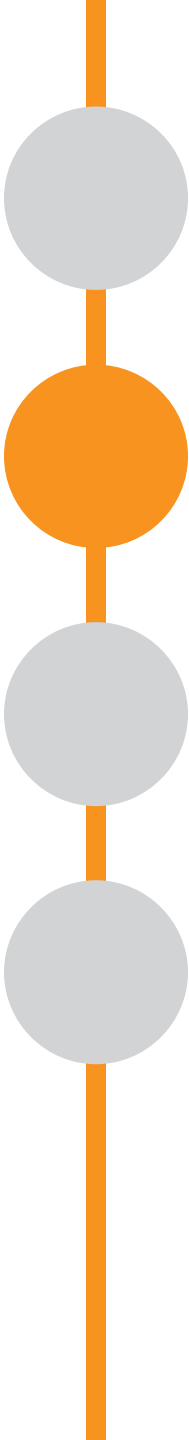




(주)아메드 연구소장 박태규



Total One Stop Foundry Service

Total One Stop Foundry Service

Si, Glass, Plastic Chip for Biochips & μ -Fluidic Chip

1

Foundry Service

Total One-stop Service
Precision Processing Service
Consulting for Chip Manufacturing
Measurement & Analysis

+

2

μ -Chip Platform

Plasma Surface Treatment
Micro Flow Control System
Chip Connector
 μ -Chip

+

3

Education / Development

Process Education
 μ -Chip Starter Education
R&D Support & Consulting
Consortium

	Service items		
Photolitho.	Photomask	Mask Design & Drawing	Dwg, Dxf, GDSII format
		Mask Fabrication	Film Mask, Cr Mask
	Photolitho.	Positive Pattern	AZ GXR601, AZ9260, AZ4330 KL6000, K-Pro
		Negative Pattern	DNR 30B SU-8 Series(2005,2010,2025,2050,2100) AR-N Series JSR 151N
		Lift off Pattern	AZ 5214E, AZ nLOF
		Dry Film Pattern	MS7050, MS7100
Etch	Wet Etch	Si(TMAH, KOH), SiO ₂ , Borofloat, Quartz, SiN _x , a-Si etc.,	
		Metal : Cr, Ti, Au, Al, Cu, Ni	
	Dry	Si , SiO ₂ , SiN _x , Poly-si, a-Si, ITO, Quartz TiO ₂ , GaN, TaN etc. Metal : Cr, Ti, Au, Al etc., Polimide, Polymer, Parylene	

	Service items	
Depo. & Growth	Thermal Oxidation	SiO ₂ (Dry & Wet)
	LPCVD	SiO ₂ , SiN _x , Poly-Si, a-Si
	PECVD	SiO ₂ , SiN _x
	E-beam. Evaporation	Cr, Al, Ti, Ni, Au, Pt, Mo, Cu, ITO etc.,
	Sputter	Cr, Al, Ti, Ni, Au, Pt, Cu, ITO etc.,
	Electroplating	Ni, Cu
	Micellaneous	ALD, Parylene
Bonding & Packaging	Anodic bonding / Fusion Bonding / Eutectic Bonding / Thermo-Compressed Bonding Plasma Treated Bonding / UV Bonding / Wire bonding	
Metrology	Microscope / Surface Profiler / Confocal Microscope / SEM(FESEM) / FIB	
Micellaneous	PDMS Chip / Plastic Chip (injection molding) Chip Dicing / substrate thinning(Lapping & CMP) / Hole (Sand blasting) Surface Modification (Hydrophobic / Hydrophilic)	

