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4934 Tainergy Report -2021

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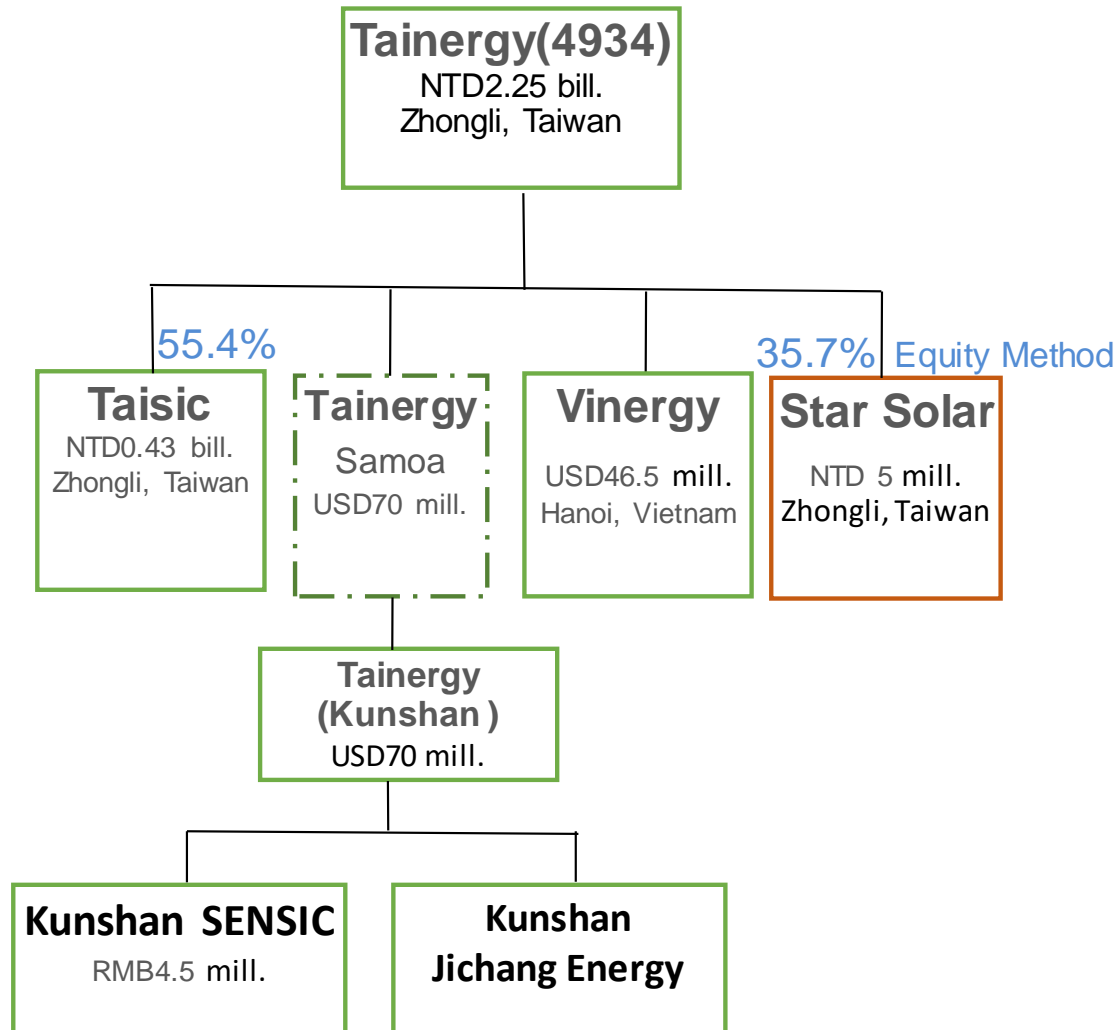
Outline



1. Company Profile & Financial Report
2. Products
3. Market Strategy
4. Our sic advantage
5. Deep Discussion

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Investment structure



Company Profile :



