



Solus Advanced  
Materials

# Solus Advanced Materials Co., Ltd. **2022 1Q EARNINGS REPORT**

April 2022

The information herein is provided for your information purposes only and contains preliminary figures which may be materially different from the final figures.

Forecasts and projections contained in this material are based on current business environments and management strategies, and they may differ from the actual results upon changes and unaccounted variables. We make no guarantees and assume no responsibility for the use of information provided. We trust your decisions will be based on your own independent judgment.

Financial data in this presentation is based on an IFRS-basis consolidated financial statements.

## **I. 2022 1Q Earnings & Plans**

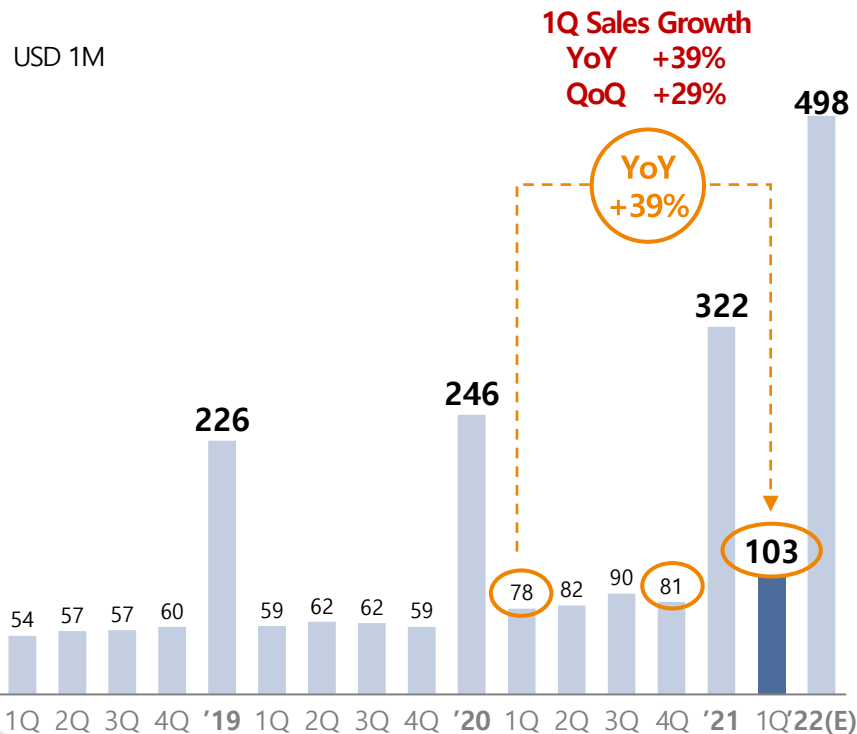
## **II. Consolidated Financial Statements**

## **III. Appendix**

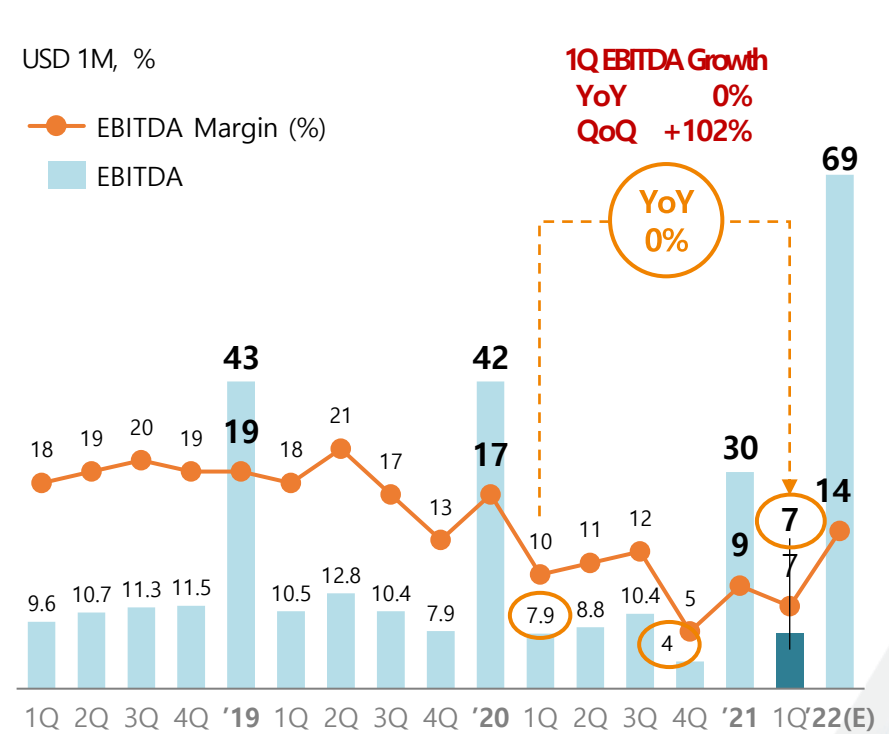
# 2022 1Q Earnings

- **2022 1Q Earnings:** Increase sales by stabilizing battery foil production and supply. Achieved the largest quarter revenue with actual supply of new entry Electro-Materials (HTL, Filler) even during the off-season. Realized the largest quarterly consolidated sales ever with the expansion of the copper foil and bio supply.
- **EBITDA:** Despite an increase in European power costs and OEM production disruptions due to the Russia-Ukraine geopolitical issues as well as increase in fixed costs due to the full-fledged operation of the battery copper foil plant, profits from the battery copper foil supply increase improved. EBITDA doubled from the previous quarter due to increased profits from the largest sales of Electro-Materials in the quarter.