Bio - Microfluidics

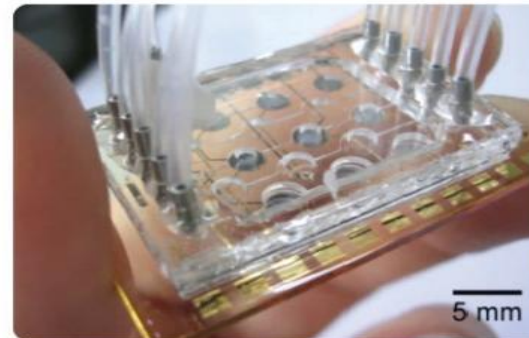
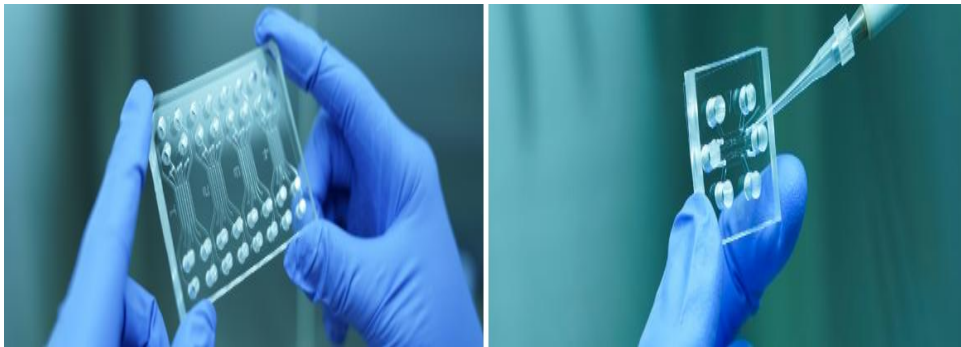
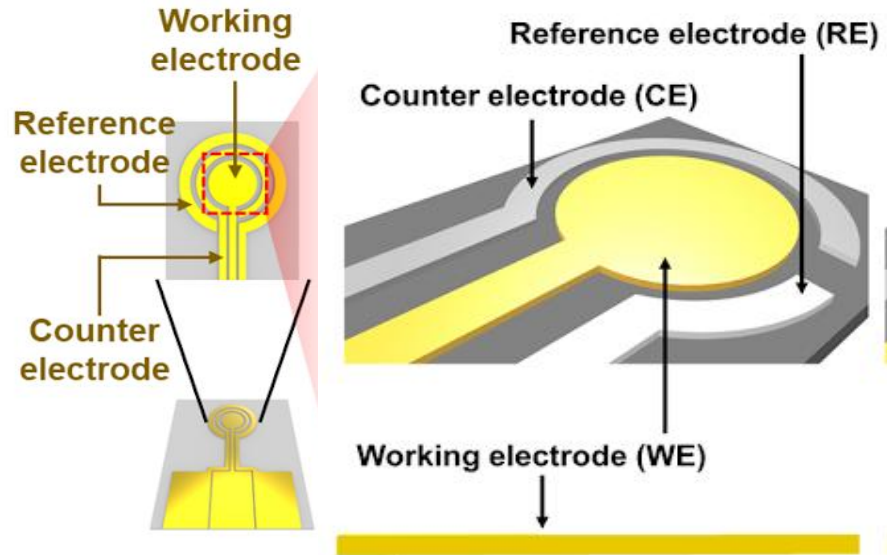
- SU-8 based Microfluidic Chip
- Si or Glass wafer based Microfluidic Chip
- Plastic based Microfluidic Chip
- SOG(Si on Glass) wafer based Microfluidic Chip
- Droplet generation Chip
- Cell Counter Chip
- Acoustic Microfluidic Chip
- MEA Chip (MicroElectrode Array)

Sensors

- Gyro-sensor
- Accelerometer
- Pressure sensor ; implantable pressure sensor, physical pressure sensor
- SAW(Surface Acoustic Wave) Sensor

Display & Optics

- ITO Glass wafer based electrode
- PI(Polyimide) based flexible device
- Microlens array

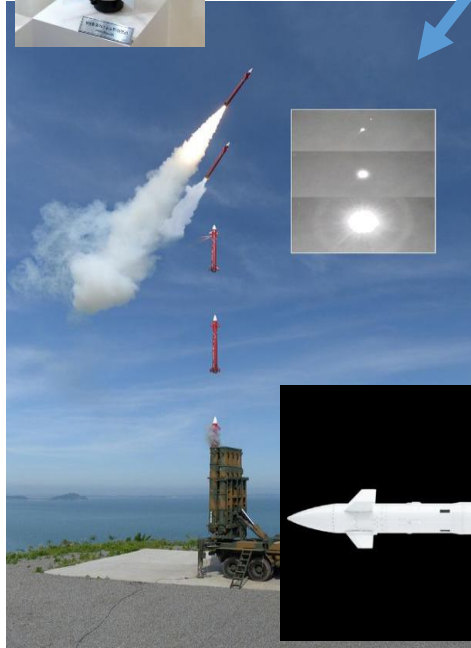
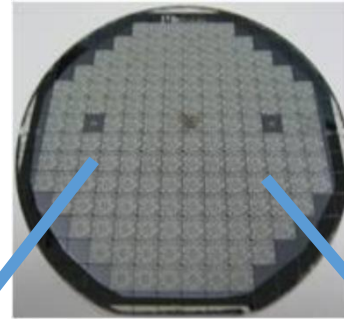
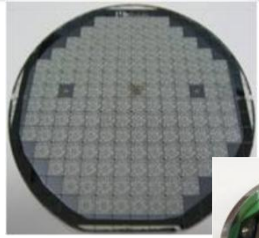