Tainergy

- A. Solar mono/poly c cell
- B. 3rd-generation semiconductor material SiC



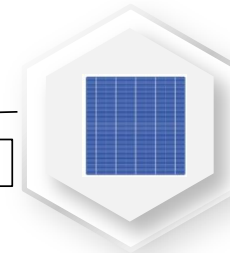
55.4%



SiC

- A. Self-made long-crystalline SiC wafers and seeds
- B. 4" and 6" SI type for 5G communication applications
- C. 4" and 6" N type for In-vehicle, POWER application
- D. Self-developed equipment

100%



Solar Cell

Products: Solar Cell
production base: Hanoi, Vietnam
Capacity: Up to 850MW

Company Profile -Tainergy



①TAINERGY TECH CO.,LTD

②Founded in : 2007/5

③Capital : NTD 2.25 bill.

④President : Frank ,HSIEH

⑤Ownership structure : Kenmec 27.20%

⑥Employees : About 600



Company Profile -Taisic



①TAISIC MATERIALS CORP.

②Founded in : 2020/ 6

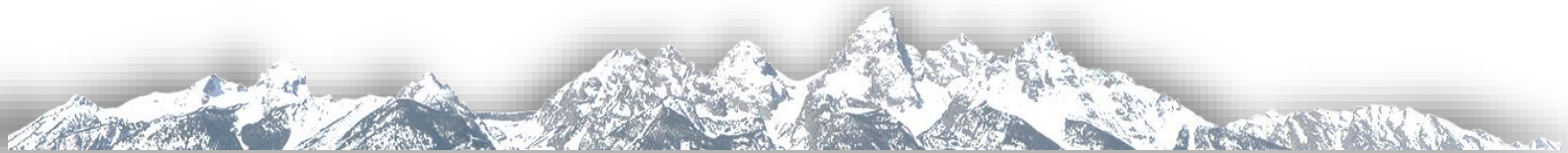
③Capital : NTD0.43 bill.

④President : Kevin ,HSIEH

⑤Ownership structure

Tainergy55.4%, Kenmec 8.6%,

Group staff 24%



2021 Q3 Income Statement



Unit: NT\$ million

EPS NT\$ dollar

	Q1	Q2	Q3	Q1~Q3	
Accounting Title	Amount	Amount	Amount	Amount	%
Net Sales	414	514	273	1,201	100
cost of sales	456	580	346	1,382	115
Gross profit	(43)	(66)	(72)	(180)	(15)
Operating Profit	(97)	(179)	(146)	(421)	(35)
Profit Before Tax	(102)	(183)	(147)	(432)	(36)
Net Income	(113)	(188)	(152)	(453)	(37)
EPS	(0.53)	(0.81)	(0.68)	(2.02)	

2021 Q3 Cash Flows



Unit: NT\$ million

Accounting Title	1/1-3/31	1/1-6/30	1/1-9/30
cash from operating activities	(221)	(323)	(486)
cash from investing activities	(410)	(417)	(646)
cash from financing activities	641	1,052	1,518
others	0	4	4
net cash flow	10	315	389

