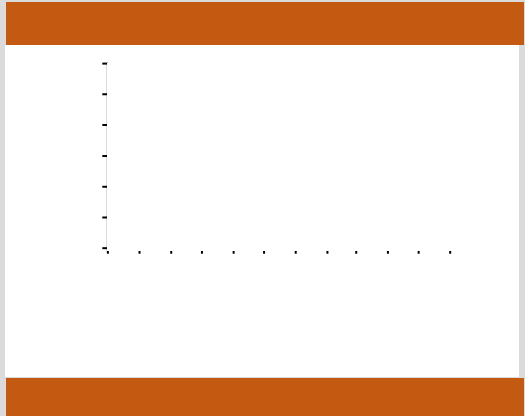


		42	

020-22836112

			Li <sub>2</sub> CO <sub>3</sub>	73.89
			720	1310
			12	
2022		19.9	53%	
18	47%			
	2022	90%		



-20230709

3C

.....	1
.....	1
.....	1
.....	2
.....	2
.....	3
.....	4
.....	8
.....	11
.....	.
.....	.
.....	.

---

3      6.941      0.534g/cm<sup>3</sup>

Li<sub>2</sub>CO<sub>3</sub>      73.89  
720      1310

12

2



YS/T 582-2013

99.5%

99.2%

98.5%

<98.5%

2022  
18 47%

19.9 53%

97-98%  
6000-10000 /

99.5%

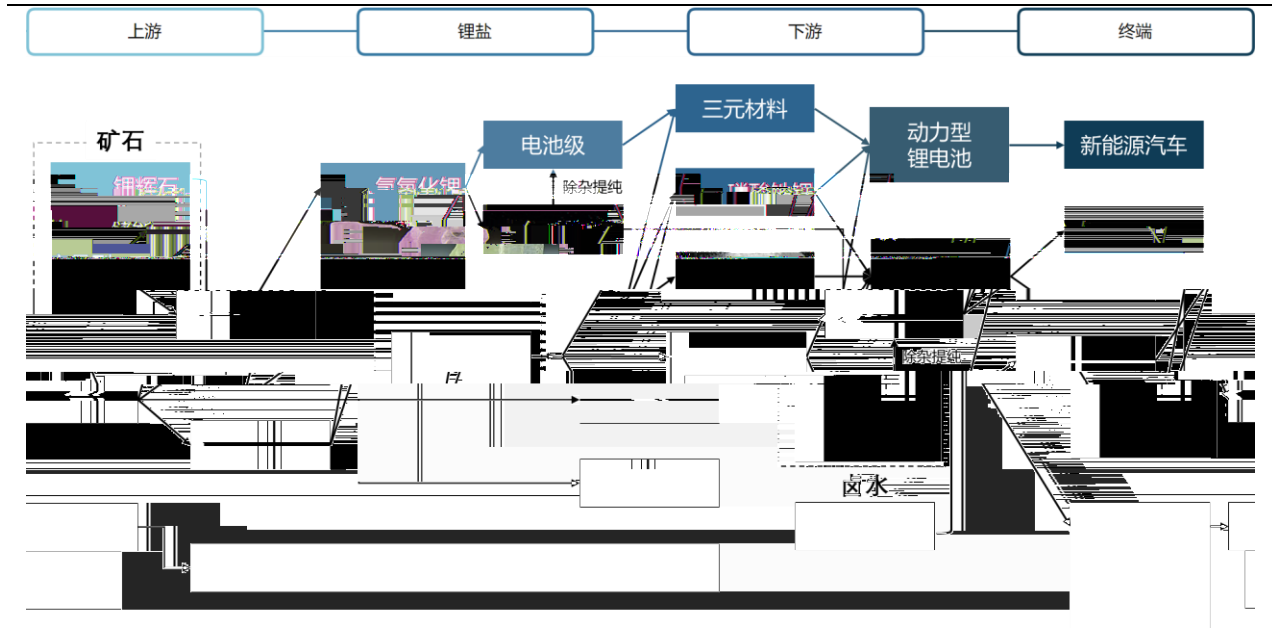
YS/T 582-2013

99.2%

YS/T 582-2013

25000 /

2022 90%

Commodity Summaries		2023	1	Mineral
				USGS
		2600	1	5.32
13832	LCE Lithium Carbonate Equivalent	4948	LCE 35.8%	3298 LCE
23.8%	1436	LCE 10.4%	1064	LCE 7.7%
532	LCE 3.8%		81.5%	
		2022		
		635		1 2.47
	1569.1 LCE	630.4	LCE 40.2%	
333.5	LCE 21.3%	139	LCE 8.9%	
460.9	LCE 29.4%	2.3	LCE 0.1%	2.8 LCE 0.2%
2022				94.5%

5	6

USGS



3.

