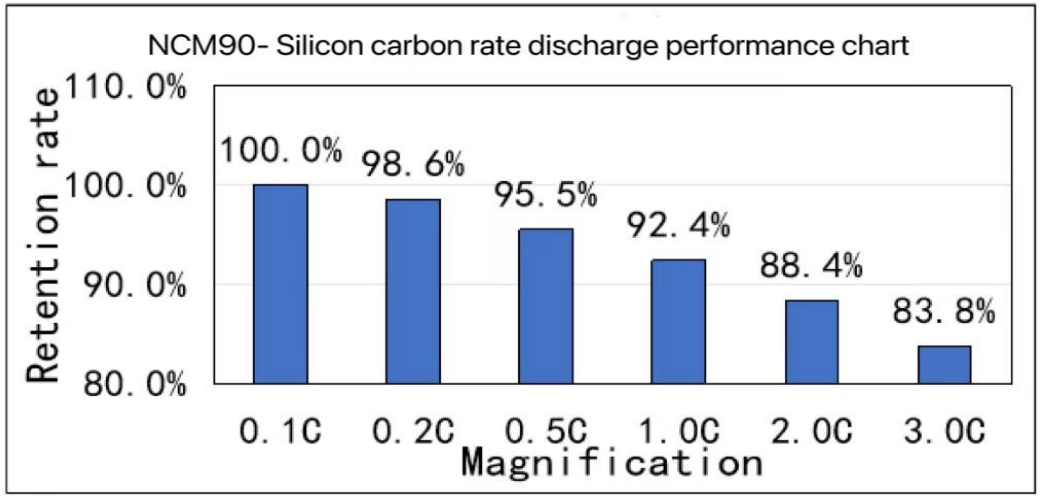
Project	Cathode	Anode
Formula	NCM90: SP: PVDF (VW770) =95: 3: 2	DXA4: SP: CMC (2200) : SBR (BM430B) =94: 1: 2: 3
Areal density	13.95mg/cm2	9.54mg/cm2
Compaction density	3.35g/cm3	1.5g/cm3
Gram capacity of material	200mAh/g	340mAh/g
Foil thickness	Aluminum foil, 12um thick	Copper foil, 8um thick
Separator	12umPE+4um ceramic +2um glue	
Electrolyte	KLD-1230C	
Injection volume	3g/Ah	
CB value	1.19	
Aluminum-plastic film	Aluminum-plastic film(Toppan 113um)	
Number of layers	7 layers	
Voltage range	3.0-4.2V	
Design capacity	1000mAh	

