# China Steel Chemical Corp.

June, 2022



# Safe Harbor statement

This presentation may contains forward-looking statements. All statements other than historical and current fact, without limitation, including business outlook, predictions, estimates, are forward-looking statements.

Such statements are based upon management's current beliefs and expectations and are subject to various risks, uncertainties and other factors that could cause actual outcomes and results to differ materially.

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**China Steel Chemical Corp.** 



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#### **Chronology of Major Events**

- 1. CSCC established in February 1989.
- 2. Plants completed during 1991~1993.
- 3. CSCC IPO listed in Taiwan in NovemAber, 1998
- 4. CSCC was awarded "Industrial Excellence Award" and "National Outstanding SMES Award" in 2001.
- 5. CSCC achieved OHSAS 18001 certification in 2002.
- 6. CSCC achieved CNLA in 2002.
- 7. The Light Oil Distillation plant phase 2 completed in 2010.
- 8. CSCC achieved AEO in 2002.



#### Chronology of Major Events

- 9. Obtained the CNS15506 certification in April 2012.
- 10. Obtained ISO50001 certification in July 2013.
- 11. Obtained IATF 16949 certification in 2018.
- 12. The line of Green Mesophase Powder Plant reaching capacity to 7,500 MT/YR in 2019.
- 13. Mesophase Powder Plant go into operation in June 2019.
- 14. Received the Sustainable Elite Award issued by SGS, and 2019 Corporate Sustainability Award Corporate Comprehensive Performance, and 2019 Taiwan Sustainable Enterprise Comprehensive Performance Award and Corporate Sustainability Report Gold Award from TCSA in November 2019.
- 15. Received the Corporate Sustainability Report Gold Award from TCSA in November 2020.



#### The Structure of Shareholder

unit: per thousand stocks

Major shareholder	Percentages
China Steel Corp.	29.04%
Fubon Life Insurance Co., Ltd.	5.31%
International CSRC Investment Holdings Co., Ltd.	4.96%
Ever Wealthy International Corp.	2.01%
Cathay Life Insurance Co., Ltd.	1.49%

As of : Apr., 2022



#### Table of academic degree in CSCC's employees

Academic Degree	No.	Percentages	
Ph.D.	8	3%	
Master's Degree	82	26%	
Bachelor's Degree	151	49%	
Junior College and Senior High School	70	22%	
Total	311	100%	

As of: June., 2022



Unit: ten thousand metric tons

	2018	2019	2021	2022 May
Coal Tar	25.5	26.0	25.2	10.0
Light Oil	12.4	11.6	10.9	4.6