- Microfluidics
- Droplets Manipulations
- Cell & Particles
- Chemistry
- General precise flow control



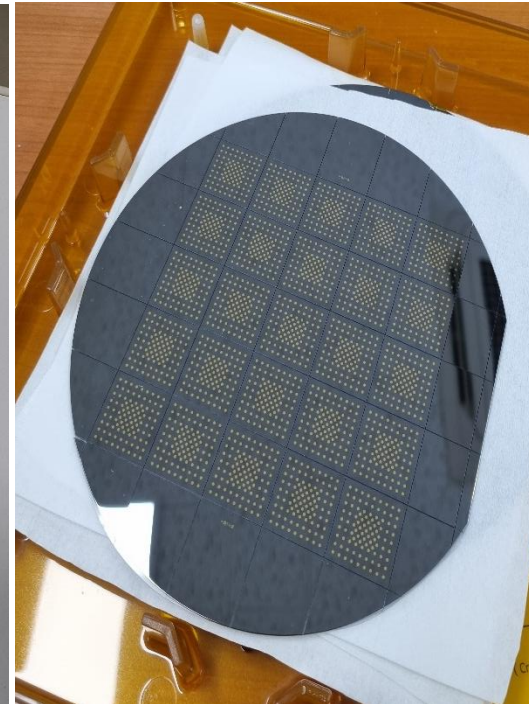
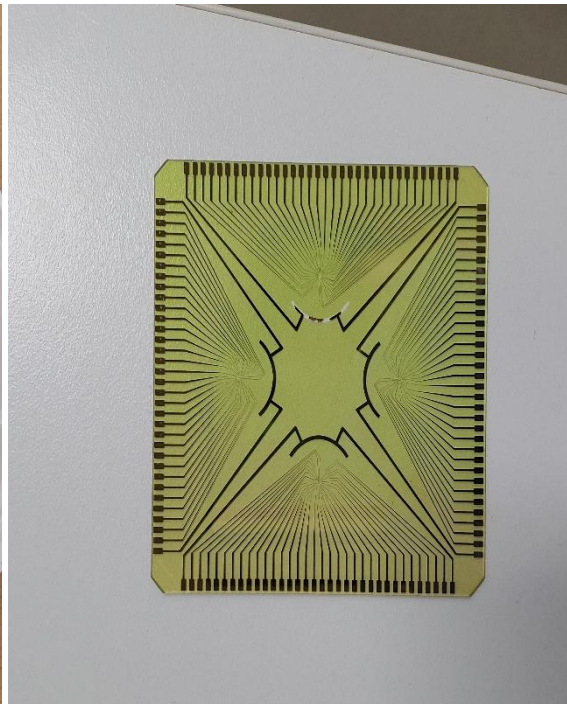