Customization - System Introduction - NCM90/Silicon Carbon - Test Performance 1

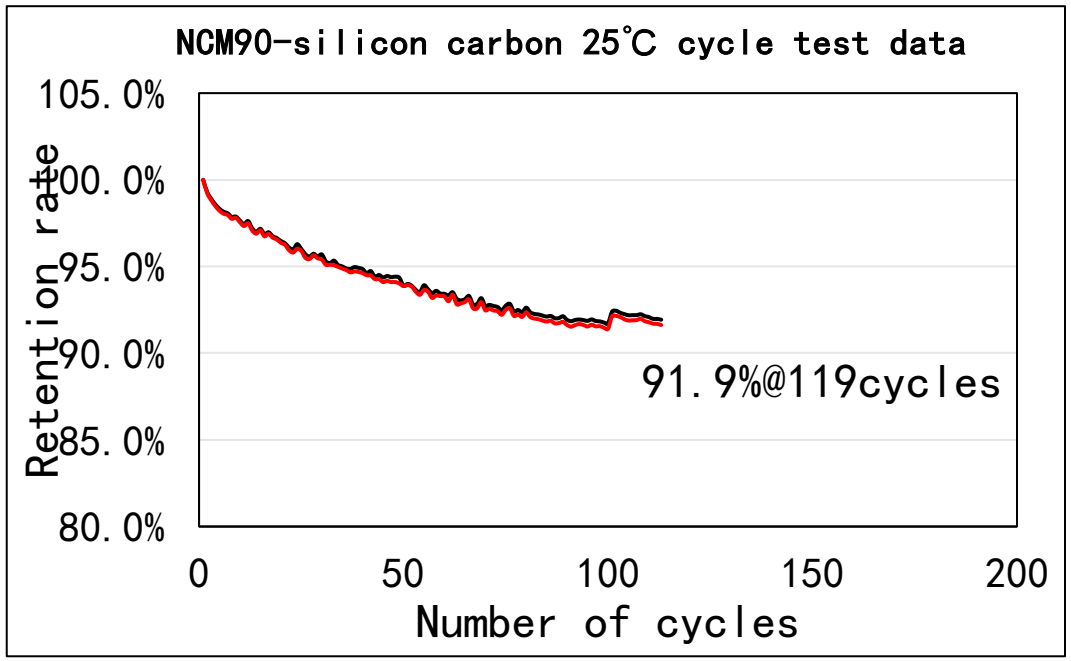
Project	NCM90/Silicon Carbon
First effect (RT)	81%
Capacity (RT, 0.2C)	1090mAh
Gram capacity (RT, 0.2C)	180mAh/g
Internal resistance	20.4mΩ
Fluid retention coefficient	3.3g/Ah
Weight energy density	210.5Wh/Kg
Volume energy density	424.84Wh/L
Voltage platform	3.84V
Cycle performance (RT, 0.5C/1C)	91.9%@119cycles
Magnification performance	83.8%@3C

- With the increase of discharge rate, the discharge capacity and capacity retention rate decreased.
- When the discharge rate is 3C, the capacity retention rate reaches about 93.2%.





