A MATERIAL SCIENCE COMPANY

Serving the semiconductor industry

(NASDAQ: AXTI)

Legal Disclosure

SEE ADDITIONAL RISK FACTORS ON FORM 10-Q AND FORM 10-K

This presentation contains forward-looking statements within the meaning of the Federal securities laws, including, for example, the progress, timing and estimated completion of the proposed listing of shares of Tongmei on the STAR Market. These forward-looking statements are based upon assumptions that are subject to uncertainties and factors relating to the company's operations and business environment, which could cause actual results to differ materially from those expressed or implied in the forward-looking statements contained in the foregoing discussion. These uncertainties and factors include but are not limited to: the requests for redemptions by private equity funds in China of investments in Tongmei, the administrative challenges in satisfying the requirements of various government agencies in China in connection with the listing of shares of Tongmei on the STAR Market, continued open access to companies to list shares on the STAR Market, investor enthusiasm for new listings of shares on the STAR Market and geopolitical tensions between China and the United States. Additional uncertainties and factors include, but are not limited to: the timing and receipt of significant orders; the cancellation of orders and return of product; emerging applications using chips or devices fabricated on our substrates; end-user acceptance of products containing chips or devices fabricated on our substrates; our ability to bring new products to market; product announcements by our competitors; the ability to control costs and improve efficiency; the ability to utilize our manufacturing capacity; product yields and their impact on gross margins; the relocation of manufacturing lines and ramping of production; possible factory shutdowns as a result of air pollution in China or COVID-19; COVID-19 or other outbreaks of a contagious disease; tariffs and other trade war issues; the financial performance of our partially owned supply chain companies; policies and regulations in China; and other factors as set forth in the company's Annual Report on Form 10-K, quarterly reports on Form 10-Q and other filings made with the Securities and Exchange Commission. Each of these factors is difficult to predict and many are beyond the company's control. The company does not undertake any obligation to update any forward-looking statement, as a result of new information, future events or otherwise.

AXT Snapshot

HISTORY
Founded in 1986; IPO in 1998

PRODUCTS
Alternative wafers when silicon will not work

PROCESS TECHNOLOGY
Pioneered Vertical Gradient Freeze (VGF) crystal growth; substantial process technology and IP

FACILITY
Headquarters in Fremont, CA

MANUFACTURING
Launched in China in 1998. Operating in three locations:

- Beijing – Indium phosphide crystal growth and wafer processing
- Kazuo – Gallium arsenide crystal growth; two raw material joint ventures: Beijing BoYu Semiconductor Vessel Craftwork Technology Co., Ltd. (“BoYu”) and Nanjing JinMei Gallium Co., Ltd. (“JinMei”) are also in Kazuo
- Dingxing – Gallium arsenide and germanium wafer processing

OPERATIONS
Sophisticated supply chain model with ownership interest in 10 raw material companies



Indium Phosphide (InP) Overview

- Growth engine ignited in 2014
- Applications using InP are expanding
- We expect a long product life cycle—mirroring GaAs

Indium Phosphide (InP) Market



KEY APPLICATIONS

- Data center connectivity (Silicon photonics)
- Passive Optical Networks (PONs)
- 5G telecommunications infrastructure
- Emerging market for medical sensors
- Upside – 5G mobile devices
- Upside – driverless cars



MARKET DYNAMICS

- Strong barriers to entry
  - Crystal growth very difficult due to two key variables
  - Customer spec-driven market
- Three leading suppliers:
- AXT, Sumitomo, and Japan Energy
- AXT is strategically adding capacity



Gallium Arsenide (GaAs) Overview

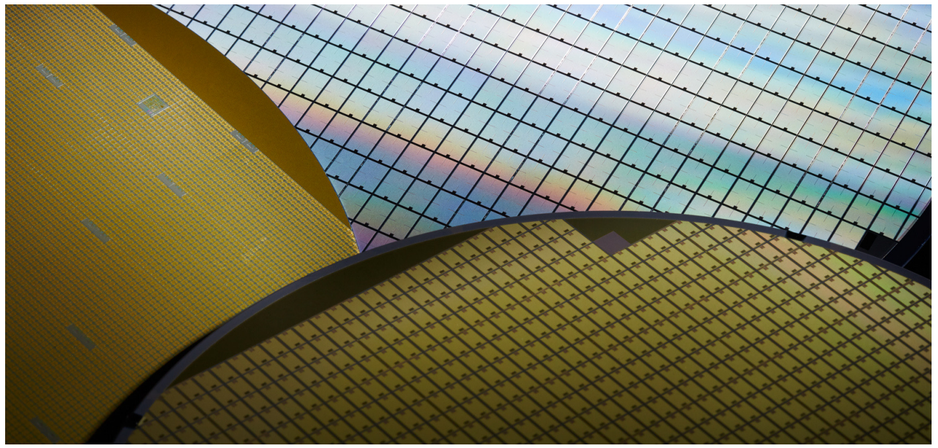
- Our first strong growth engine, even before our IPO in 1998
- A long product life cycle populated with new applications
- Supplied first 8-inch gallium arsenide wafers to major customer in April 2021