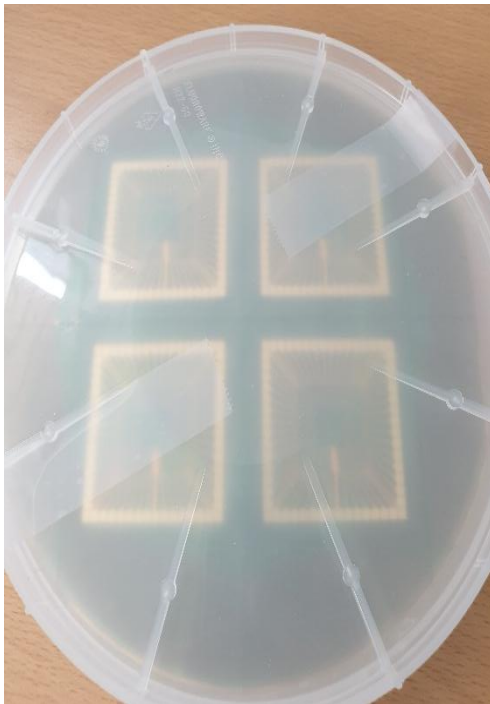
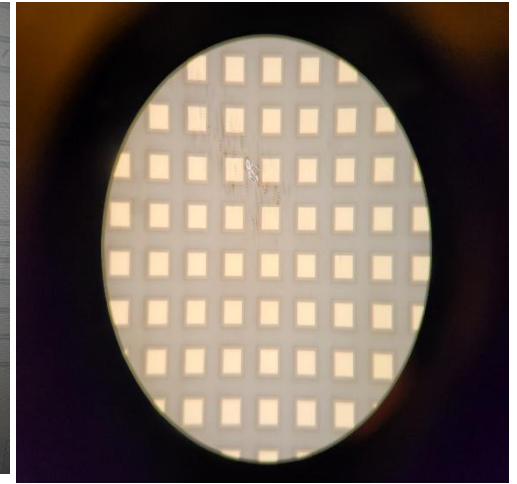
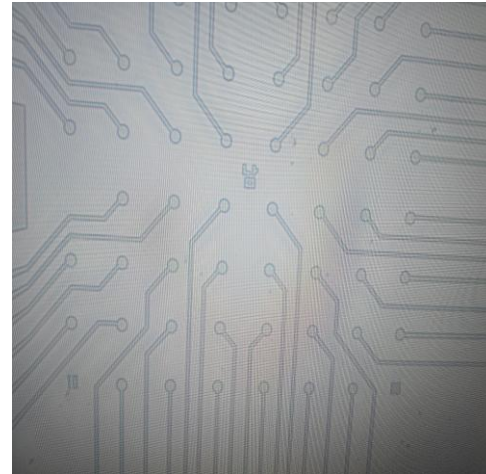
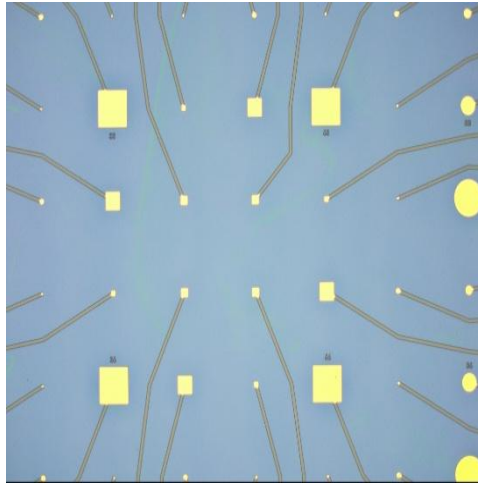
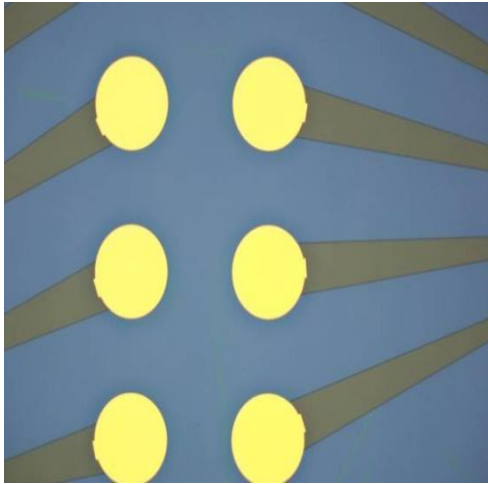
1-5₍₃₎