Customization - System Introduction - NCM90/Silicon Carbon - Test Performance 2

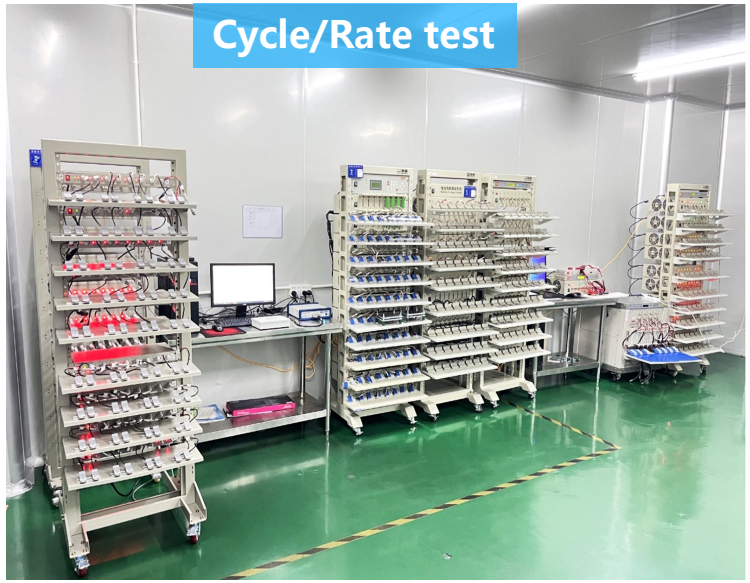


- Tested at 25° C, 0.5C/1C
- 119 cycles, capacity retention rate of 91.9%

Testing Hardware

Testing—hardware

Cycle/Rate test



H/L temperature oven

High temperature oven

Electrochemical workstation

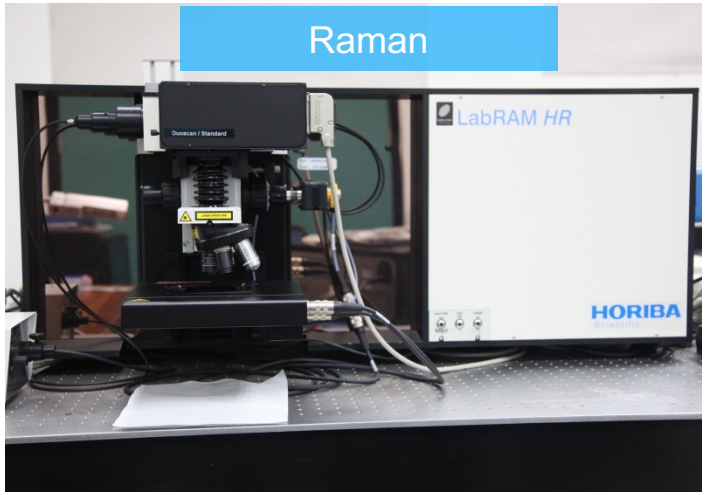
- We have the testing center contain different test equipment which can fulfill different customer requirement

Testing—hardware

BET

TG-DSC

Raman



XRD

Infrared

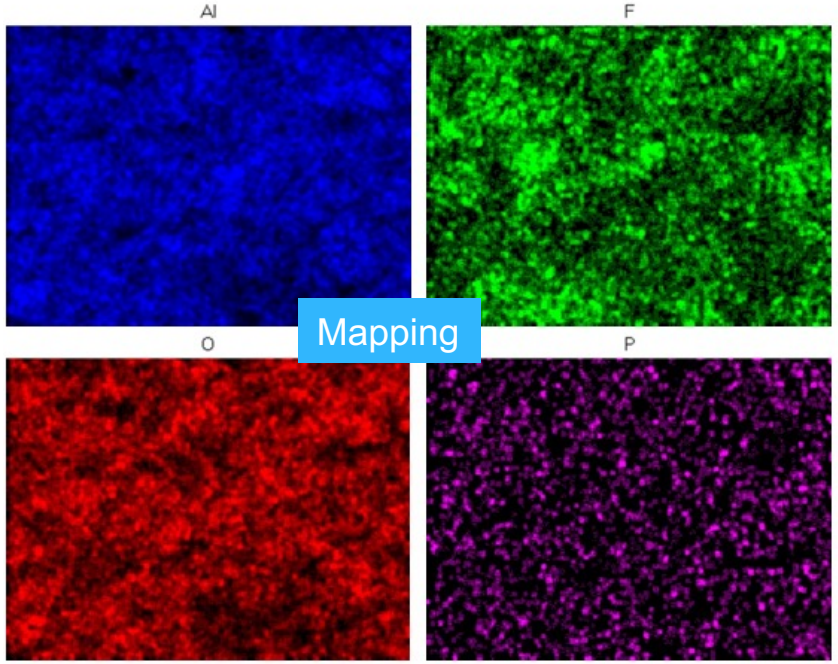
SEM

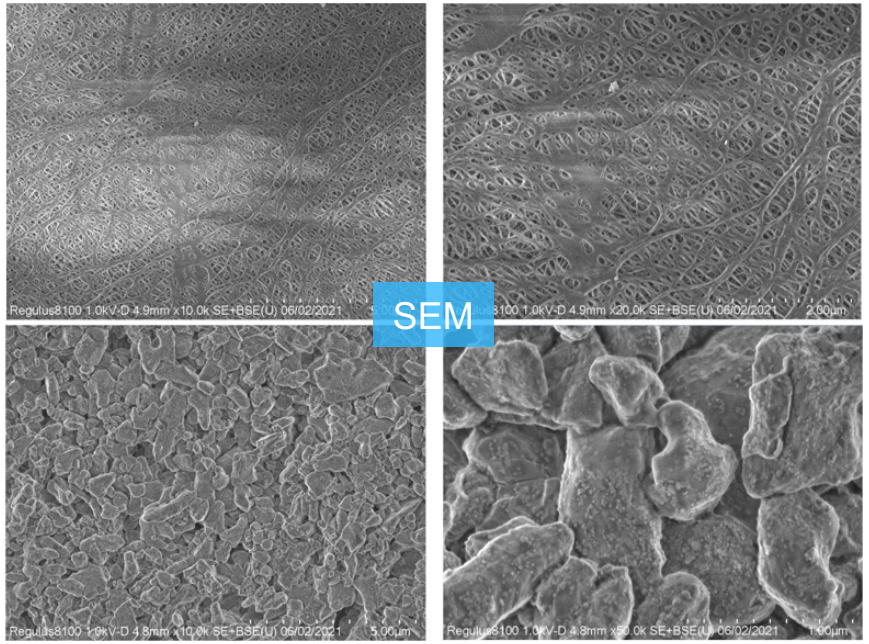
Strategic partners provide (partial)

