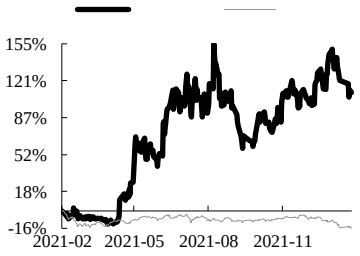
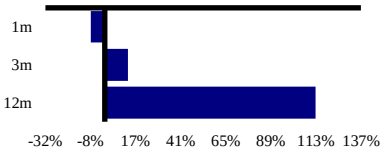
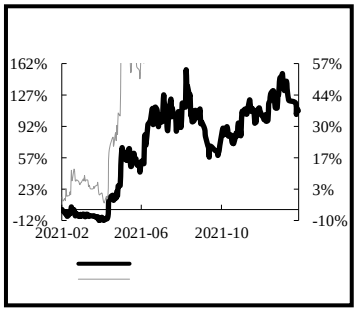
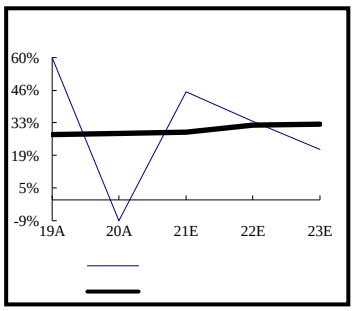
52




1m
3m
12m
-32%
-8%
17%
41%
65%
89%
113%
137%


162%
127%
92%
57%
23%
-12%
57%
44%
30%
17%
3%
-10%
2021-02
2021-06
2021-10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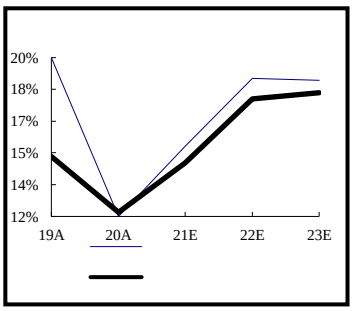
33%
19%
5%
-9%
19A
20A
21E
22E
23E


20%
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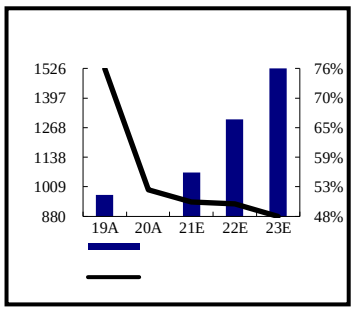
1526
1397
1268
1138
1009
880
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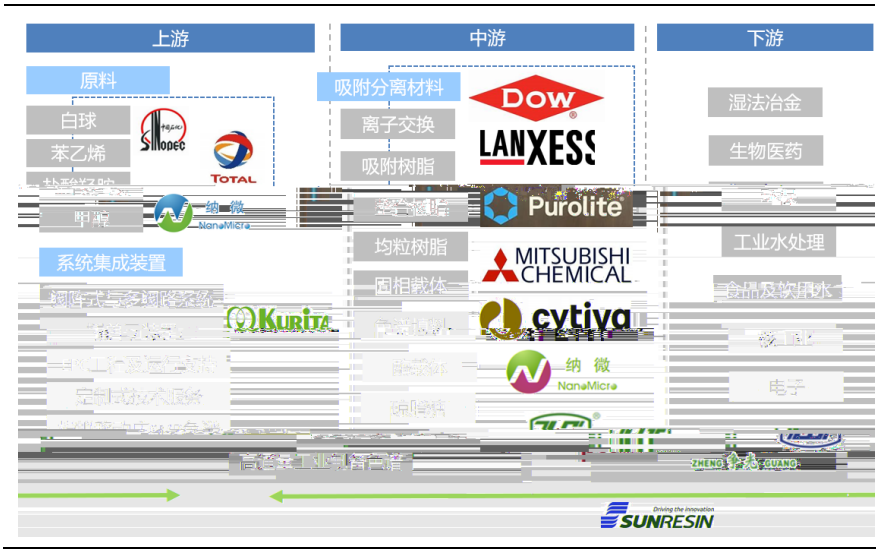
1.