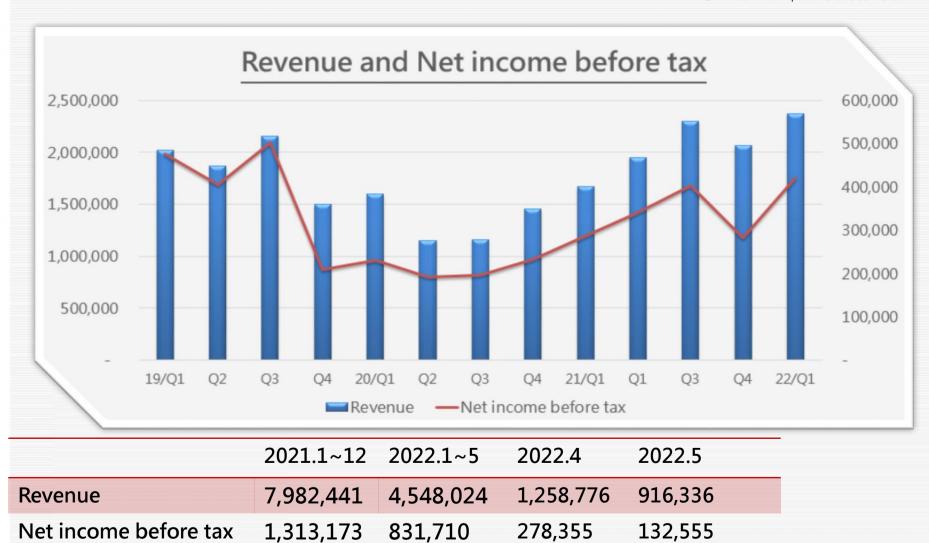


# Sales Revenue breakdown by products

	2019	2020	2021	2022 May
Light Oil	29%	28%	30%	27%
Benzene	24%	24%	26%	23%
Coal Tar	47%	47%	41%	43%
Creosote Oils	26%	26%	24%	24%
Soft Pitch	12%	13%	11%	13%
Naphthalene	7%	7%	5%	4%
Carbon Material	5%	4%	6%	7%
Coke Breeze	8%	11%	10%	8%
Trading	11%	10%	13%	15%



Unit: NT\$ thousands



# Dividend Payout

	2017	2018	2019	2020	2021
EPS	5.0	6.5	5.57	3.09	4.73
Cash Div.	4.6	5.3	5.0	2.8	4.0*
Stock Div.	0	0	0	0	0

<sup>\*</sup>The appropriations of earnings for 2021 are subject to the resolution in the shareholders' meeting to be held in June 2022.



# Governance-ESG executive summary

#### **Environment**

To construct ISO-14001 energy management system and establish ISO-14064 Emissions Inventories and Verification.

To commence the introduction of the Task Force on Climate-related Financial Disclosures

(TCFD), disclose guide for financial information.

#### **Social**

To take care the community and join the donation to social care activities, visit neighborhoods and villages nearby the Company from time to time and sponsors community activities to achieve healthy interactions with community residents.

#### Governance

To establish Corporate Governance and Sustainability Committee for the corporate social responsibility and sustainable operations.



# Organizational structure of energy-saving and carbon emission reduction

To achieve short - term, medium term and long - term goals of ESG.

To disclosure of progress report about sustainable development for 2021.

To commence the introduction of the Task Force on Climate-related Financial Disclosures (TCFD).



# Achievement of sustainable development through governance

#### Governance

To commence the introduction of the Task Force on Climate-related Financial Disclosures (TCFD).

### **Strategies**

To form the cross-functional communication and evaluate the risks and opportunities of the climate.

### Risk management

To hold the TCFD meeting to sort the risks and opportunities of the climate.

#### Goals

To set short - term, medium term and long - term goals of resource management.



#### Governance-medium term and long - term goals of ESG

#### **Environment**

To implement long-term plan of energy-saving and carbon emission.

#### **Social**

To promotes green life, tree planting, beach cleaning, mountain climbing, green life lectures.

#### Governance

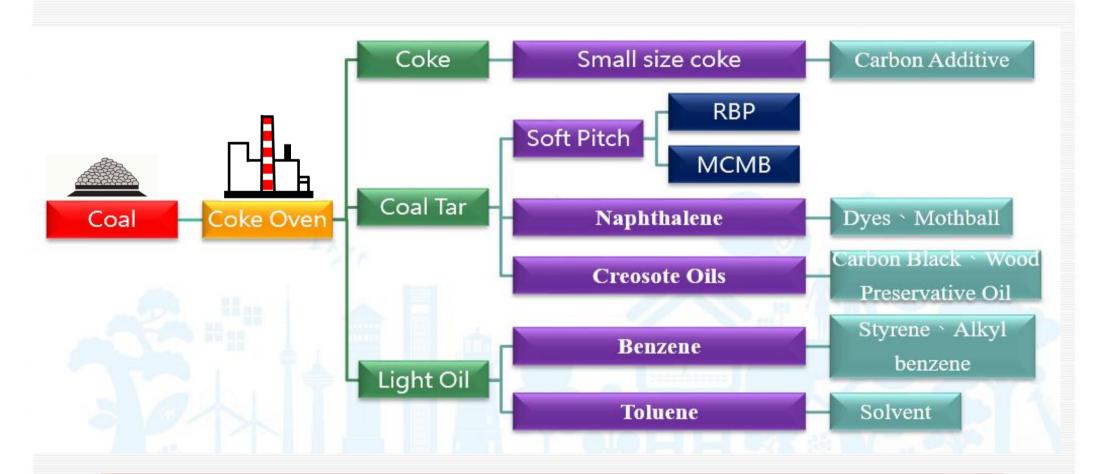
To engage external expert to evaluate Directers' performance.