	2022		32.9	LCE	25.5
LCE	78%	7.4	LCE	22%	
	2025		67.1	LCE	
	27%	16.3	LCE	24%	

3

Eramet

4

--	--	--	--	--	--

SQM  
ALB  
Orocobre

2-4 /



		Atacama Olaroz			
					3-6 /
					3-4 /
					2-3 /
					2-3 /
					2.5-4 /

		Livent				
		Cordillera				

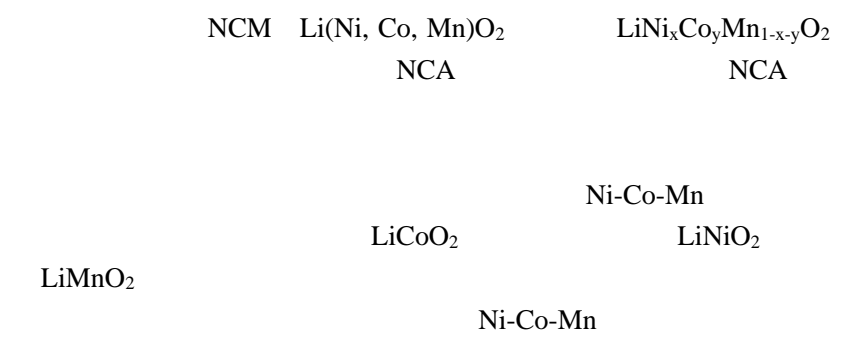
NCA NCM

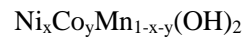
2022 93% 81%

2022 40.9 2022 7%

24.6 11.5 49% 23% 2022

1.

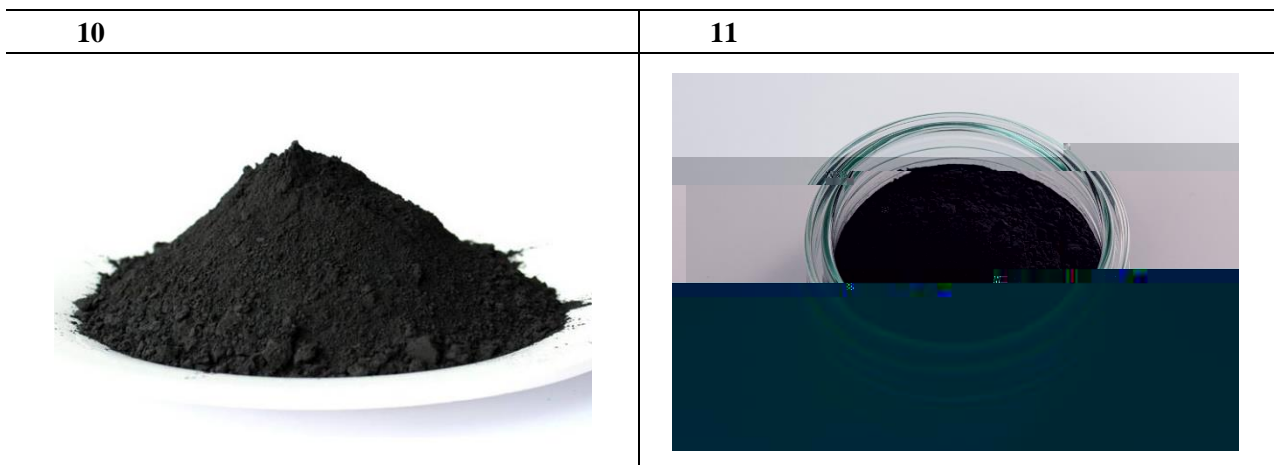
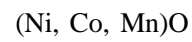