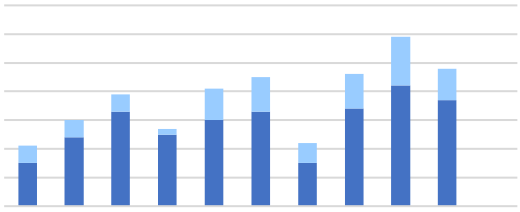
1.1.

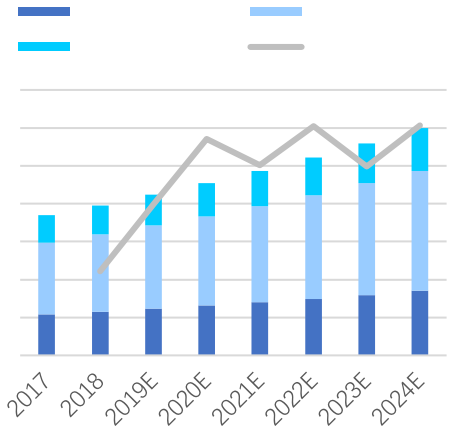
1.2.

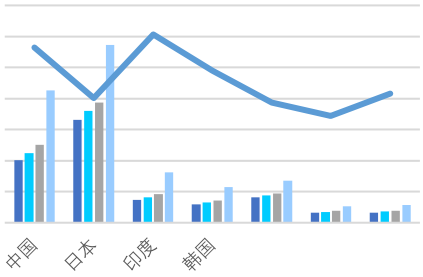

上游
中游
下游
原料
白球
苯乙烯
吸附分离材料
离子交换
吸附树脂
均粒树脂
固相载体
湿法冶金
生物医药
工业水处理
食品及软用水
系统集成装置
电子
DOW
LANXESS
Purolite
MITSUBISHI CHEMICAL
cytiva
纳 微
NanoMicro
KURITA
SUNRESIN

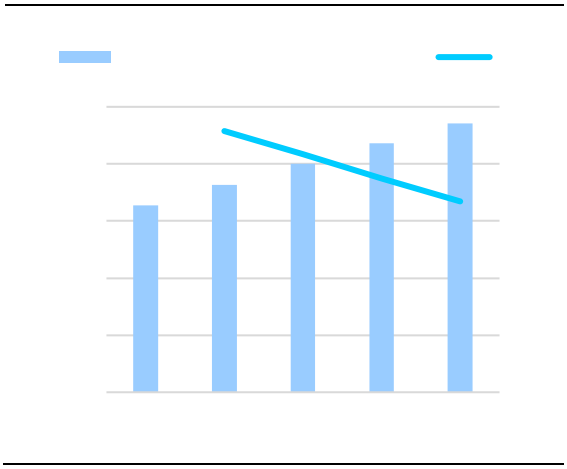
2.

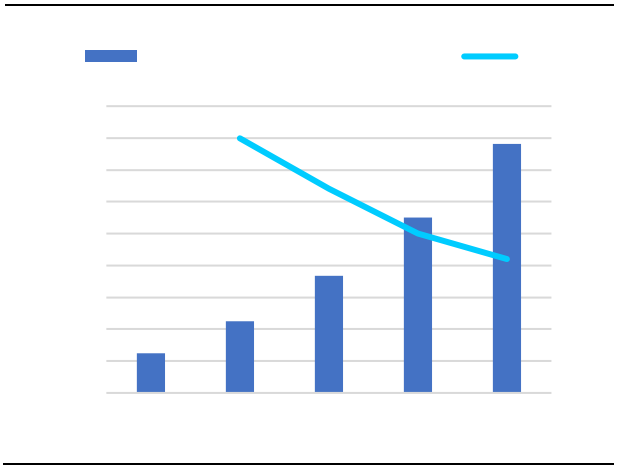
2.1.