beginning balance	523	523	523
ending balance	533	839	913

Outline

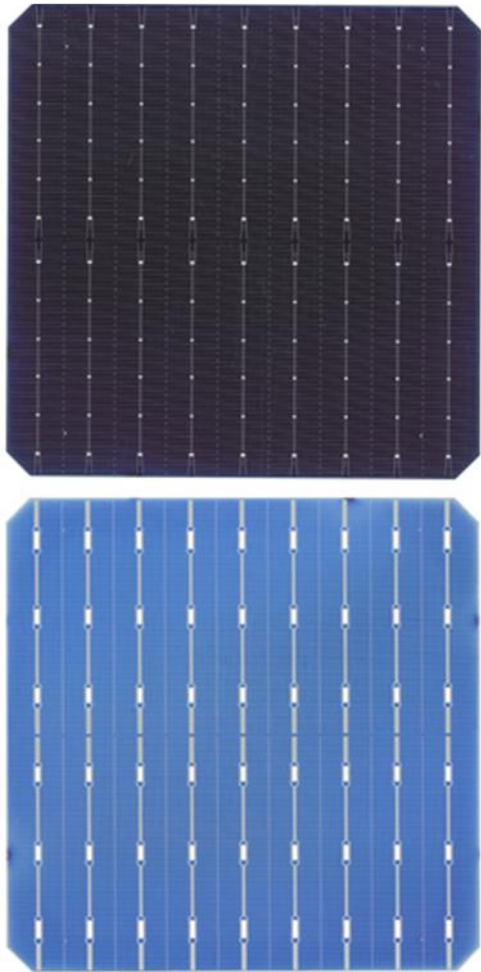


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3. Market Strategy
4. Our sic advantage
5. Deep Discussion

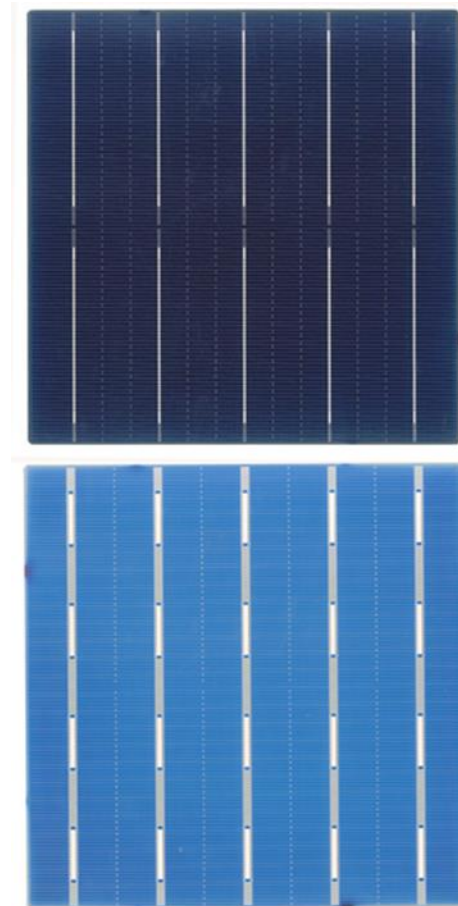
TAINERGY-Solar Cell



Bifacial Mono PERC Cells
166mm (M6) 9BB Half-cut



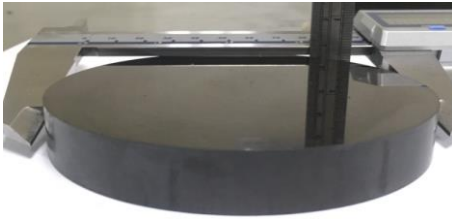
Bifacial Mono PERC Cells
158.75mm (G1) 5BB Half-cut