**Upstream CSC · DS** 

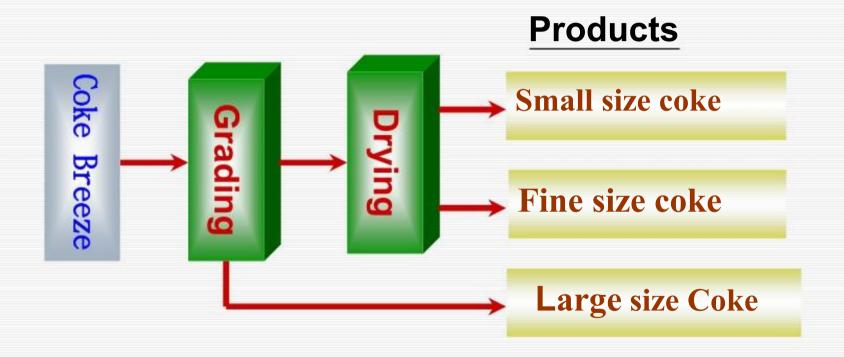
Midstream CSCC

**Downstream** 



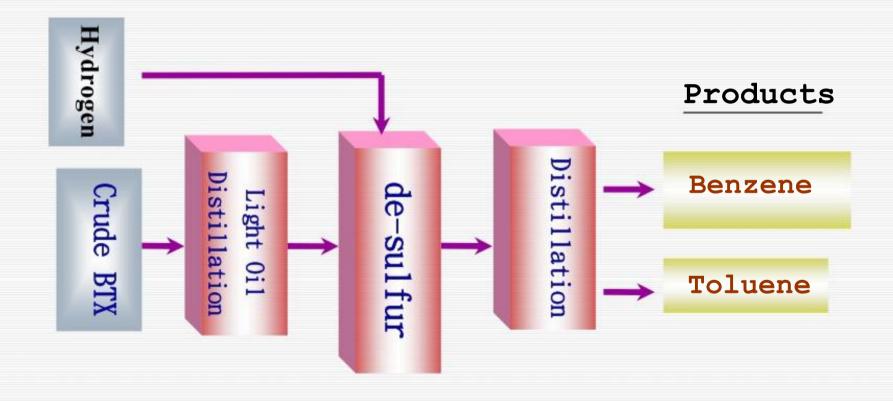


**♣** The Process of the Coke Breeze Plant





#### **4** The Process of the Light Oil Distillation Plant

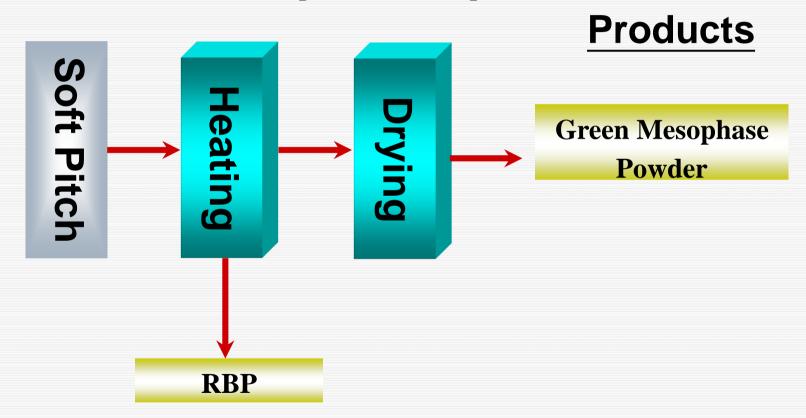




#### The Process of the Coal Tar Distillation **Products** Plant **PITCH Flakers** Refiners **NAPHTHALENE** Pre-Distillation Coal Dehydration Distillation Tar CREOSOTE OILS

