

avantor™ 

VWR® 

avantor 

# Agenda

1. Company briefing profile
2. Asia technology center capability

# Company Profile – Corporate Evolution

## A Foundation of Excellence



In 1904, John Townsend Baker founded the J.T.Baker® Chemical Company with a mission to produce chemicals of the "highest degree of purity commercially available."

### J.T.Baker® brand

#### Legacy of performance

- First to include lab results listing trace impurity levels on labels
- Used to manufacture munitions and medicines during **WWI**
- **ULTREX** brand phosphorous pentoxide was used by scientists to study and analyze lunar samples from the **Apollo 11 mission**

- 1904 — J.T. Baker Chemical Company founded
- 1941 — Acquired by Vick Chemical Company
- 1985 — Acquired by Proctor & Gamble
- 1995 — Acquisition of Mallinckrodt; company renamed Mallinckrodt Baker
- 2010 — Acquired by New Mountain Capital
- 2011 — Renamed Avantor Performance Materials
- 2011 — Acquisitions of POCH, S.A. (Poland) and RFCL Limited (India)
- 2013 — Global Footprint Optimization and cGMP enhancements position Avantor for future growth
- 2016 — Acquisitions of Nusil
- 2017 — **Avantor & VWR acquisition**



# Global Capabilities



- cGMP manufacturing in three regions: U.S., Europe, India
- Four cGMP manufacturing facilities
- Research & Applications facilities in the U.S., India and Taiwan
- Global sales and support
- Distribution network covers 80+ countries



# Global Manufacturing Footprint

## Phillipsburg, US

- Manufacturing, packaging and distribution of multiple grades of high-purity solvents, acids, salts and bonded phase products
- ISO 9001 and 14001 certified; FDA registered

## Gliwice, Poland

- Manufacturing, packaging and subdivision of pharmaceutical and biopharmaceutical intermediates, analytical reagents, organic and inorganic compounds, laboratory chemicals and reagents for food and beverage.
- ISO 9001 and 13485 certified; FAMI QS and AQAP certified

## Paris, US

- Manufacturing, packaging and distribution of multiple grades of high-purity solvents, acids, salts and bonded phase products
- ISO 9001 certified; FDA registered

## Mexico City, Mexico

- Manufacturing, packaging and distribution of multiple grades of solvents, acids and salts
- ISO 9001 certified

## Dehradun, India

- Manufacturing, packaging and distribution of diagnostic materials and kits
- GMP certified with local FDA; CE certification for hematology products

## Panoli, India

- Manufacturing, packaging and subdivision of chemical excipients, biopharmaceutical materials and high-purity solvents
- ISO 9001 certified and Indian FDA approved manufacturing facility

avantora

# Taiwan Technology Center “Collaboratory”



# Collaboratory = Fast Response to Customer

- Build up World Class Research and Application Lab

**Solve customer's concern:**  
Wafer & Process confidential

**Solve Q-time issue:**  
Minimize Q-time impact

**Solve cycle time issue:**  
Meet customer's need

**We can be customer's virtual fab to create win-win situation!**





## Infrastructure

Class 100 Clean Room

Class 10 Chemical manufacture

## Application

- 12" wafer process & analysis
- Chemical blending system in the class 10 clean environment
- N5 node chemical manufacture



# Taiwan “Collaboratory” Equipment List

Equipment	Purpose	Supplier/Model
Process tool	Process optimization on-tool optimization	
Single Spin Tool	<ul style="list-style-type: none"> <li>• Process simulation/ full loop wafer demo</li> <li>• Chemical live demo</li> </ul>	SEZ ( LAM) SP 305
Wet Bench Tool	<ul style="list-style-type: none"> <li>• Process simulation</li> <li>• Chemical live demo</li> </ul>	GPTC
Particle Counter	<ul style="list-style-type: none"> <li>• Particle defect verification</li> <li>• Meet advanced tech. node requirement</li> </ul>	KLA/ SP2
Analysis tool	Analysis of chemical component	
XRF	<ul style="list-style-type: none"> <li>• Ultra-thin film thickness measurement</li> <li>• High-k material measurement</li> </ul>	Rigaku/ ZSX-400
SEM/EDX	<ul style="list-style-type: none"> <li>• Surface &amp; material analysis</li> <li>• Wafer performance check</li> </ul>	Hitachi/SU 8040
Optical Microscope	<ul style="list-style-type: none"> <li>• Surface morphology analysis</li> </ul>	Olympus /STM6
GC	<ul style="list-style-type: none"> <li>• Chemical component analysis</li> </ul>	Agilent / Model 6850
Ellipsometer	<ul style="list-style-type: none"> <li>• Low-k film thickness measurement</li> </ul>	Mikropack/SpecEL-2000-VIS
Titrand	<ul style="list-style-type: none"> <li>• Chemical component analysis</li> </ul>	Metrom
LPC	<ul style="list-style-type: none"> <li>• Liquid particle analysis</li> </ul>	Rion KS-42BF/ KS-19F