TAICIS-SiC INGOT



4" SiC Ingot



Diameter: 100.2 mm
Thickness: 12 mm

6" SiC Boule



Diameter: 155.4 mm
Thickness: 18 mm

6" SiC Ingot

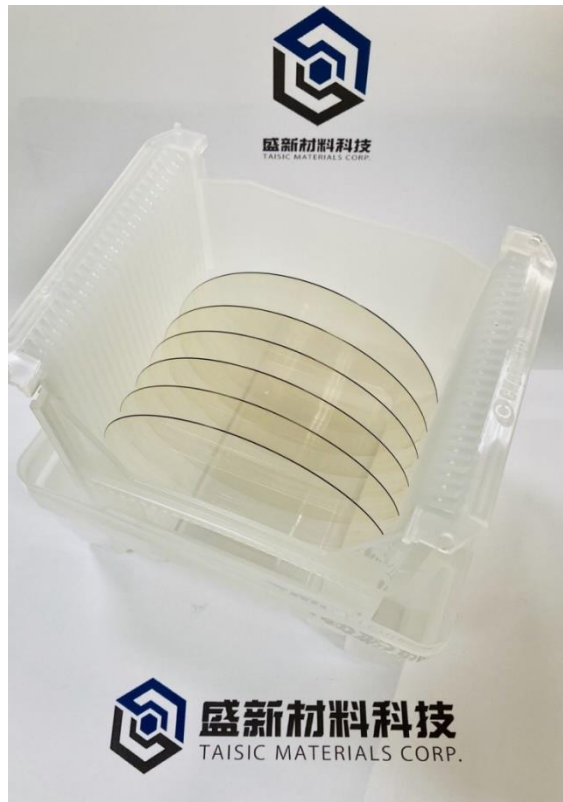


Diameter: 150.2 mm
Thickness: 18.6 mm

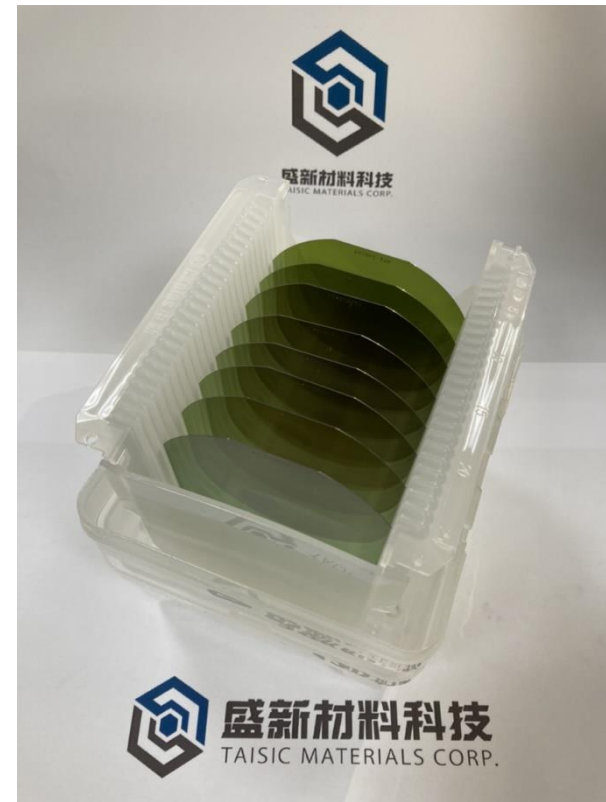
TAICIS-SiC WAFER



SI TYPE WAFER



N TYPE WAFER



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Solar optimization equipment-Vietnam



Advantages of SiC Devices

High Power Applications

Ultra High Working Voltage

Ultra High Frequencies

More Stable at High Temp.

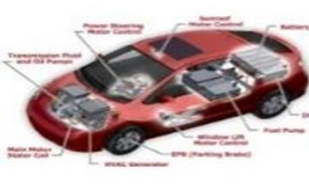





Excellent Radiation Resistance

Smaller Module Size



SiC product portfolio and applications



Product	Size		Application		
	4 inch	6 inch			
導電型碳化矽晶錠 N-SiC Ingot	√	√	Automotive Electronics	Renewable Energy	Industrial Server
導電型碳化矽晶圓 N-SiC Wafer	√	√			
通訊用碳化矽晶錠 SI-SiC Ingot	√	√	5G / Base Station	Satellite	Aerospace
通訊用碳化矽晶圓 SI-SiC Wafer	√	√			

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TaisiC Mass production technology advantages



SiC

Twin crystal ingot manufacturing process

Only a few companies in the world can sell both N-SiC and SI-SiC wafers at the same time. Shengxin will **rank first in Taiwan** and **top 5 in the world**.