## [Revenue Trend]



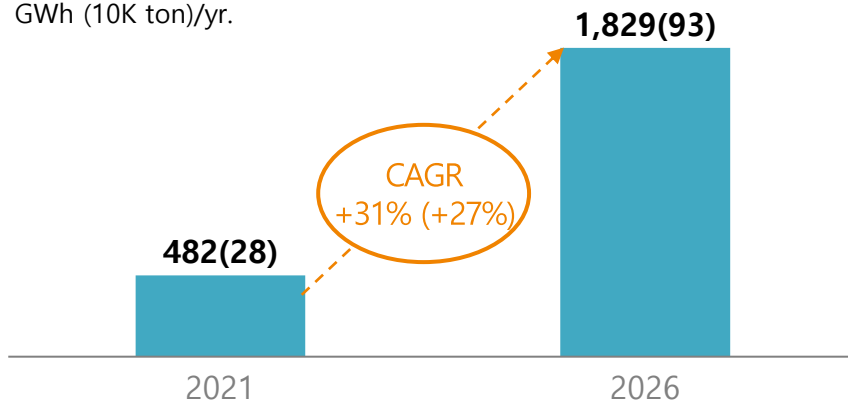
## [EBITDA (%) Trend]



# Battery Copper Foil Div. (Battery Copper Foil & Copper Foil) 2022 1Q Achievements & Plans

## Global Market Outlook for Battery Copper Foil

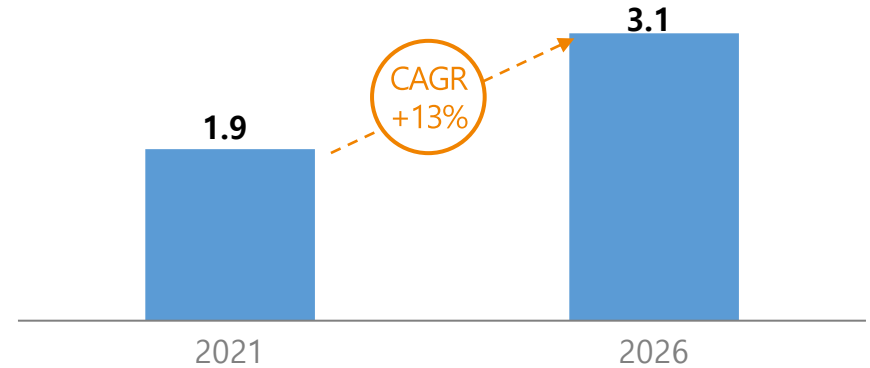
GWh (10K ton)/yr.



※ Source: IHS Markit & Company data

## Global Market Outlook for High-end Copper foil for 5G/Semiconductors

(10K ton)/yr.

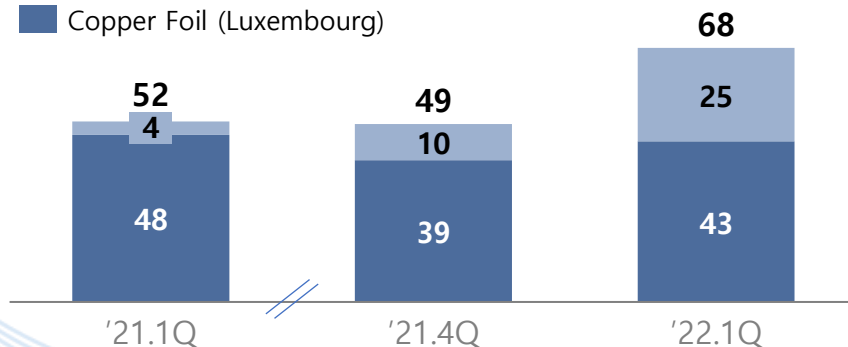


※ Source: Prismark Report\_IDTechEx 5G Technology Marketand

## Revenue of Battery Copper Foil Div. (Battery copper foil + Copper foil)

USD 1M

■ Battery copper foil (Hungary)  
■ Copper Foil (Luxembourg)