Testing Case

Testing—case

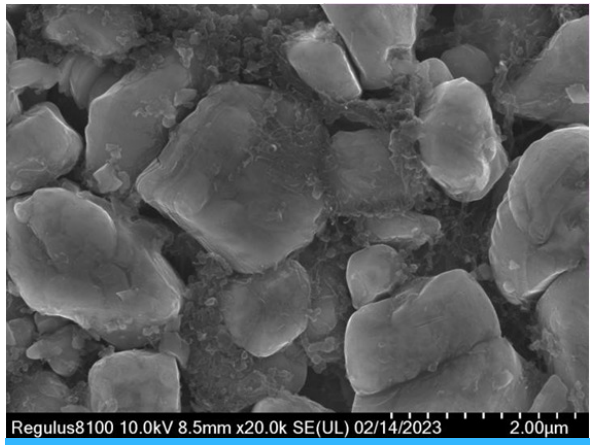
- **Reverse analysis:** assist customers to analyze the polymer / organic components in mainstream power batteries



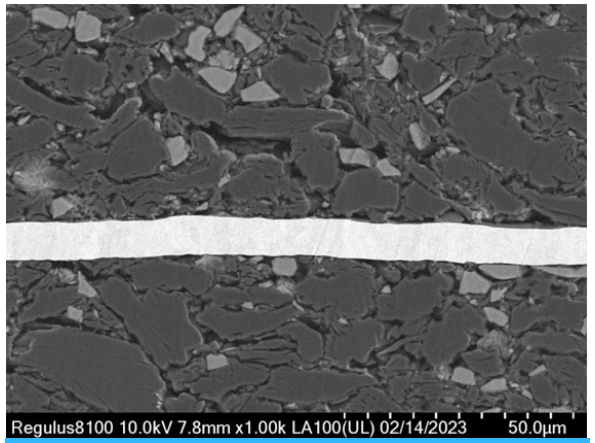


- **Experiment scheme:** first conduct nondestructive testing (size / capacity / internal resistance / EIS / ratio / high and low temperature, etc.), and finally conduct disassembly analysis
- **Implement reverse analysis:** gram capacity / SEM / ED S/Mapping / CP / TG / GC-MS / ICP and other means
- **Write the reverse analysis report:** give the customer research and development direction according to the market situation