Rapid mass production

Develop materials, configurations, and process technologies with high crystal growth stability, high stability and reproducibility on the same machine; transfer to other machines: reach the standard within **3-5RUN**

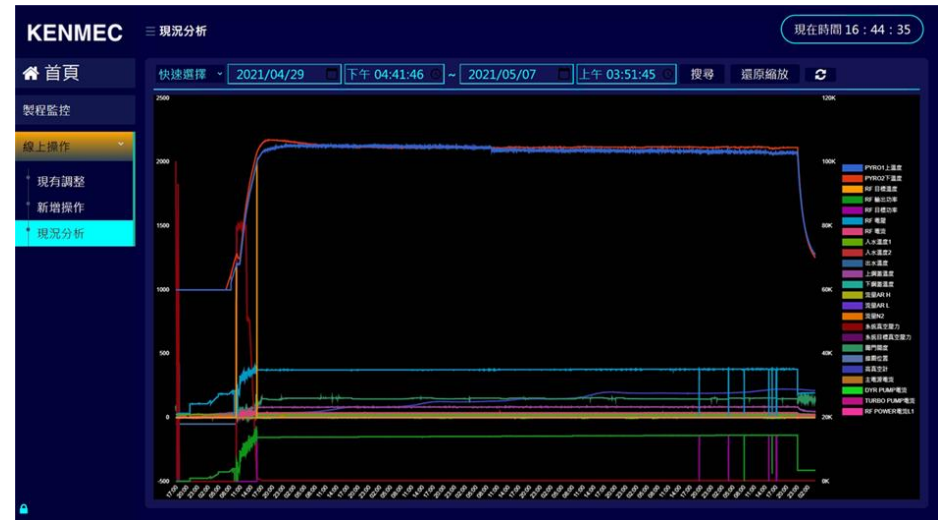
low cost

Close to the manufacturing costs of major international factories, **use self-made seed crystals and raw materials**, and **simultaneously improve the crystal growth rate, the thickness of the ingot, and develop its own crystal growth equipment**