Applications : Foundry Services



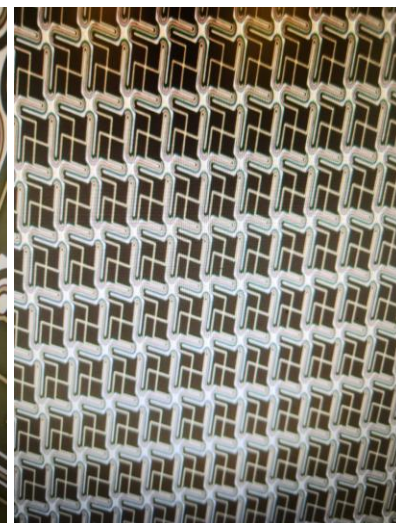
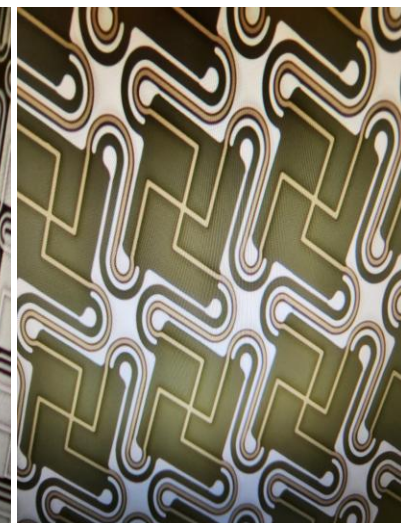
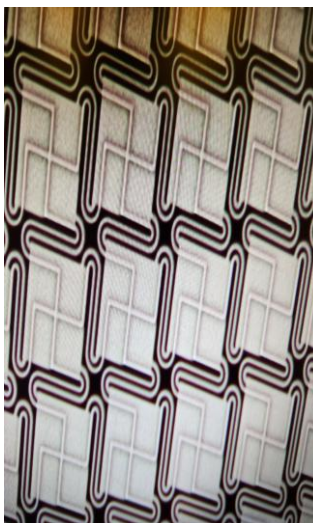
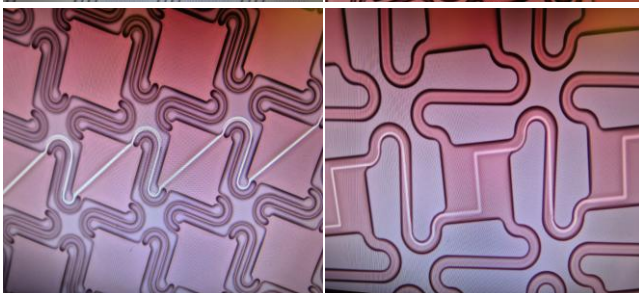
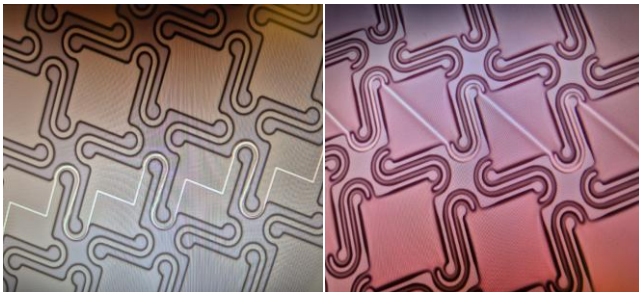
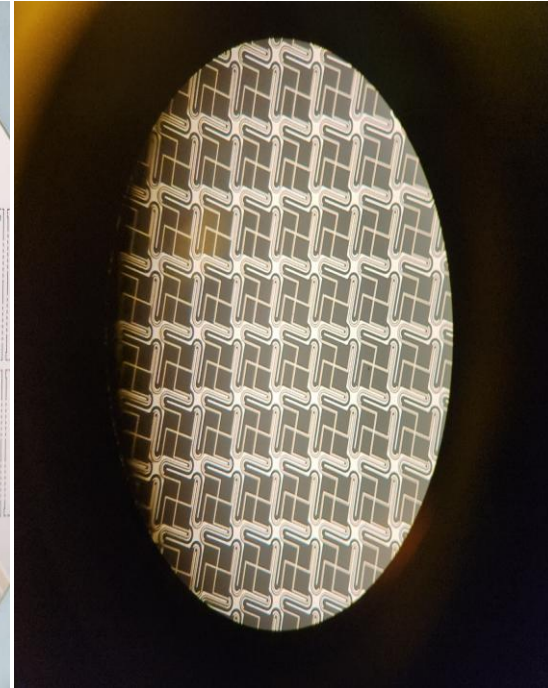
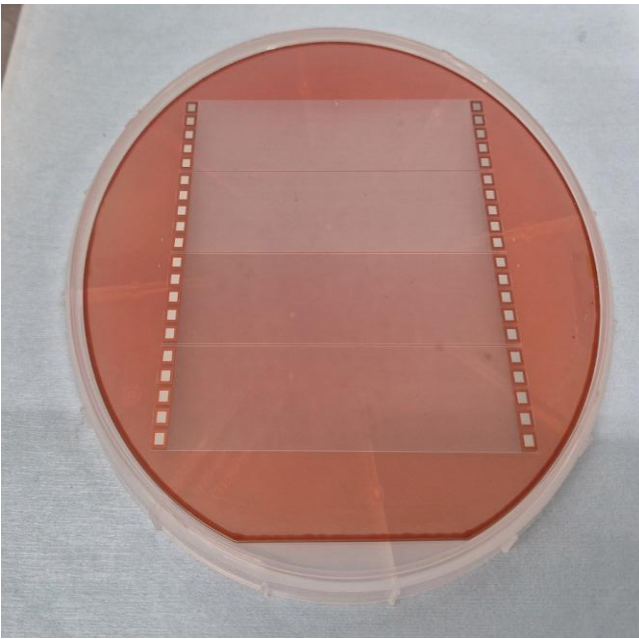
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Applications : Foundry Services