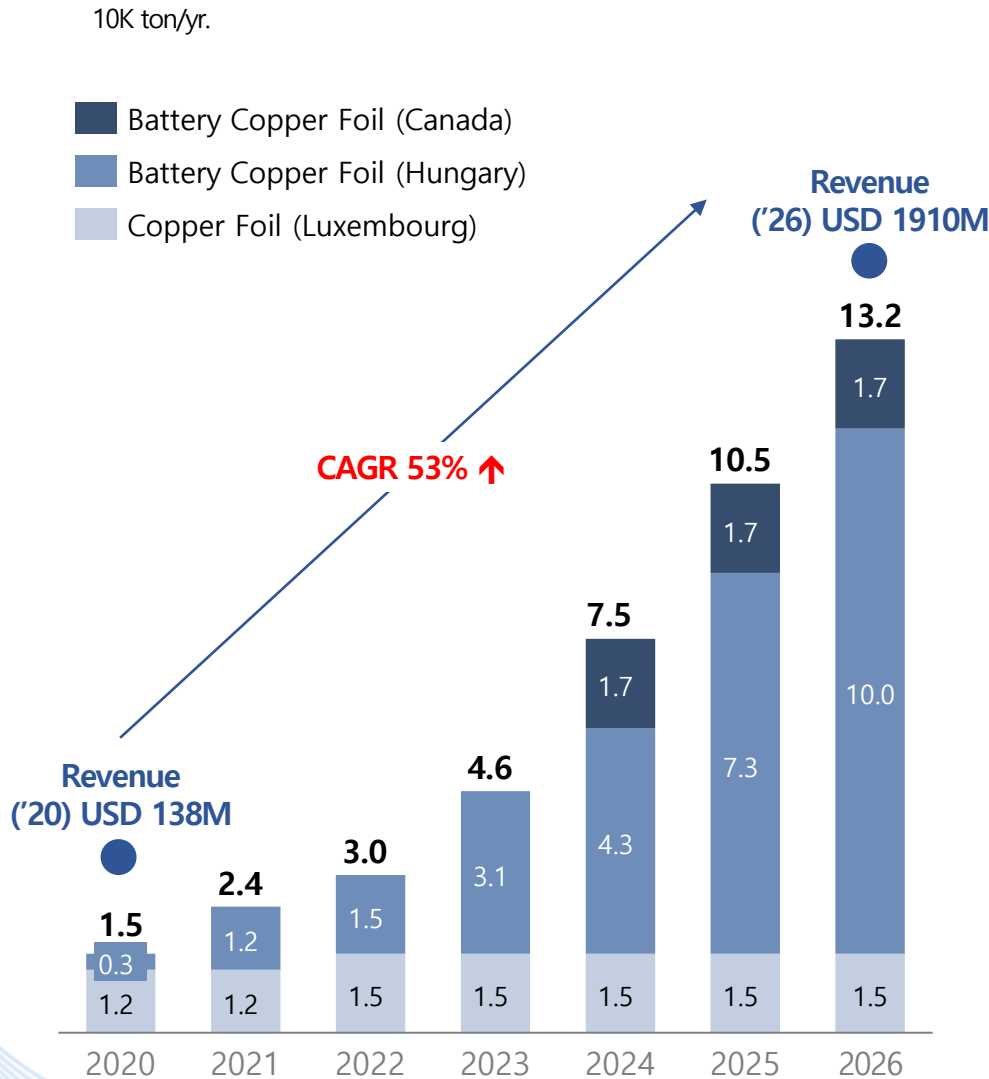


## [1Q 2022 Achievements & Plans]

- **Achievements: YoY increased by 41%, QoQ increased by 43%**
  - Battery copper foil: Production and supply of plant #1 stabilized. Started supply of battery copper foil for completion of globalization (Jan. 2022).
  - Copper Foil: Supply share of High-end copper foil increased compared to the previous quarter.
- **Plans: Response to increasing demand & customer diversification**
  - Battery copper foil: Supply volume will increase, and new/additional supply agreements will be made within 2Q.
  - Copper foil: Supply expansion expected based on the growing copper foil market in high-end 5G/semiconductors.

# Battery Copper Foil Div.

## Mid-to Long-term Plans for Production & Plant Expansion



※ Based on year-end gross capacity.  
 ※ The average monthly exchange rate of 1Q, '22.

### Battery Copper Foil Plant Expansion Status & Plan (Hungary & Canada)

- **Hungary (Targeting Europe): A total of 100K tons**
  - Phase 1 (15K tons): First shipment in Nov. '20
  - Phase 2 (23K tons): Plans to mass-produce in the 2H of '22
  - Phase 3 (62K tons)
    - Phase 3-1 (33K tons): Plans to mass-produce in the 2H of '24
    - Phase 3-2 (29K tons): Plans to mass-produce in the 2H of '25
- **Canada (Targeting North America): Phase 1 (17K tons)**
  - Completed site purchase with an annual production capacity of 60K tons in Quebec, Canada
  - Purchased a plant equipped with copper foil infrastructure and renovations will be launched (scheduled to break ground in the 2H of '22)
  - Phase 1 (17K tons): Plans to mass-produce in the 2H of '24

### Copper Foil Plant Expansion Status & Plan (Luxembourg)

- **Copper Foil (for 5G/Semiconductors) plant's production capacity of 15K tons**
  - Capacity: Total of 15K tons (3K ton capacity increased at the end of '21)
  - Plans to respond to supply increase both in High-end copper foil (for 5G) & Ultra-thin copper foil (for semiconductors)

# Battery Copper Foil Business Status & CAPEX Plan

## [ Current Status of Battery Copper Foil Business ]

- Production Base: Hungary plant #1 (Step-by-step expansion for Hungary plants #2-3 and Canada plant #1 planned from '22 through '25)
- Production Capacity: Gross Capacity of 12K tons (117K tons by '26)
- Product Line: (Thickness) 8 $\mu$ m, 6 $\mu$ m / (Features) High-Strength & High-Elongation
- Customer: Supplying to **Top-tier battery manufacturer (Located in Poland & Hungary) and global automobile company**
- **Supply contract signed: Order worth approx. USD 780M (supply period from '21 to '25) completed. New and additional supply contracts are to be agreed by 2Q**