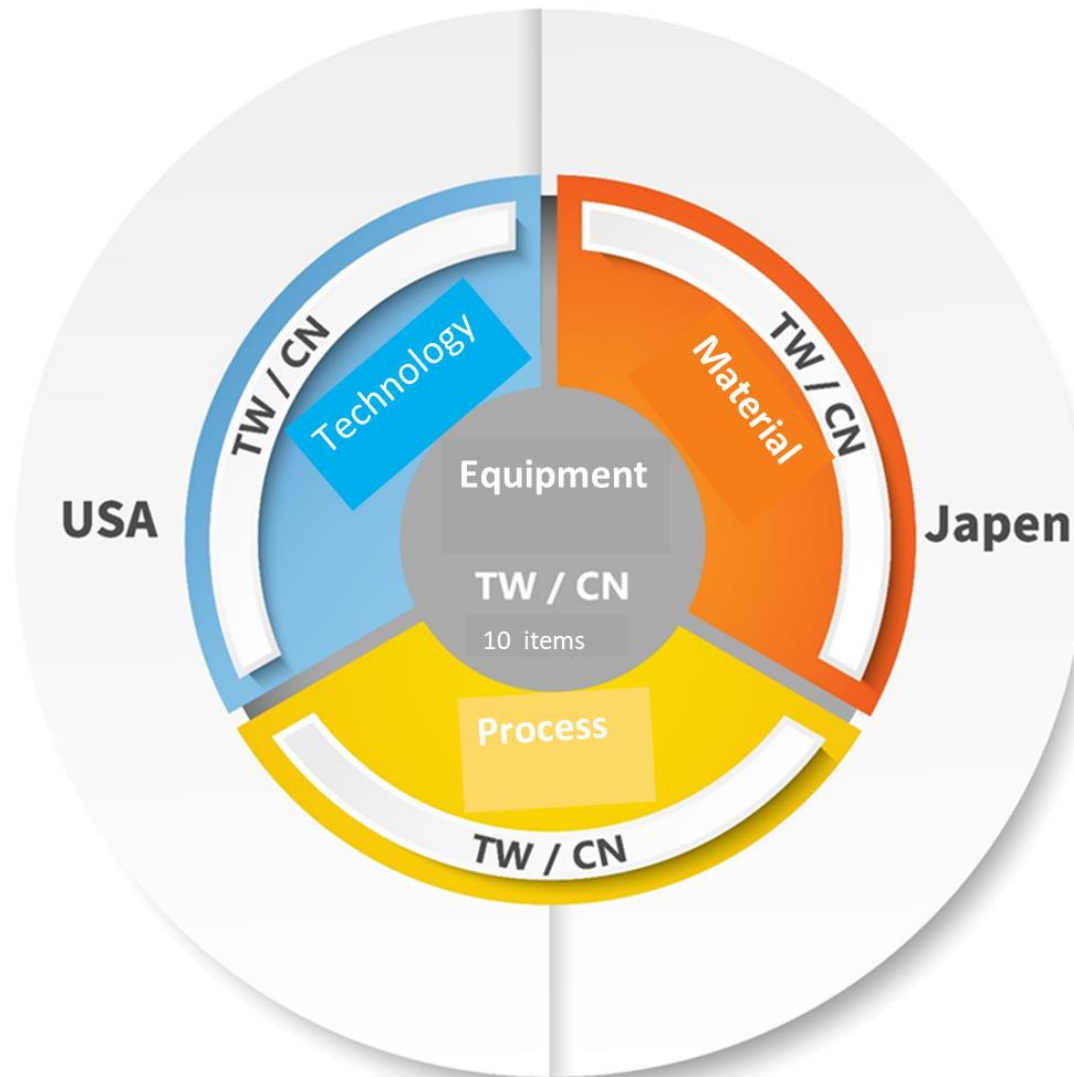
Expansion

From scratch, gradually master the development of large-scale crystal expansion technology (thermal field simulation, material, process) from 2" to 6".

Sic



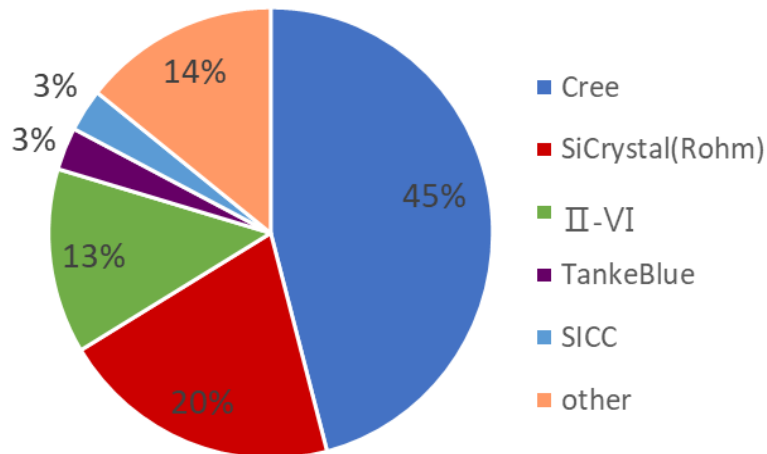
Core competitiveness: four cores and 18 patents