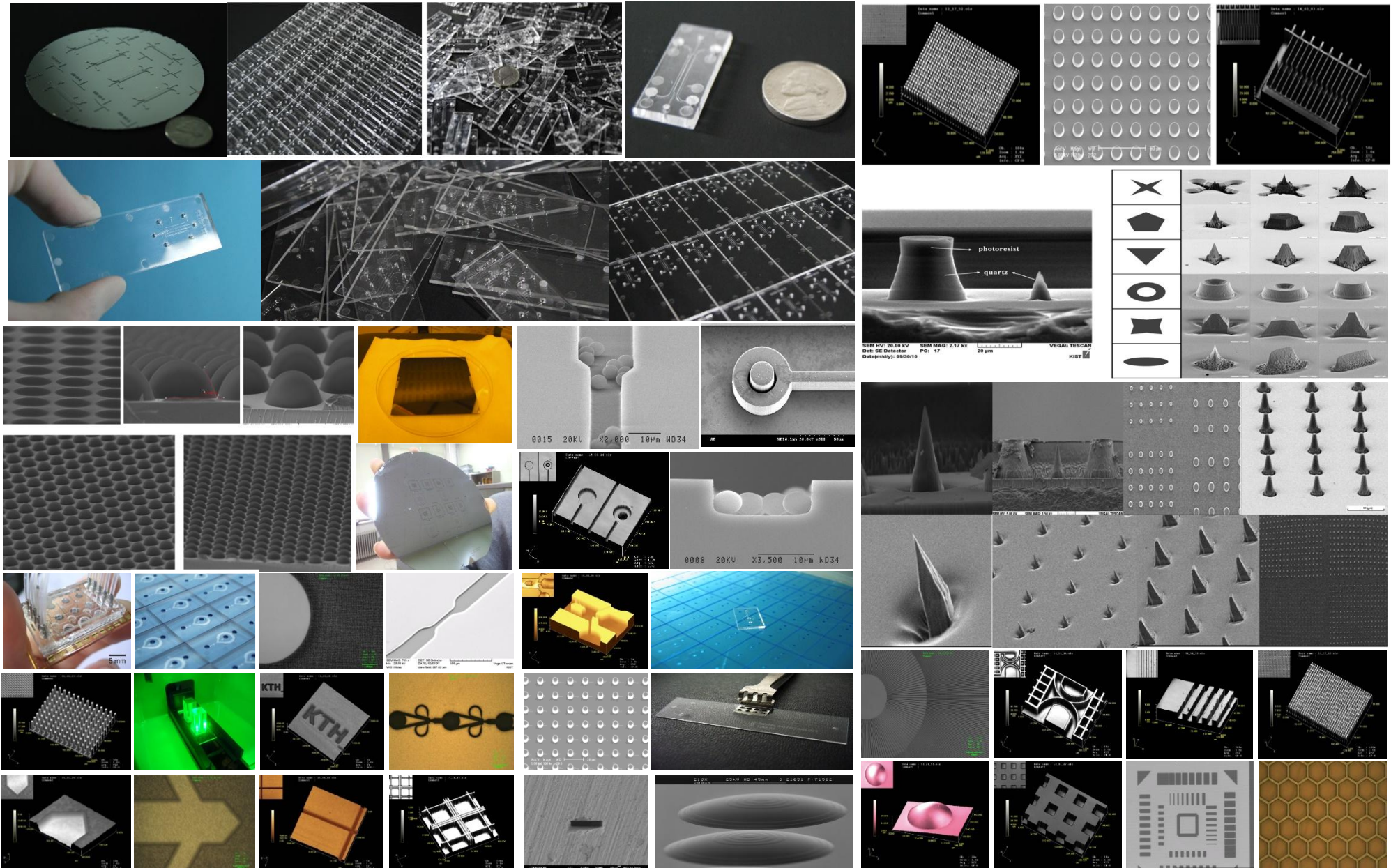
1-5⁽⁵⁾

Applications : Foundry Services



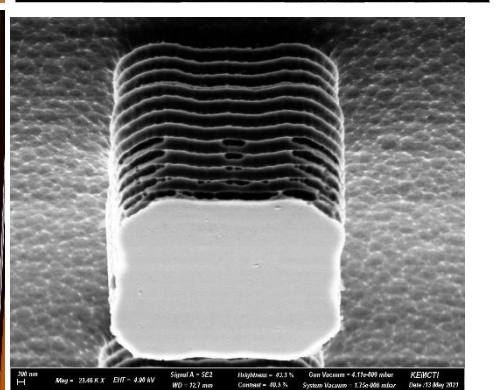
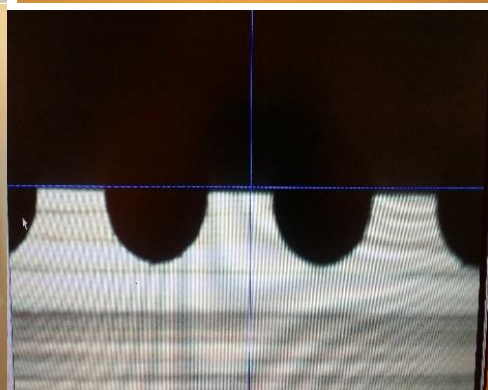
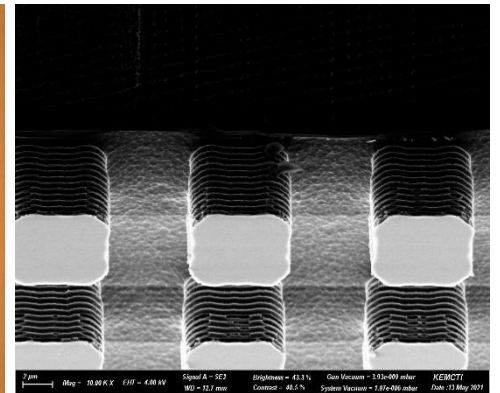
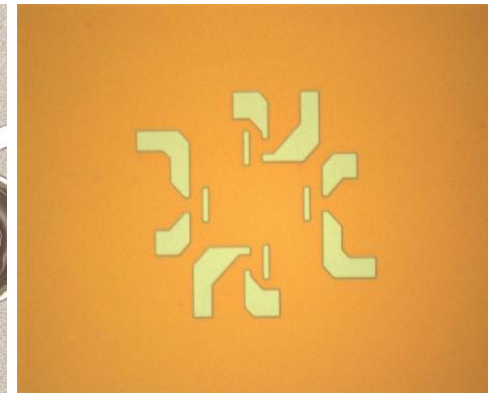
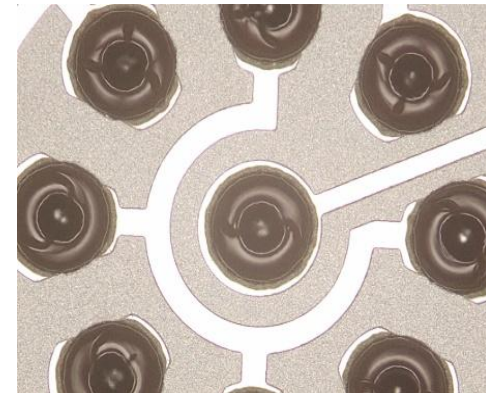