2017
2018
2019E
2020E
2021E
2022E
2023E
2024E


中国
日本
印度
韩国





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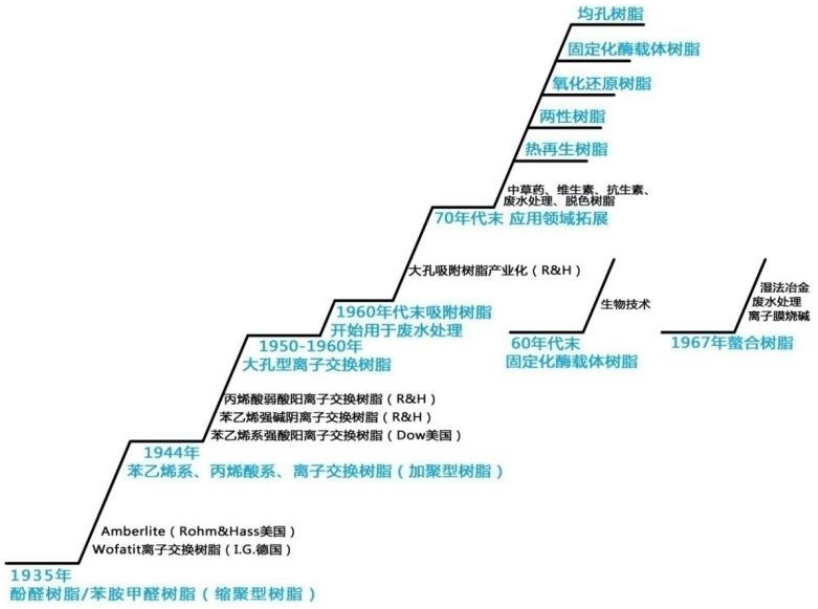
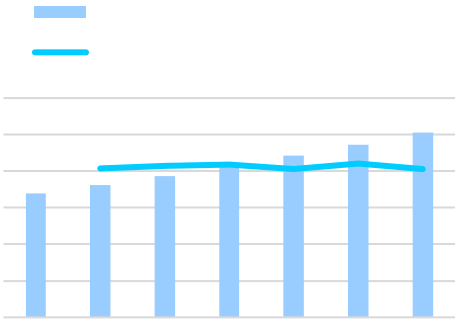
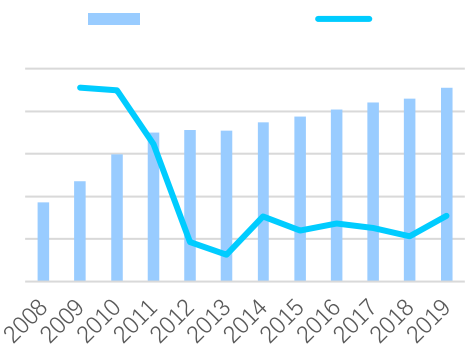

均孔树脂
固定化酶载体树脂
氧化还原树脂
两性树脂
热再生树脂
中草药、维生素、抗生素、废水处理、脱色树脂
70年代末 应用领域拓展
大孔吸附树脂产业化（R&H）
1960年代末吸附树脂开始用于废水处理
1950-1960年 大孔型离子交换树脂
丙烯酸弱酸阳离子交换树脂（R&H）
苯乙烯强碱阴离子交换树脂（R&H）
苯乙烯系强酸阳离子交换树脂（Dow美国）
1944年 苯乙烯系、丙烯酸系、离子交换树脂（加聚型树脂）
Amberlite（Rohm&Hass美国）
Wofatit离子交换树脂（I.G.德国）
1935年 酚醛树脂/苯胺甲醛树脂（缩聚型树脂）
生物技术
60年代末 固定化酶载体树脂
湿法冶金废水处理离子膜烧碱
1967年螯合树脂