## [ Battery Copper Foil CAPEX status and plans ]

- CAPEX : Estimated investment of approx. USD 1,239M from '22 through '26
  - Hungary Phase 1 investment completed, '21. Phase 2 in progress, Phase 3 planned in the 2H of '22
  - Canada Phase 1 investments will be secured by VES recapitalization (approx. USD 330M) based on this time's recapitalization (to be completed by June)
- **Financing status and plans: bank loan, local government's incentives, recapitalization, cash generation, etc.**
  - Jan. '22: Succeeded in raising investment funds of approx. USD 26M from EBRD (European Bank for Reconstruction and Development, a global financial institution)
  - Jan. '22: The Hungarian Government's incentives of approx. USD 26M confirmed in Phase 2 (Received approx. USD 28M from the government of Hungary in Phase 1)
  - Jun. '22: Recapitalization of approx. USD 198M confirmed → Investment to be made in North America production plant (Canada plant # 1 17K tons)
  - 2Q '22: Scheduled to borrow approx. USD 173M from a local bank in Europe

# Battery Copper Foil Div.

## Current Status of Canada Production Plant

Investor Relations 2022

### [ Canada Battery Copper Foil Plant Overview ]

- Capacity: Gross capacity of 17K tons (Phase1)
  - Completed the purchase of plant site capable of producing 60,000 tons of battery copper foil annually
  - Additional expansion scheduled according to market/customer conditions
- Location: Granby, Quebec, Canada
- Area: 129,700m<sup>2</sup> (site), 57,313m<sup>2</sup> (plant)
- **Groundbreaking date: Scheduled in July '22 (Remodeling design and site purchase completed at the end of March '22)**
- Mass production: within the 2H of '24
- Investment cost: USD 330M (including site, plant, and facilities)

[ Plant site ]



[ General view of the plant ]

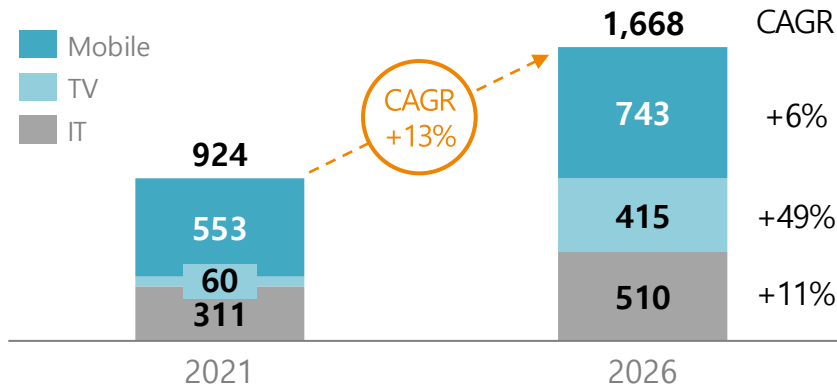




# Advanced Materials Div. (OLED & Bio) 2022 1Q Achievements & Plans

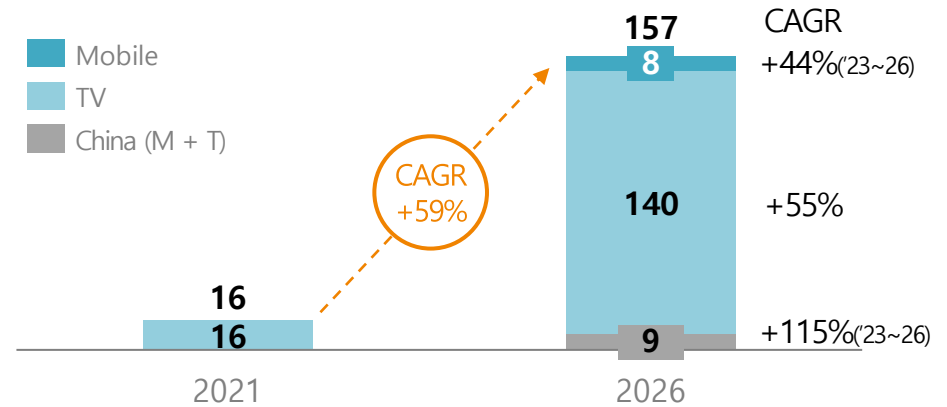
## Market Outlook for OLED Display (EML Materials)