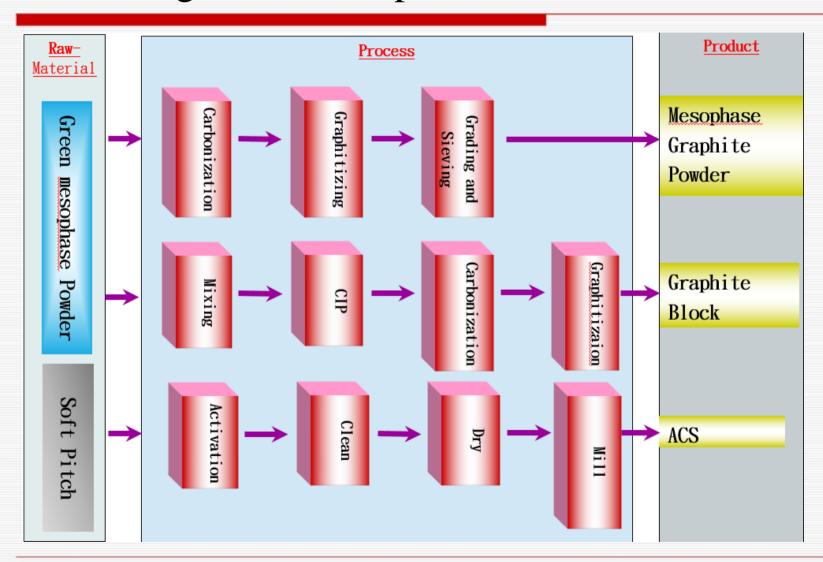


**4**The Process of the Green Mesophase Powder plant



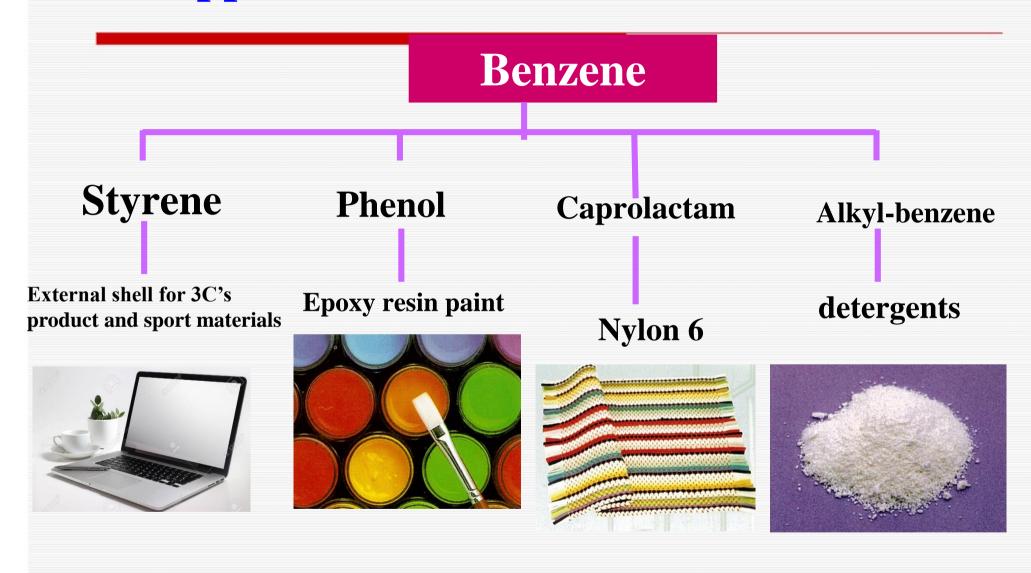


#### The Relating Product Map of Carbon Material Industries





## The Appliance of Benzene





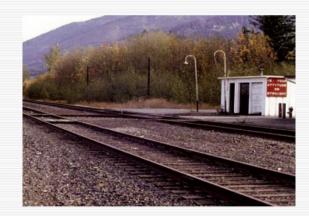
## The Appliance of Creosote oils

#### **Creosote oils**

# Carbon black



Wood preservative oil



Wash oil





## The Appliance of Naphthalene

# Naphthalene

B-naphthol, Tobias acid, Jacid

**Dyestuffs pigment** 



#### **Mothballs**





## The Appliance of Soft Pitch

Soft Pitch