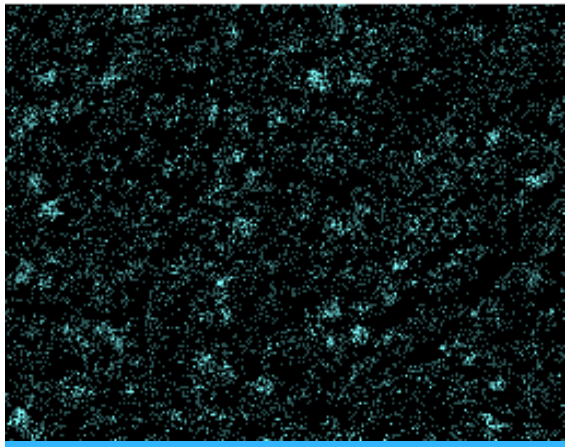
Testing—case



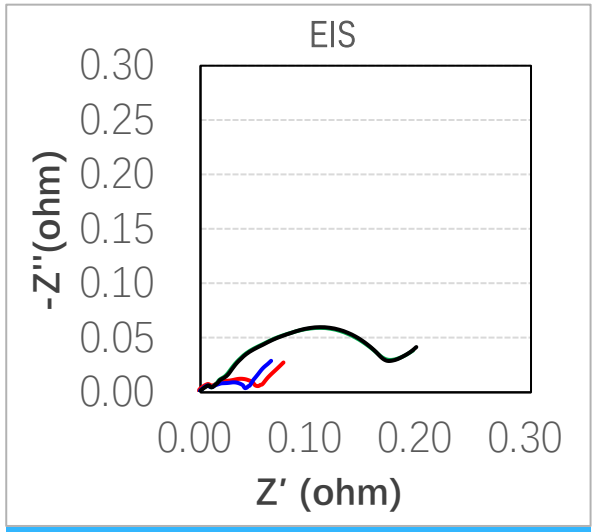
SEM(Surface morphology))



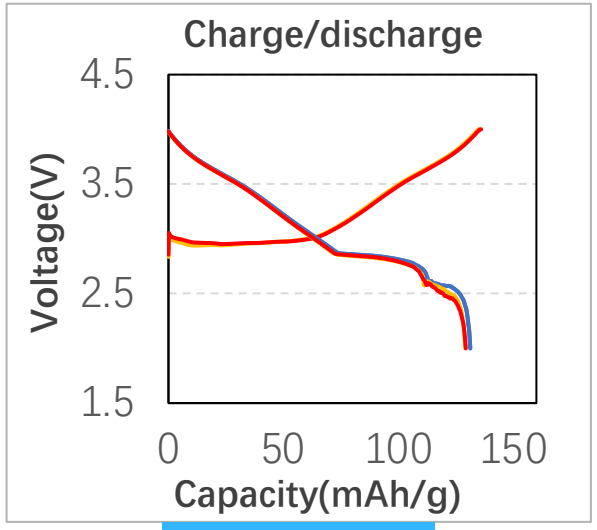
Cross section



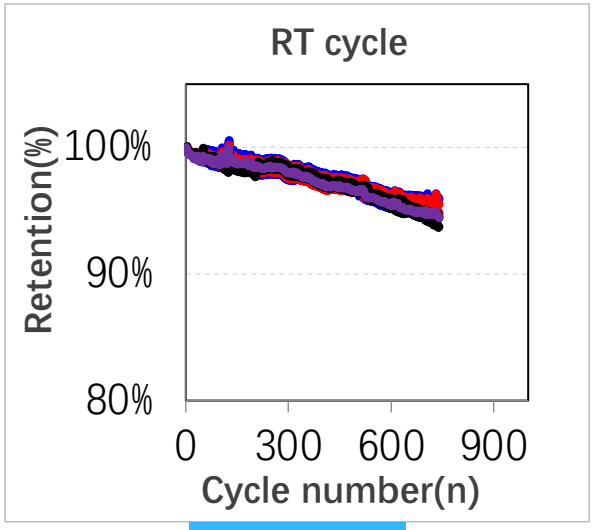
Elemental distribution



EIS



Coin cell test



Cycle test

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Whatsapp barcode

Appendix

Appendix- patent list

Sequence Number	Application Number	Application Type	Applicant	Title of Invention
1	201510088422.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-sulfur battery and its preparation method.
2	201510088426.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery and its preparation method.
3	201510088429.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery naked cell, finished cell, and their preparation method.
4	201510088423.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery preparation method and a lithium-sulfur battery prepared using said method.
5	201510088380.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A composite porous separator, a battery prepared using the separator, and its preparation method.
6	201510088428.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Gel electrolyte and preparation method for a lithium-ion battery containing said electrolyte.
7	201510088425.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-sulfur battery naked core, finished core, and their preparation method.
8	201510088430.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-sulfur battery and its preparation method.
9	201510088427.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery and its preparation method.
10	201510088421.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery and its preparation method.
11	201510089336.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-sulfur battery and its preparation method.
12	201510152380.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Naked core of a lithium-ion battery and method for preparing a carp-ion battery containing said naked core.