USD 1M



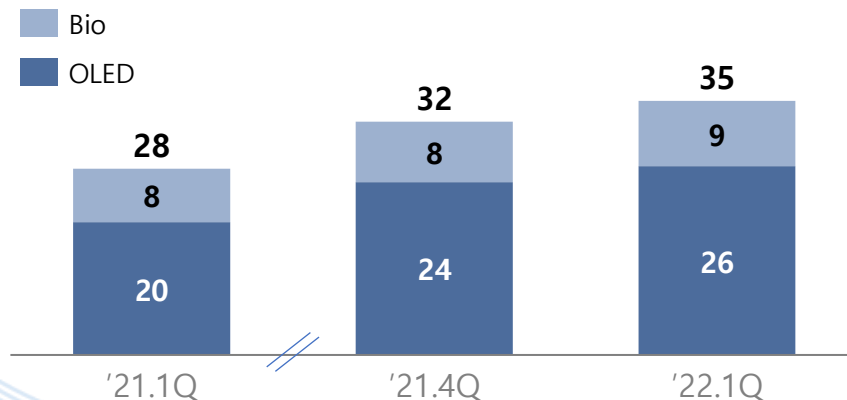
## Market Outlook for OLED Display Materials (Non-EML Materials)

USD 1M



## Advanced Materials (OLED & Bio) Revenue

USD 1M

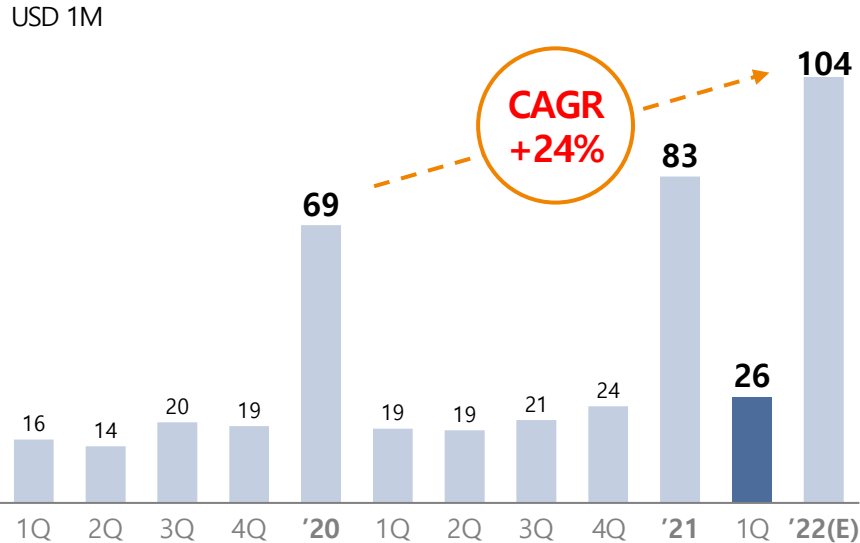


## [2022 1Q Achievements & Plans]

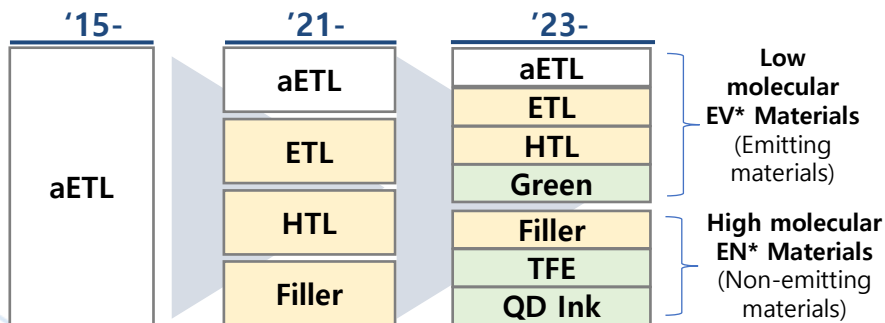
- **Achievements: YoY increased by 36%, QoQ increased by 9%**
  - Electro-Materials: Supply of HTL for OLED TVs, and Filler for QD-OLED increased, realizing the largest quarterly sales even during the off-season
  - Bio: Supply of Ceramide to major global company increased
- **Plans: Expand overseas customers and sign supply agreements**
  - Electro-Materials: Setup for China plant line in progress. Mass production to start in the 2H of '22
  - Bio: Ceramide supply agreements with a global major cosmetics company planned

# Current status & Plan of Electro-Materials Business

## Revenue Trend of Electro-Materials Div.



### Product diversification



※ EV(Evaporation), EN(Encapsulation)

- **OLED Materials Business continues to grow 20% annually**

- Target sales of USD 104M in '22
- '22 1Q Sales reached USD 26M, achieving the largest quarterly sales ever

- **Performance visualized via Product/customer diversification**

- Product/customer diversification in existing business groups (low molecular EV materials)
  - : HBL/ETL/HTL + Green phosphorescent EV materials
- Product/customer diversification in new business group (high molecular EN materials)
  - : Filler for QD OLED + low-dielectric TFE (Encapsulation)/QD Ink

- **Competitiveness of OLED materials business**

The biggest competitiveness that the main organic emitting material items have similar chemical structures, they have **a product platform useful for product diversification**

- For both aETL and HTL, Solus Advanced Materials has **IP and exclusively supplies it to domestic and overseas customers**
- ETL is being supplied to Chinese customers thanks to **its higher driving/efficiency/life compared to those of competitors**
- **Built a mid-term growth foundation by supplying filler that account for a large percentage of the polymer EN materials market**
- **Built a long-term growth foundation by completing technology development such as QD ink, low-dielectric TFE, etc.**
- Built a **factory in China** and secure two major panel companies in China as customers for the first time among Korea's OLED materials companies