Primary electrode rod



Water and rust proofing materials



**RBP** 

**Green Mesophase** Powder

**Applications of** Carbon material product

Roofing Pitch Electrode binder





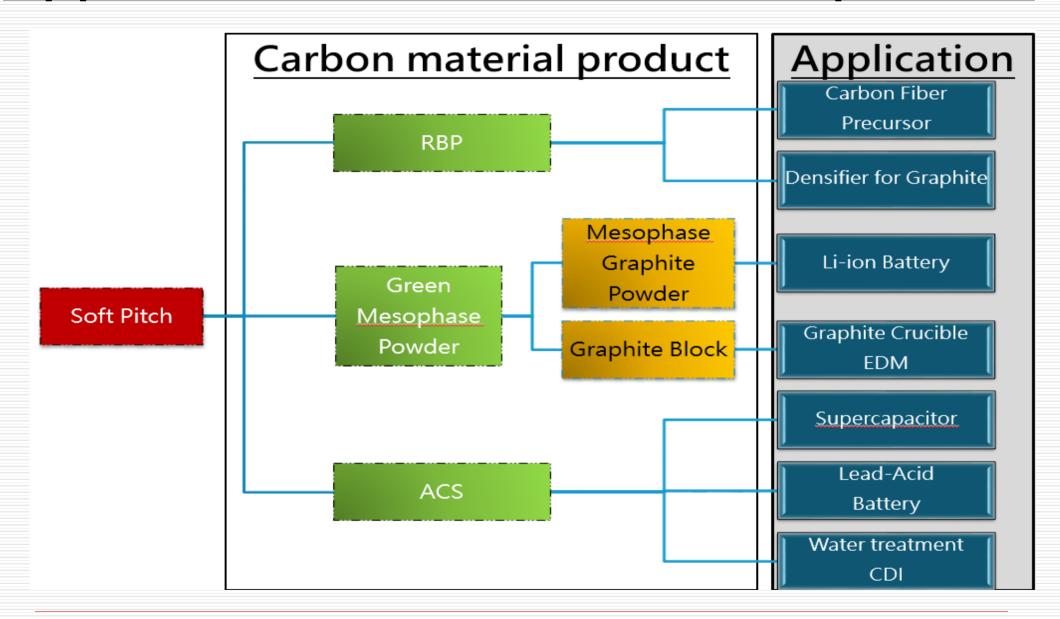
Carbon Fiber Densifier for Graphite Precursor







# **Applications of Carbon material product**



## CSCC's Meso-Graphite

Application: High Energy & Power density in LIB

Feature: High first columbic efficiency, high energy density, high discharge capability and long cycle life.