2008
2009
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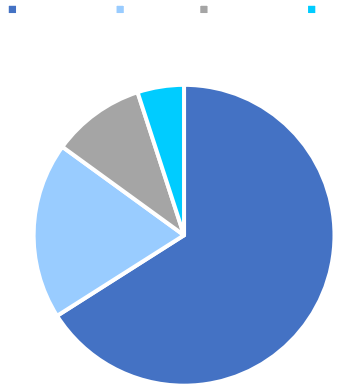
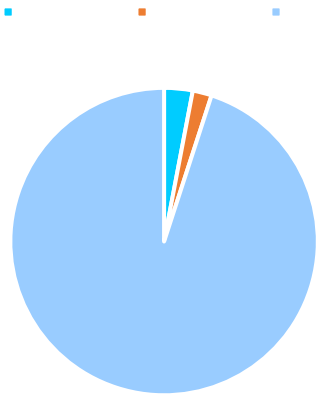
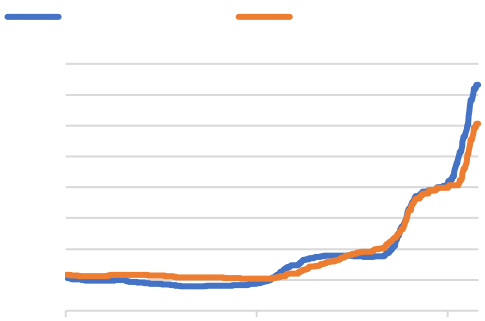
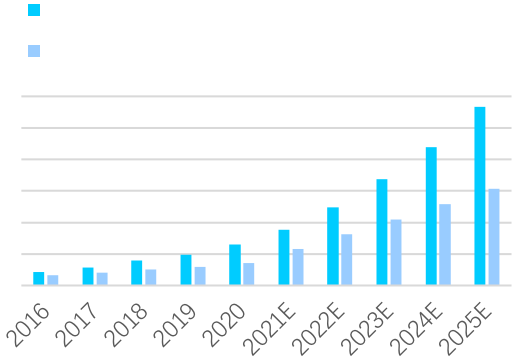




3.2.




2016
2017
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2019
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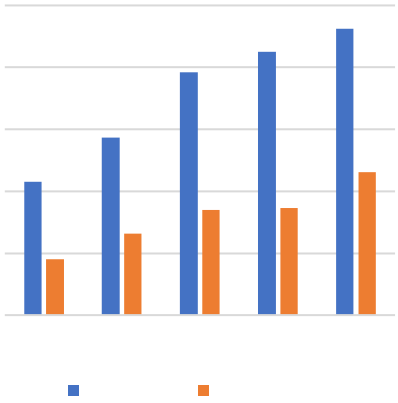
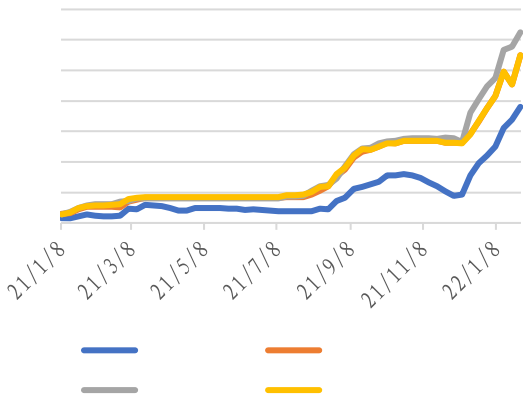
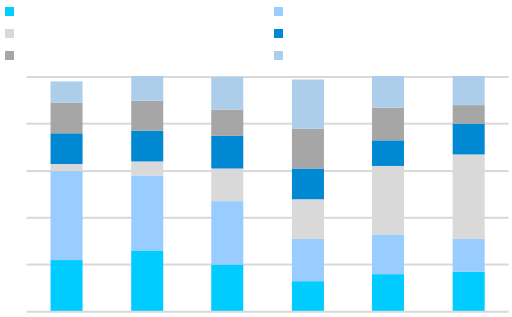
2021E
2022E
2023E
2024E
2025E