## I. 2022 1Q Earnings & Plans

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## III. Appendix

# Consolidated Financial Statements

Investor Relations 2022

USD 1M									
Items	'20. 03	'20. 06	'20. 09	'20. 12	'21. 03	'21. 06	'21. 09	'21. 12	'22. 03
Current Asset	161	151	158	414	335	331	316	332	347
Non-current Asset	265	292	305	359	380	441	480	520	635
<b>Total Asset</b>	<b>425</b>	<b>443</b>	<b>464</b>	<b>773</b>	<b>715</b>	<b>772</b>	<b>796</b>	<b>852</b>	<b>982</b>
Current Liabilities	138	135	120	154	162	211	237	241	349
Non-current Liabilities	162	178	212	169	110	113	113	171	204
<b>Total Liabilities</b>	<b>300</b>	<b>313</b>	<b>331</b>	<b>323</b>	<b>272</b>	<b>324</b>	<b>350</b>	<b>412</b>	<b>553</b>
Capital Stock	3	3	3	4	4	4	3	3	3
<b>Total Equity</b>	<b>125</b>	<b>130</b>	<b>132</b>	<b>450</b>	<b>443</b>	<b>448</b>	<b>446</b>	<b>440</b>	<b>429</b>
Debt-to-Equity Ratio	240%	241%	250%	72%	61%	72%	79%	94%	129%
[Loan Payable]									
Loans Payable	173	207	218	228	139	180	208	253	385
Cash	45	55	45	281	178	166	141	118	85
<b>Net Debt</b>	<b>128</b>	<b>151</b>	<b>173</b>	<b>-53</b>	<b>-39</b>	<b>14</b>	<b>67</b>	<b>135</b>	<b>300</b>

※ The above data for 2022 1Q is based on unaudited financial statements.

※ The exchange rate is as of March 31<sup>st</sup>, 2022.

# Consolidated Statements of Comprehensive Income

Investor Relations 2022

Items	USD 1M										
	'20					'21					'22
	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q
<b>Revenue</b>	<b>59</b>	<b>62</b>	<b>62</b>	<b>59</b>	<b>246</b>	<b>80</b>	<b>82</b>	<b>90</b>	<b>81</b>	<b>322</b>	<b>103</b>
Battery Copper Foil	-	-	-	1	1	4	6	13	10	32	25
Copper Foil	37	38	34	29	140	48	46	45	39	172	43
OLED	15	14	20	19	69	20	19	21	24	81	26
Bio	7	10	8	10	36	8	11	11	8	37	9
COGS	40	40	41	41	164	63	66	71	65	256	88
Gross Profit	20	22	20	18	82	16	16	19	16	66	15
SG&A	12	13	14	16	56	16	14	16	20	64	17
<b>EBIT</b>	<b>7</b>	<b>9</b>	<b>6</b>	<b>2</b>	<b>26</b>	<b>0.4</b>	<b>2</b>	<b>3</b>	<b>-4</b>	<b>2</b>	<b>-2</b>
<b>(%)</b>	<b>13%</b>	<b>15%</b>	<b>10%</b>	<b>15%</b>	<b>10%</b>	<b>0.5%</b>	<b>2.3%</b>	<b>3.6%</b>	<b>-4.4%</b>	<b>0.5%</b>	<b>-2.0%</b>
Gain/Loss on Interest	-1	-1	-1	-2	-5	-2	-1	-1	-0.3	-4	-1
Gain/Loss on foreign currency transaction	1	0.2	-1	-6	-6	5	2	0.7	-0.2	7	0
Gain/Loss on foreign currency translation	1	-3	-4	-8	-14	2	-2	2	-0.2	1	2
<b>Earnings before Interest and Taxes</b>	<b>7</b>	<b>6</b>	<b>-1</b>	<b>-15</b>	<b>-2</b>	<b>3</b>	<b>-0.3</b>	<b>2</b>	<b>-4.4</b>	<b>0.5</b>	<b>-1</b>
Income Taxes	3	1	1	2	7	4	-3	2	-2.5	0.4	3
<b>Net Income</b>	<b>5</b>	<b>5</b>	<b>-2</b>	<b>-17</b>	<b>-9</b>	<b>-1</b>	<b>3</b>	<b>0.6</b>	<b>-2</b>	<b>0.1</b>	<b>-4</b>
Income for controlling shareholder	<b>5</b>	<b>5</b>	<b>-2</b>	<b>-17</b>	<b>-9</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>0</b>

※ The above data for 2022 1Q is based on unaudited financial statements.

※ The exchange rate is as of March 31<sup>st</sup>, 2022.