Energy Density(Wh/Kg):Low High

Power Density(W/Kg):Strong Low

MG10 MG11 MG08 FMGP

PT/HEV EV/ESS

MG12 MGP

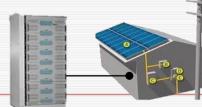
**MG13** 

Tablets/3C



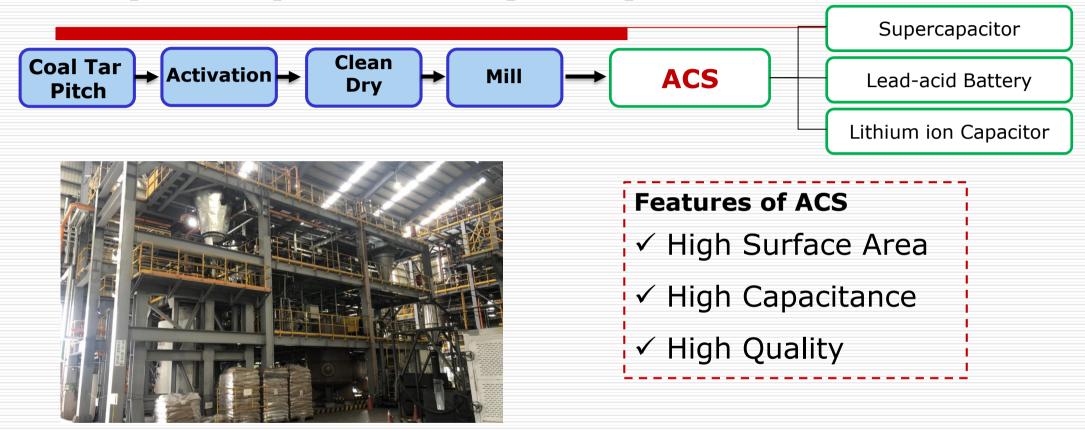








# Advanced Carbon for Supercapacitors (ACS)



ACS annual production capacity is 45MT/year, and the second production line
is planed to increase total annual production capacity to 90MT/year

# Applications of Supercapacitors

Light Rail Transit



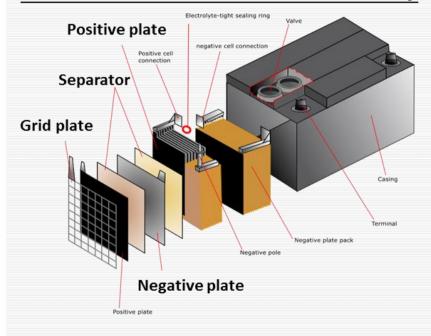
Wind turbine





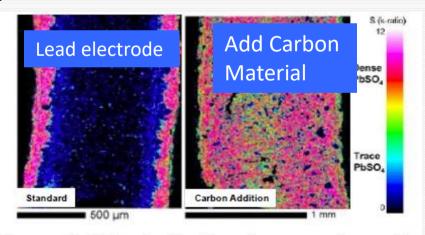
## Introduction of Advanced Lead-Acid Battery

#### **Structure of Lead-Acid Battery**



Advantages of addition activated carbon into LAB

- 1. Increasing conductivity
- 2. Improving the uniformity of Pb/PbSO<sub>4</sub>
- 3. Capacitance effect
- 4. Low amount of maintenance
- 5. Extending the life of LAB

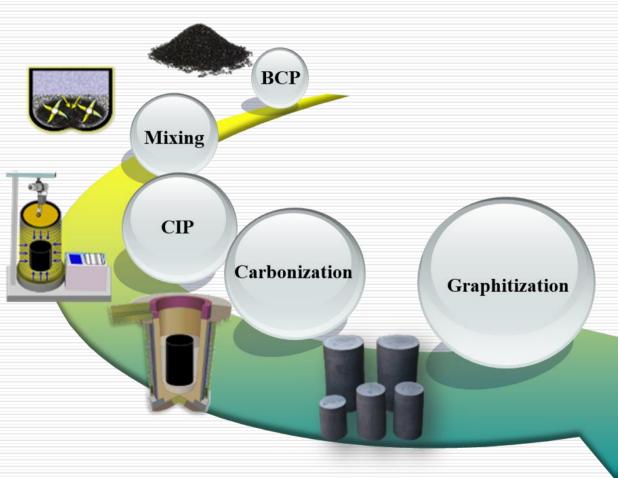


Elimination of hard sulfation by carbon additions, allowing more complete usage of the battery (both images are from cells at end of life). Fernandez et al., 2010.

Source: Pavlov D., Lead-acid Batteries: Science and Technology. Elsevier, 2011.



# **Graphite Block**

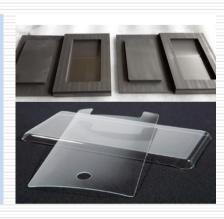


- Thermal and Chemical Resistance
- High Thermal Conductivity
- High Purity
- High Density
- Fine Structure
- Homogeneous

# **Graphite Block Application**





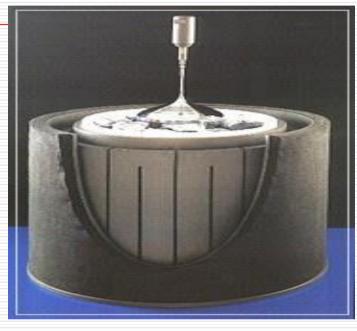


**Continuous Casting EDM** 

Graphite Block for large Size (>30cm) EDM continuously study high-end product.