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
13	201510153389.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Electrochemical energy storage device and its preparation method.
14	201510152683.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for a lithium-ion battery.
15	201510152685.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for a lithium-ion battery.
16	201510152307.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Graphene preparation method.
17	201510152378.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical energy storage device and its preparation method.
18	201510153392.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical anode electrode, an energy storage device containing said anode electrode, and its preparation method.
19	201510153352.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical anode electrode, an energy storage device containing said anode electrode, and its preparation method.
20	201510152684.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A porous graphene-like material and its preparation method.
21	201510152682.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A functional device, a macroscopic body of porous graphene-like material, and its preparation method.
22	201510152253.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing a lithium-ion battery.
23	201510153394.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing a lithium-ion battery.
24	201510152379.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery naked core and method for preparing a lithium-ion battery containing said naked core.

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
25	201510153347.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing graphene
26	201510153434.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing graphene
27	201510274742.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Electrochemical energy storage device
28	201510274673.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method of lithium metal strip and lithium metal strip prepared using the method
29	201510276060.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium metal strip, its preparation method, and energy storage device using the lithium metal strip
30	201510274671.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Solid electrolyte interphase (SEI) membrane for lithium-ion batteries and its preparation method
31	201510274376.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Graphene preparation method
32	201510274255.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical energy storage device
33	201510274254.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Electrode for an electrochemical energy storage device and its preparation method
34	201510274899.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Porous composite separator membrane and its preparation method
35	201510274897.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Negative electrode sheet, electrochemical energy storage device containing said negative electrode sheet, and its preparation method
36	201510274896.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A composite porous separator membrane and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
37	201510274745.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium metal strip, its preparation method, and an energy storage device utilizing said lithium metal strip
38	201510274744.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Solid electrolyte membrane for lithium-ion batteries and its preparation method
39	201510274573.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrode for a lithium-sulfur battery and a preparation method for a carp-sulfur battery containing said electrode
40	201510274571.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing graphene
41	201510276058.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing graphene
42	201510274489.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A positive electrode sheet, electrochemical energy storage device containing said positive electrode sheet, and its preparation method
43	201510394862.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Flexible device and its preparation method
44	201510395386.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Flexible device and its preparation method
45	201510395360.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical energy storage device and its preparation method
46	2015103953615	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrode for a lithium-sulfur battery, a lithium-sulfur battery containing said electrode, and its preparation method
47	201510394861.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A flexible device and its preparation method
48	201510395357.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A flexible device and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
49	201510395345.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A flexible device and its preparation method
50	201510675286.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Electrochemical cell and its preparation method
51	201510676160.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing an electrochemical cell
52	201510675281.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing an electrochemical cell
53	201510675225.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing an electrochemical cell
54	201510676246.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrode for an electrochemical cell, an electrochemical cell containing said electrode, and its preparation method
55	201510675282.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing an electrochemical cell
56	201510675284.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing an electrochemical cell
57	201510676109.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A sulfur-containing electrode, a lithium-sulfur battery containing said electrode, and its preparation method
58	201510675214.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A sulfur-containing electrode material, a lithium-sulfur battery containing said electrode material, and a method for preparing the sulfur-containing electrode material
59	201510675236.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing sulfur-containing electrode material
60	201510676257.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing sulfur-containing electrode material