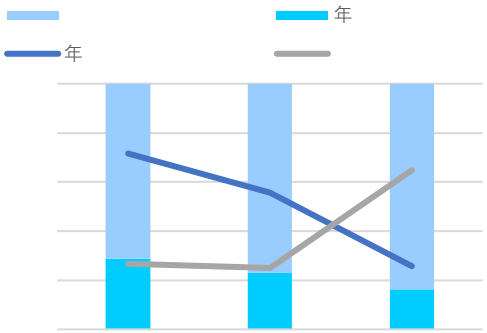


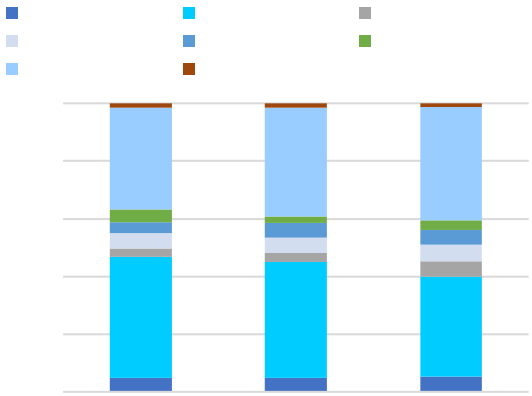

21/1/8
21/3/8
21/5/8
21/7/8
21/9/8
21/11/8
22/1/8

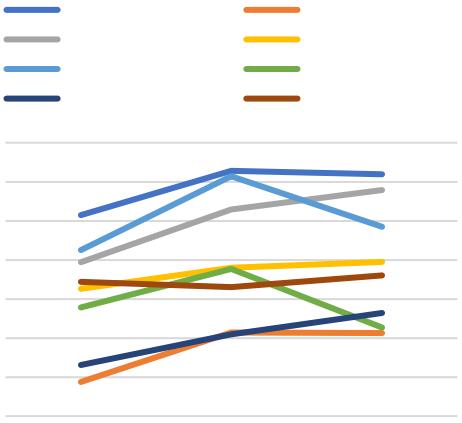
		1	1	+
		-	3	+
		1	2	/ +
		0.7	1	
		1+0.1	2	+
		-	1+3	+
	+ +	-	1+2+2	+
	+ +	-	-	+
		-	5	+

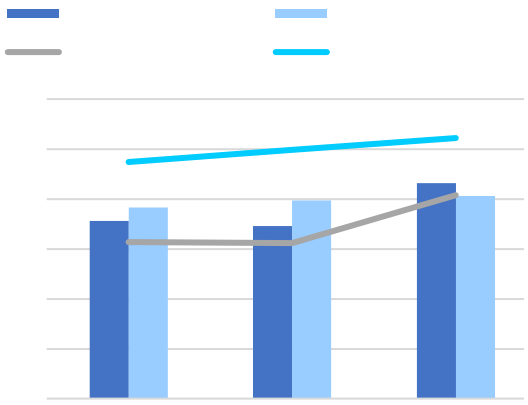
4.