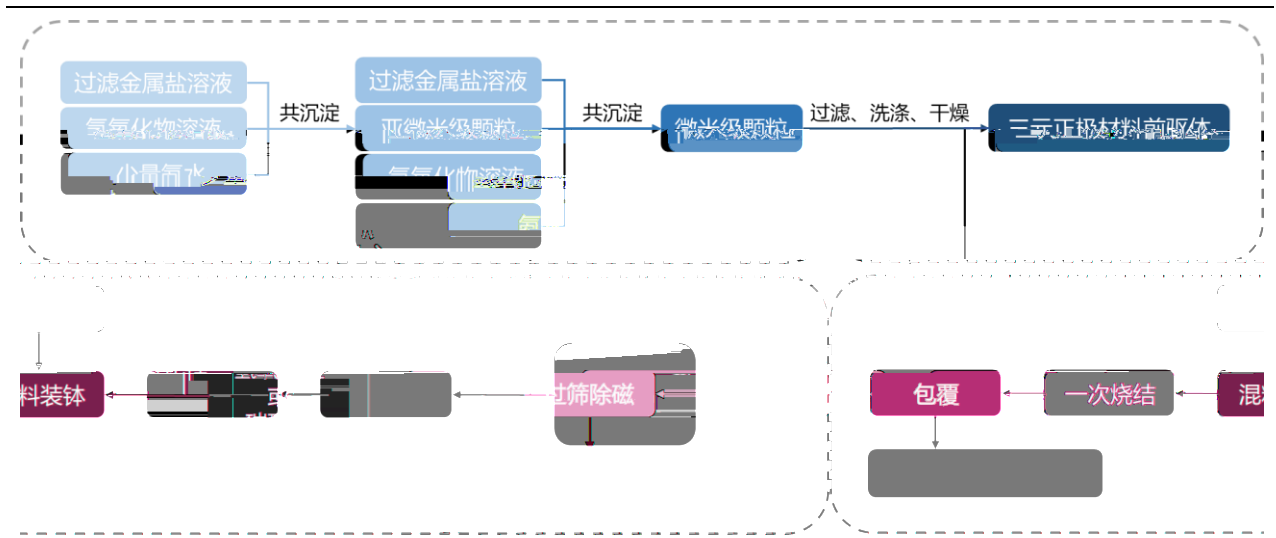
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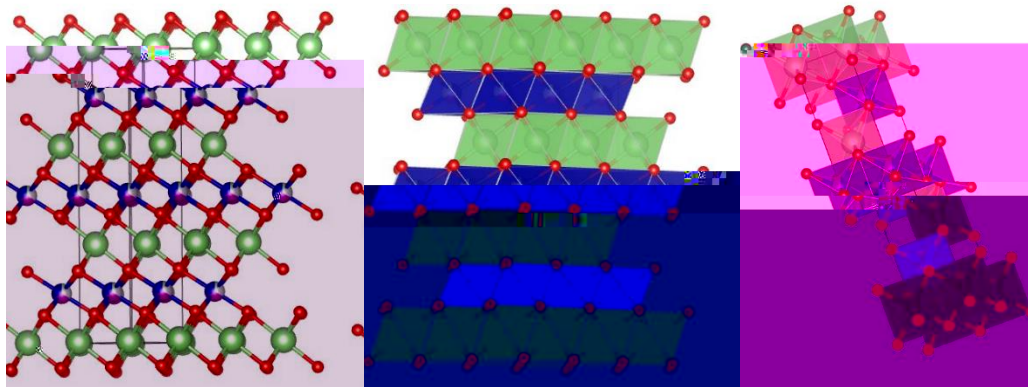
440

pH



Sumitomo Metal Mining





S.C. Yin, Y.H. Rho, I. Swainson, L.F. Nazar, X-ray/neutron diffraction and electrochemical studies of lithium de/re-intercalation in  $\text{Li}_{1-x}\text{Co}_{1/3}\text{Ni}_{1/3}\text{Mn}_{1/3}\text{O}_2$  *Chemistry of materials*, 2006; Aalto University Wiki

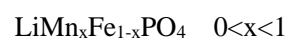
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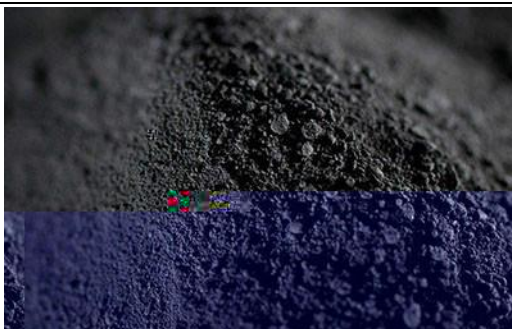
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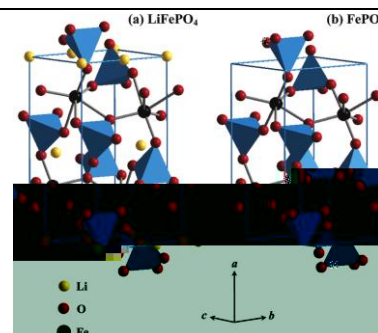
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14