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
61	201510675811.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing sulfur-containing electrode material
62	201510676083.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A method for preparing sulfur-containing electrode material
63	201510676980.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Electrochemical cell and its preparation method
64	201510676226.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrode for an electrochemical cell, an electrochemical cell containing said electrode, and its preparation method
65	201510676085X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method of nano sulfur particles
66	201510676110.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Sulfur-containing electrode material and its preparation method
67	201510676082.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Sulfur-containing electrode material and its preparation method
68	201510676127.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A sulfur-containing electrode, a lithium-sulfur battery containing said electrode, and its preparation method
69	201510676107.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A sulfur-containing electrode, a lithium-sulfur battery containing said electrode, and its preparation method
70	201510676990.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
71	201510676229.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
72	201510676199.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
73	201510715868.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
74	201510715948.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
75	201510715967.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
76	201510715984.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
77	201510716088.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
78	201510716062.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrode for an electrochemical cell, an electrochemical cell utilizing said electrode, and its preparation method
79	201510718974 8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell encapsulation material, a battery using the encapsulation material, and its preparation method
80	CN201510715948.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An electrochemical cell and its preparation method
81	CN201710038194.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Graphene preparation method
82	CN201720073465.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	An apparatus for graphene production
83	CN201710270675.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for silicon-carbon negative electrode material and the silicon-carbon negative electrode material obtained using said method
84	CN201710270678.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
85	CN201710271205.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
86	CN201710270846.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
87	CN201710271222.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for silicon-carbon negative electrode material and the silicon-carbon negative electrode material obtained using said method
88	CN201710271253.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for nano silicon-based material
89	CN201710270679.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
90	CN201710270686.X	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A preparation method for nano silicon-based secondary particles
91	CN201710270902.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
92	CN201710270676.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
93	CN201710271204.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
94	CN201710270850.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
95	CN201710270869.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
96	CN201710271252.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for nano silicon-based material

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
97	CN201710271172.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
98	CN201710271171.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
99	CN201710270870.4	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
100	CN201710270674.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
101	CN201710271173.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
102	CN201710271202.3	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
103	CN201710270677.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
104	CN201710270901.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Silicon-carbon negative electrode material and its preparation method
105	CN201710391330.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanate negative electrode material and its preparation method
106	CN201710393514.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-ion battery cathode material and its preparation method
107	CN201710393497.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery cathode material and its preparation method
108	CN201710393509.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium titanate negative electrode material and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
109	CN201710392758.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery cathode material and its preparation method
110	CN201710391692.0	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for lithium-ion battery cathode material and the lithium-ion battery cathode material obtained using said method
111	CN201710391350.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanate negative electrode material and its preparation method
112	CN201710392701.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanate negative electrode material and its preparation method
113	CN201710392714.5	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for lithium titanate negative electrode material and lithium titanate negative electrode material obtained using said method
114	CN201710391348.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-ion battery cathode material and its preparation method
115	CN201710391708.8	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanium oxide negative electrode material and its preparation method
116	CN201710393508.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanate negative electrode material and its preparation method
117	CN201710393502.9	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery cathode material and its preparation method
118	CN201710391718.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for lithium-ion battery cathode material and the lithium-ion battery cathode material obtained using said method
119	CN201710391717.7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery cathode material and its preparation method

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Sequence Number	Application Number	Application Type	Applicant	Title of Invention
120	CN201710392423.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	A lithium-ion battery cathode material and its preparation method
121	CN201710393313.1	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-ion battery cathode material and its preparation method
122	CN201710392712.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanium oxide negative electrode material and its preparation method
123	CN201710393312 7	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanium oxide negative electrode material and its preparation method
124	CN201710393498.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium titanium oxide negative electrode material and its preparation method
125	CN201710391716.2	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Preparation method for lithium titanium oxide negative electrode material and the lithium titanium oxide negative electrode material obtained using said method
126	CN2017103927484	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-ion battery cathode material and its preparation method
127	CN201710393515.6	Invention Patent	Guangdong Canrd New Energy Technology Co., Ltd.	Lithium-ion battery cathode material and its preparation method

THANK YOU！