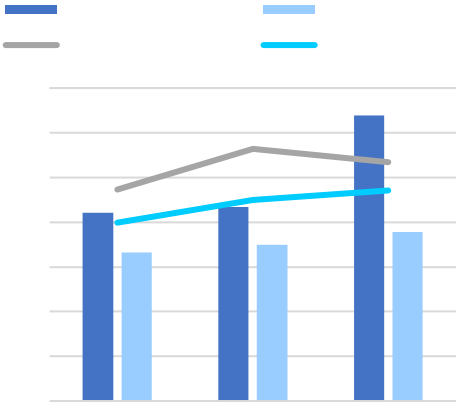


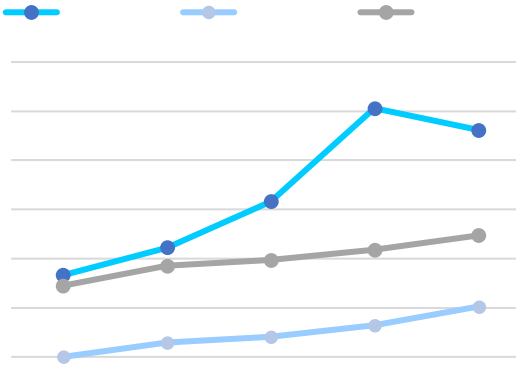

年
年

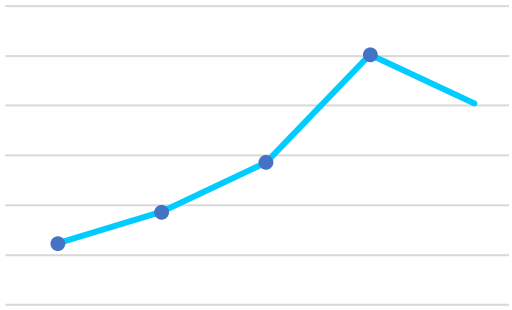








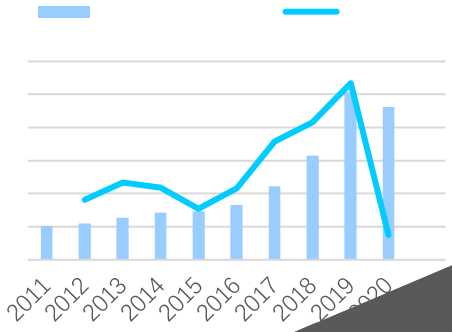




5.

6.

6.1.


2011
2012
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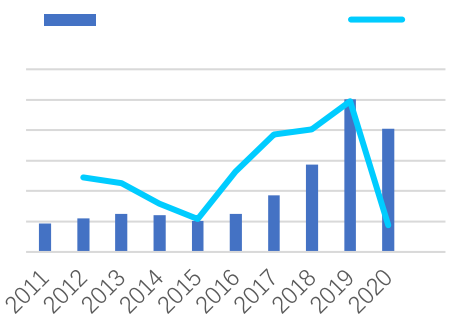
2011
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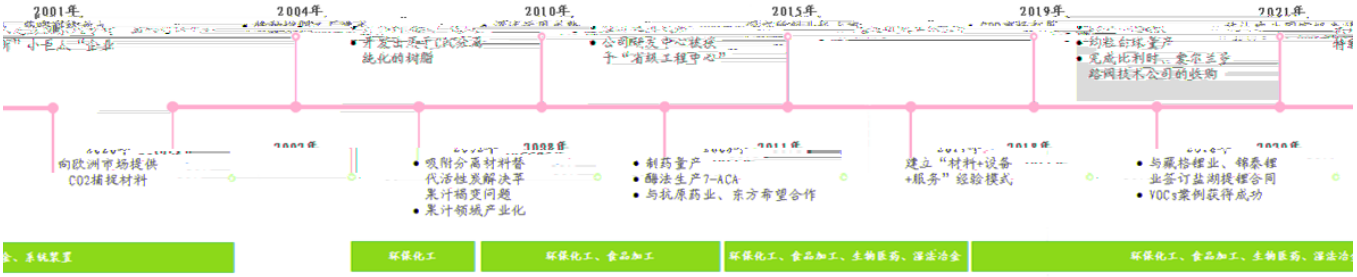
2001年
2004年
2010年
2015年
2019年
2021年
向欧洲市场提供CO2捕捉材料
吸附分离材料替代活性炭解决苹果汁褐变问题
果汁领域产业化
制药重产
酶法生产7-ACA
与抗原药业、东方希望合作
建立“材料+设备+服务”经验模式
与藏格锂业、锦泰锂业签订盐湖提锂合同
VOCs案例获得成功
环保化工
环保化工、食品加工
环保化工、食品加工、生物医药、湿法冶金
环保化工、食品加工、生物医药、湿法冶

6.2.

1.	
2.	