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# Company & Business Introduction

## [Company Introduction]

<u>Company Name</u>	Solus Advanced Materials Co., Ltd.
<u>CEO</u>	Daeje Chin & Kwangpyuk Suh
<u>Established</u>	2019. 10. 01
<u>Listed</u>	2019. 10. 18 (KOSPI)
<u>Total Assets</u>	USD 982M (As of 03. 31. 2022)
<u>Employees</u>	1,104 (As of 03. 31. 2022)
<u>Based</u>	627 Seodong-ro, Iksan-si, Jeollabuk-do
- <u>Battery Copper Foil</u>	Hungary, Canada (R&D/Production/Sales)
- <u>Copper Foil</u>	Luxembourg (R&D/Production/Sales)
- <u>Bio</u>	Yongin (R&D/Sales), Iksan (Production)
- <u>OLED</u>	Yongin (R&D/Sales), Iksan (Production), China (Production/Sales)

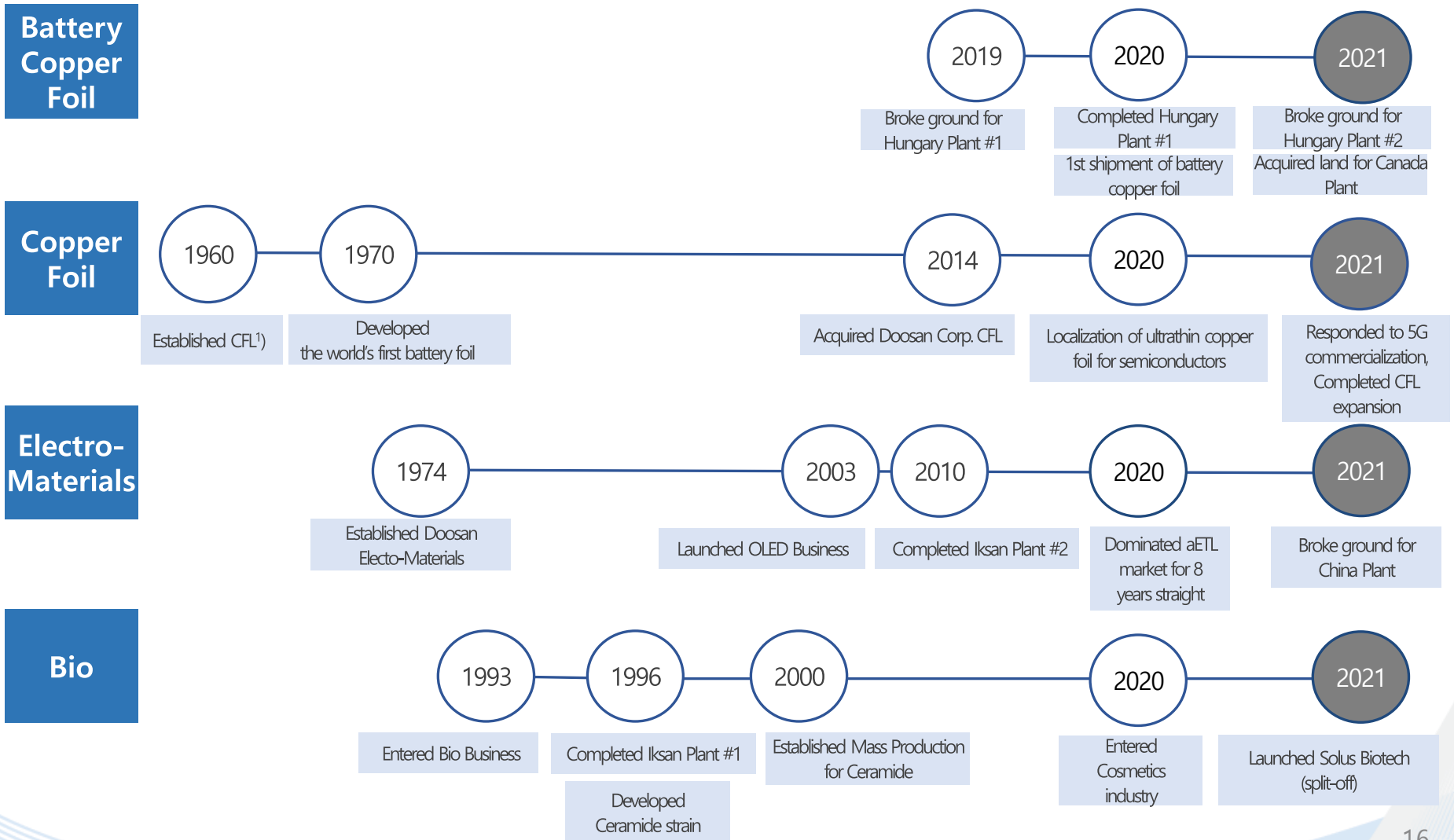
## [Business Introduction]

 Battery Copper Foil Division	<b>Battery Copper Foil</b>	Copper foil for EV batteries	
	<b>Copper Foil</b>	Copper foil for 5G Networks & electronic devices (PCB)	
 Advanced Materials Division	<b>Electro- Materials</b>	OLED and display materials for smartphone, TV, laptop, etc.	
	<b>Bio</b>	Natural-based materials for cosmeceutical, pharmaceutical and nutraceutical	

※ The above data for 'Total Assets' (as of end of Mar '22) is based on unaudited financial statements.