Market share of major global SiC wafer suppliers

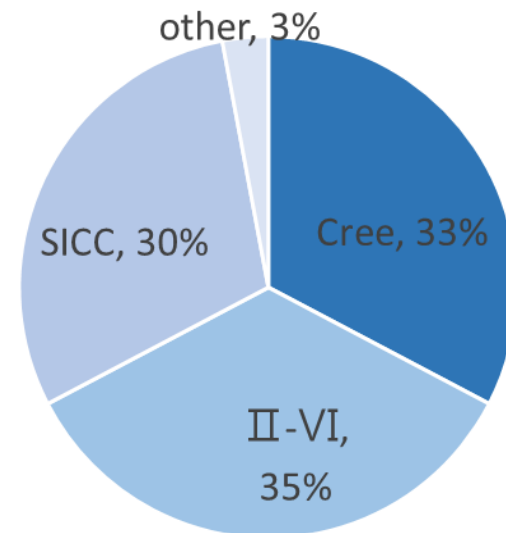


Global SiC wafer market share



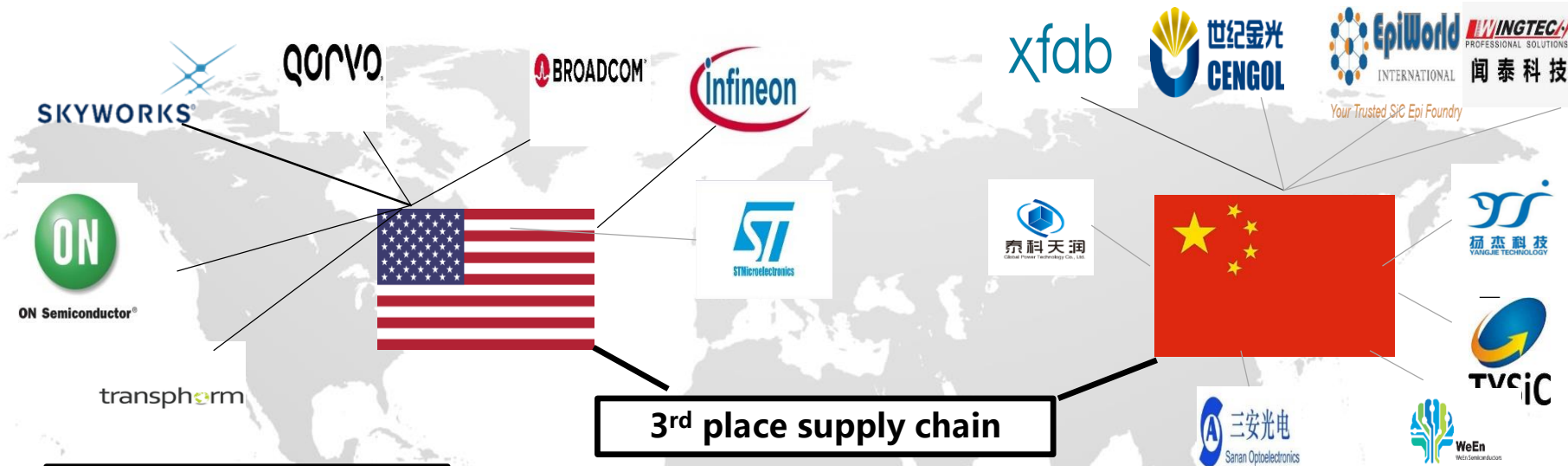
Ref. CASAResearch

Global SI SiC wafer market share



Ref . SiCC Public prospectus

The U.S. and China confront the 3rd-generation semiconductor supply chain with clear barriers



European and American Supply Chain

1. SiC in Europe and the US is an important strategic material and is prohibited from being sold to mainland China
2. Due to the US semiconductor trade ban, many European and US chip manufacturers cannot sell many products to the Chinese market
3. Affected by trade bans and Xinjiang issues, products using Chinese raw materials cannot be sold locally in Europe and the US