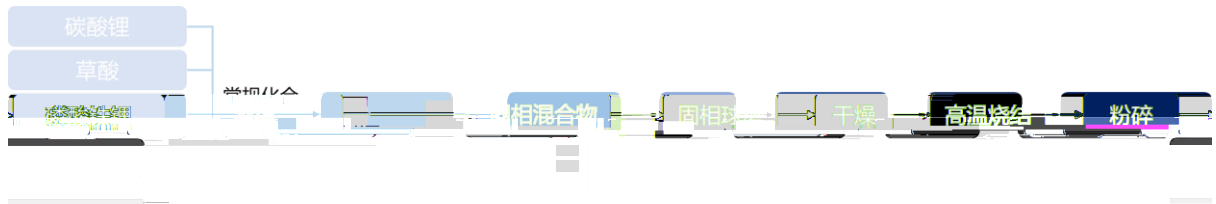


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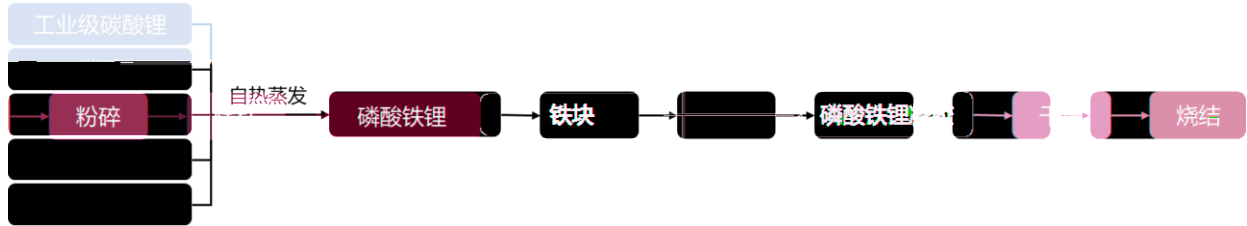


Stanford Advanced Materials Castro, Laurent & Dedryvère, Rémi & El Khalifi, Mohammed & Lippens, P.-E & Br ger, Julien & Tessier, Cecile & Gonbeau, Dany. (2010).

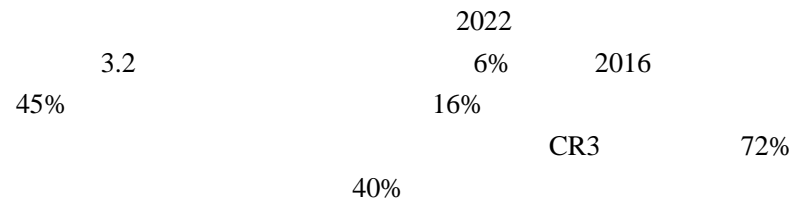
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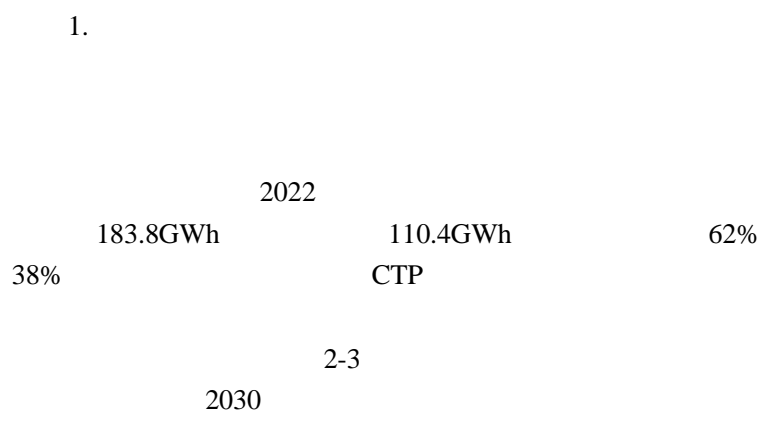
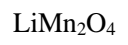
2



3.



4.



2.

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