Gallium Arsenide (GaAs) Market



KEY APPLICATIONS

- LED lighting
- Industrial lasers
- Printer heads
- Power amplifiers
- 3-D sensing
- MicroLEDs



MARKET DYNAMICS

- Market pushes wafer size
- Tier-one requires very low defect density
- Consumer applications mean high volume
- GaAs not going away, keeps re-inventing itself
- New opportunities developing
- Limited competitive landscape



Germanium (Ge) Overview

- A single element wafer i.e. just Germanium

- Primary application is satellite solar cells:
  - Multi-junction solar cells
  - Weather, environmental, communication

Germanium (Ge) Market



MARKET DYNAMICS

- Satellites increasingly in the news
- Satellite solar cell market increasing
- Difficult to make house calls
- Difficult for customer to change supplier
- AXT has strong relationships with multiple leading customers

Sophisticated Supply Chain



- Ownership interest in ten raw material companies in China
- Merged the two crown jewels into Beijing Tongmei Xtal Technology Co., Ltd. (“Tongmei”)
- Direct visibility and influence in these markets
- Favorable cost/pricing
- A risk minimization strategy if supply shortages occur
- On the boards of all ten raw material companies
- AXT is uniquely positioned to secure key materials
- Tier 1 customers attracted to this structure

Financials

($ in M)	2022	2021	2020	2019	2018	2017
	FY	FY	FY	FY	FY	FY
Revenue	$141.10	$137.40	$95.40	$83.30	$102.40	$98.70
Non-GAAP Gross Margin %*	36.93%	34.51%	31.75%	29.82%	36.18%	34.90%
Non-GAAP Op Expense*	$39.60	$34.50	$26.33	$25.10	$24.90	$21.80
Non-GAAP Net Profit/(Loss)*	$15.80	$14.58	$3.24	($2.60)	$9.70	$10.10

*See our financial statements for GAAP to Non-GAAP reconciliation

Summary of the STAR Market Process

- Announced intention in November 2020 to seek capital by listing Tongmei to IPO in China
- Separate listing of Tongmei, no change regarding the current Nasdaq listing of AXTI
- Tongmei's IPO application was formally accepted for review by the Shanghai Stock Exchange ("SSE") in January 2022
- The SSE approved the application in July 2022
- The application is now being reviewed by the China Securities Regulatory Commission ("CSRC")
- If approved, the next stage in this process is to conduct a series of one-on-one meetings with interested investment funds in China and assess the level of interest
- Once the meetings are concluded Tongmei's investment banker could request a listing date to begin trading
- We hope to receive CSRC approval in the coming months.

Ownership of Tongmei

- AXT currently owns approximately 85.5% of Tongmei
- An additional 10% will be sold if the IPO is approved
- AXT would then own approximately 77% of Tongmei

Benefits to Key Shareholders

- **AXT shareholders**
  - Attractive balance sheet, minimal dilution
  - Displays and leverages/unlocks China assets
  - Strengthens AXT's business development positioning

- **Our customers**
  - Increases confidence in our ability to scale up
  - Confirms our commitment to their projects and to winning their business

- **Our employees**
  - Creates excitement, pride and financial opportunity
  - Strengthens retention, motivation and commitment to excellence



AXT Market Opportunity

- New facilities, equipment and capacity
- Selling into major long-term technology trends: data center expansion, 5G, LED lighting and display, laser-based sensing, medical applications, and more
- Limited competitive landscape
- Market-leading InP technology with high barriers to entry
- Proprietary process technology, barriers to entry
- Access to both China and U.S. capital, U.S. quality standards; China cost structure
- The only player to have a position in raw materials
- Markets and business fundamentals look good
- STAR Market listing can finance more growth and capacity


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Thank You