**3D Glass Mold** 

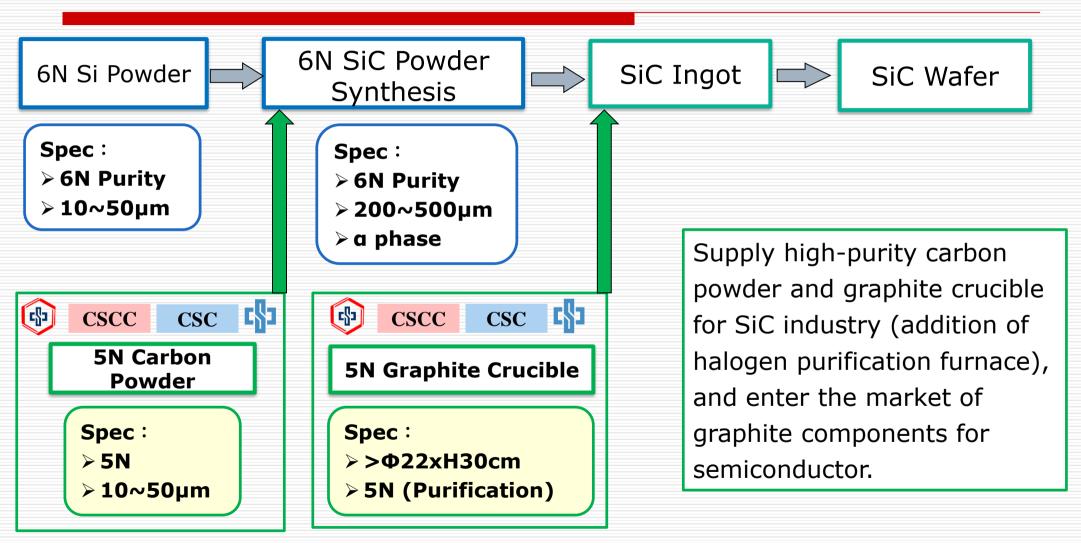
Being verified by customers.



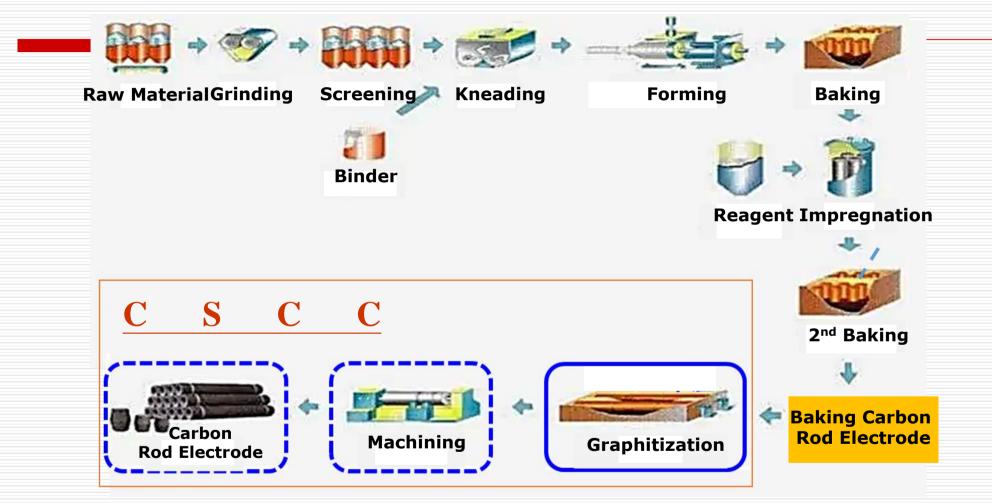
#### **Crucibles**

Graphite crucible for SiC industry are being verified by customers.

# Carbon Material for Compound Semiconductor (SiC)



## **Graphite Rod Electrode Manufacturing Flow**



 Introduce roasted carbon rods for graphitization and machining for home market.



# Q&A