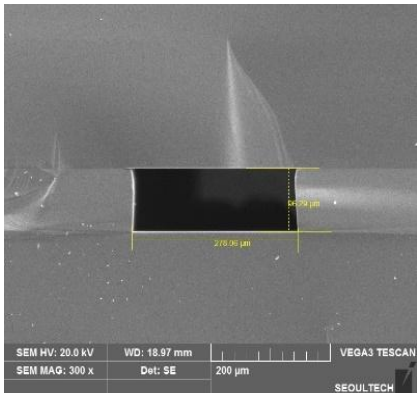
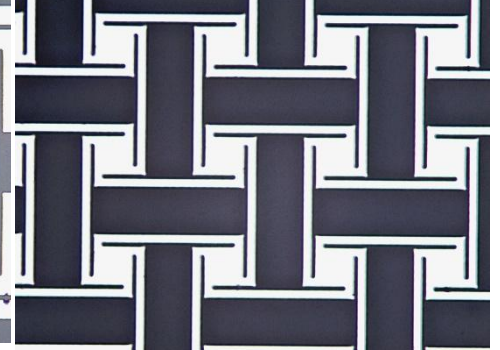
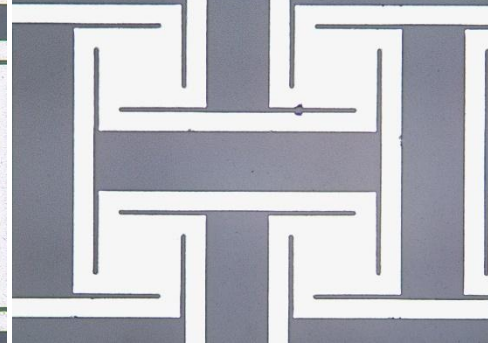
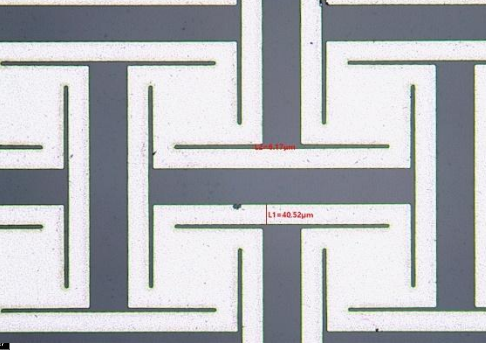
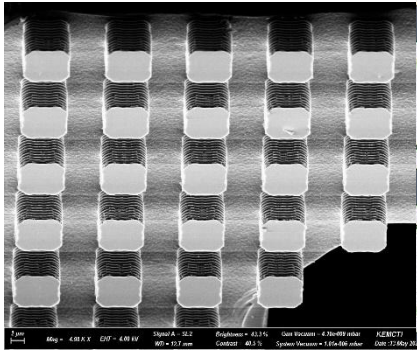
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Foundry Services