3rd place supply chain



China Supply Chain

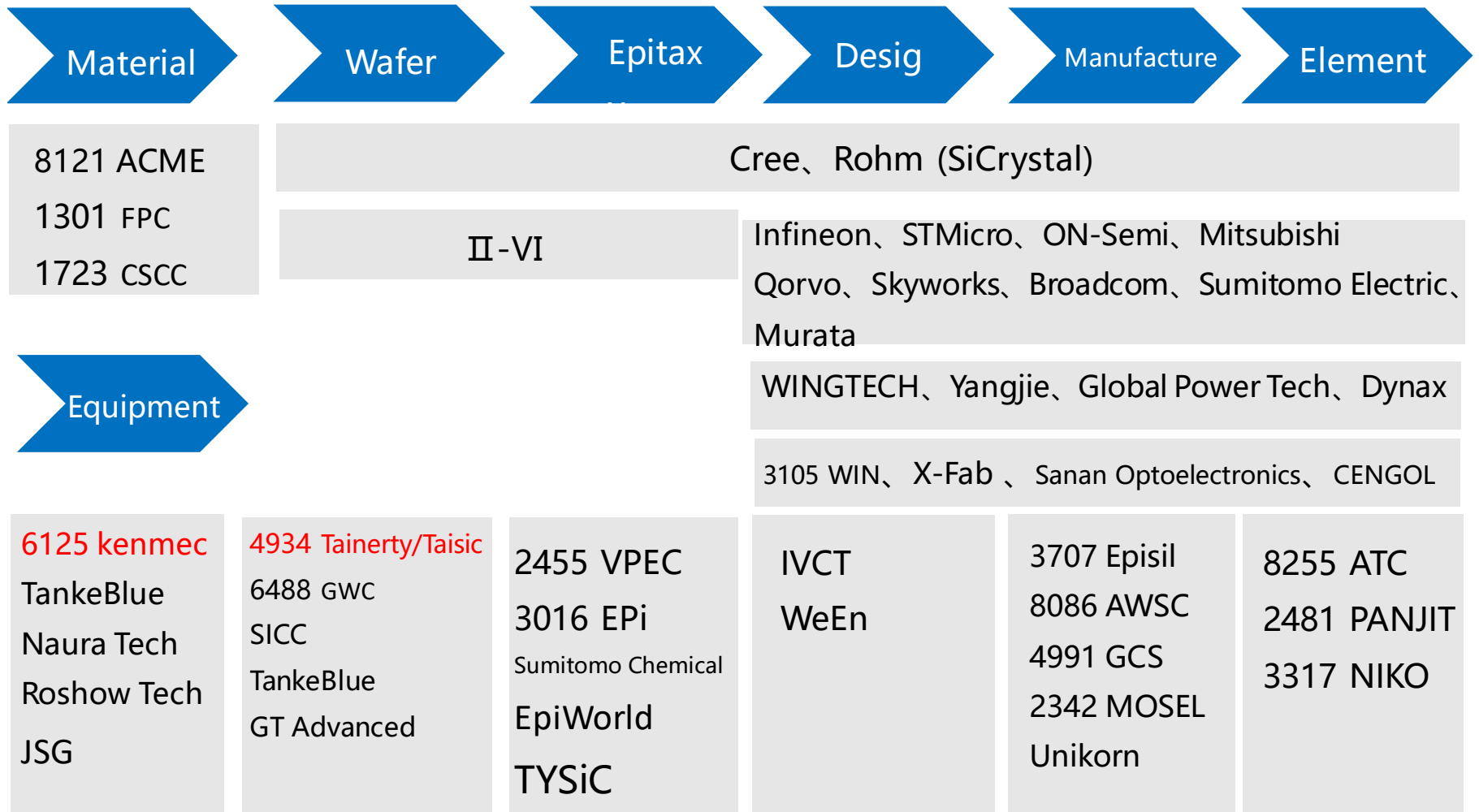
1. China is aware of the seriousness of the stuck neck and actively develops the non-U.S. supply chain
2. End products using China-made SiC raw materials cannot be sold to markets outside of China

Taiwan's current situation in the SiC compound semiconductor industry



- 臺灣SiC主要應用產品領域：
 - 適用於功率較高的領域，例如馬達、驅動器和逆變器，如電動車充電樁與驅動馬達，太陽能逆變器等
- 臺灣SiC供應鏈現況，主要以晶圓代工為主，產能不大：
 - SiC基板：太極能源與母公司廣運轉投資盛新材料，布局 SiC 長晶和切晶
 - 磊晶：嘉晶電子
 - 晶圓代工：漢磊科、鴻海(2021年併購竹科 6 吋晶圓廠)、穩懋半導體
 - 封裝與模組整合：朋程科技預計2021年第4季導入SiC模組代工量產

Global SiC upstream and downstream supply chain



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Tainergy 4934

Entering a new century of carbon-neutral
renewable energy/next-generation semiconductors