# History

Business expansion & growth into global no.1 material company with over 60 years of experience & knowhows



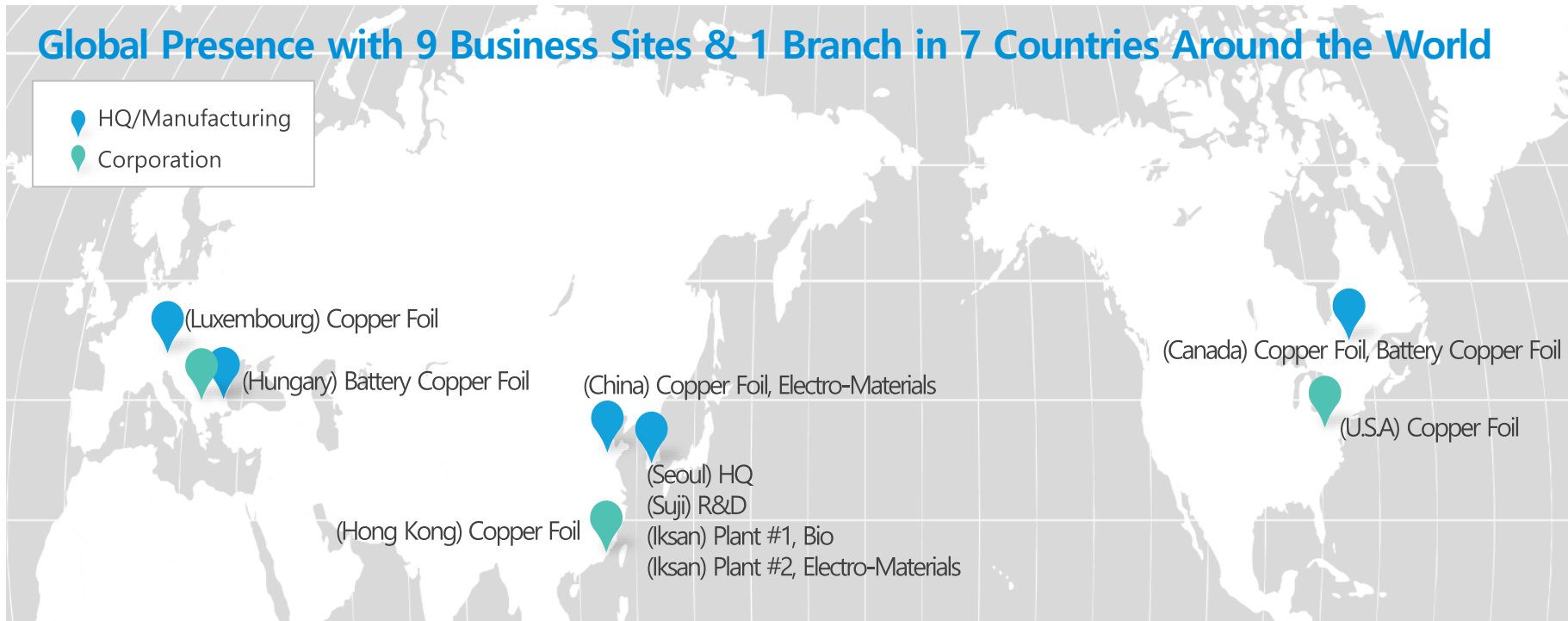
1) Circuit Foil Luxembourg



# Business Sites

## Global Presence with 9 Business Sites & 1 Branch in 7 Countries Around the World

- HQ/Manufacturing
- Corporation



Iksan, Korea (OLED & Bio)



Hungary (Battery Copper Foil)



Luxembourg (Copper Foil)

# Domestic & Overseas Corporations

## Solus Advanced Materials Co., Ltd.

### Volta Energy Solutions S.a.r.l. (LUX)

#### Copper Foil

Circuit Foil Luxembourg  
(Luxembourg)

CFT\* (U.S.A)

CFAPZH\* (China)

CFAPHK\* (Hong Kong)

Canada Branch

#### Battery Copper Foil

Volta Energy Solutions  
Europe Kft. (Hungary)

Volta Energy Solutions  
Hungary Kft. (Hungary)

Volta Energy Solutions  
Canada Inc. (Canada)

#### Electro- Materials

- R&D (Suji)
- Manufacturing & Production (Iksan)
- Manufacturing & Production (China)\*\*

#### Bio

Solus Biotech Co., Ltd.  
(Korea)

\* CFT(Circuit Foil Trading Inc.) / CFAPZH(Circuit Foil Asia Pacific Zhangjiagang) / CFAPHK(Circuit Foil Asia Pacific Hong Kong)

\*\* Solus Advanced Materials (Changshu) Co., Ltd.

# FX Rate

Items	'19.1Q	'19.2Q	'19.3Q	'19.4Q	'20.1Q	'20.2Q	'20.3Q	'20.4Q
B/S	1,137.80	1,156.80	1,201.30	1,157.80	1,222.60	1,200.70	1,173.50	1,088.00
I/S	1,124.97	1,145.78	1,161.94	1,165.46	1,193.03	1,206.70	1,200.52	1,179.96

Items	'21.1Q	'21.2Q	'21.3Q	'21.4Q	'22.1Q	2022(P)	2023(P)~ 2026(P)
B/S	1,133.50	1,130.00	1,184.90	1,185.50	1,210.80	1,150.00	1,130.00
I/S	1,113.62	1,121.33	1,157.95	1,183.14	1,204.46	1,150.00	1,130.00

- Source : First notified basic exchange rate from Hana Bank
- Source : Internal materials for projections

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