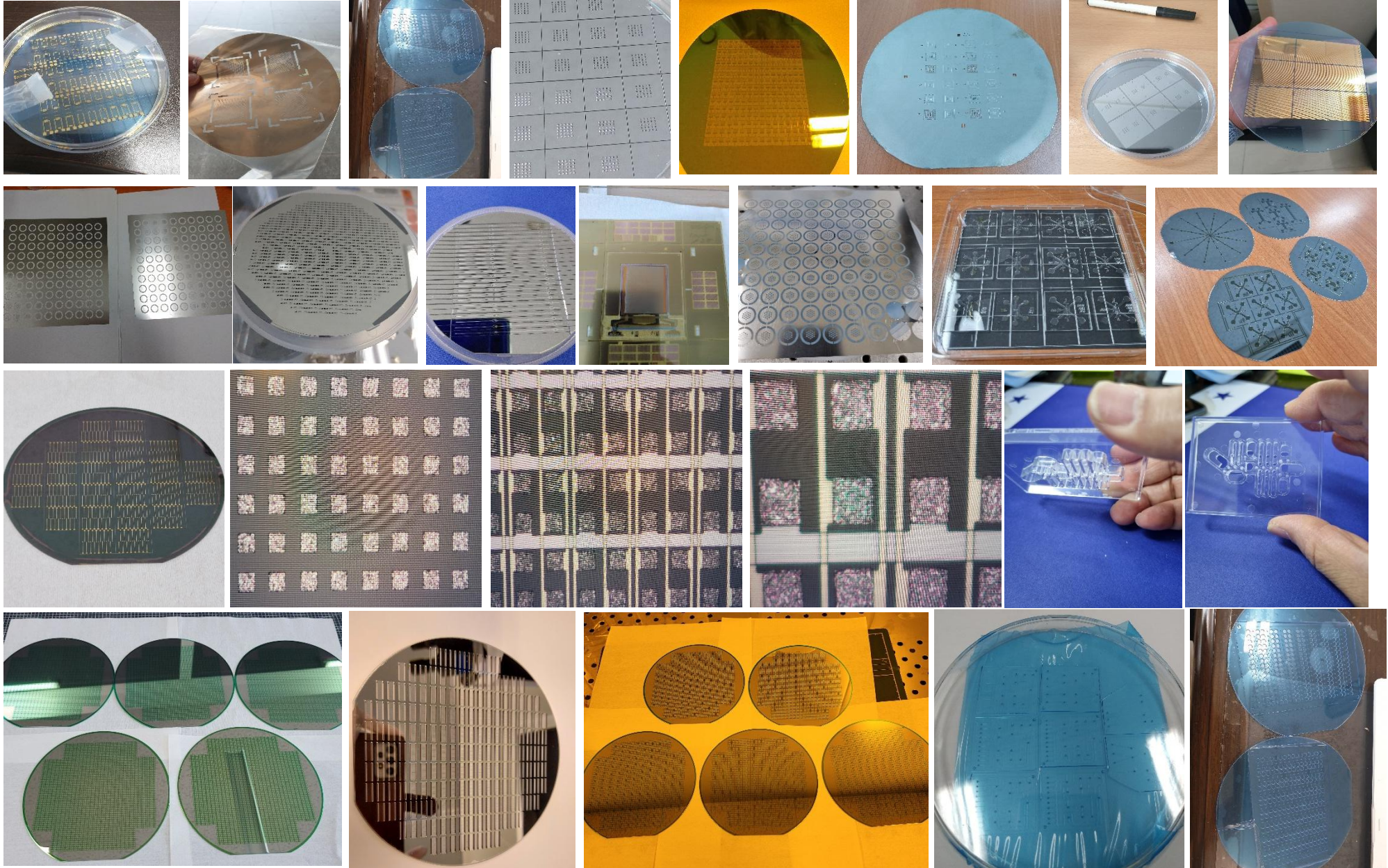
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Foundry Services



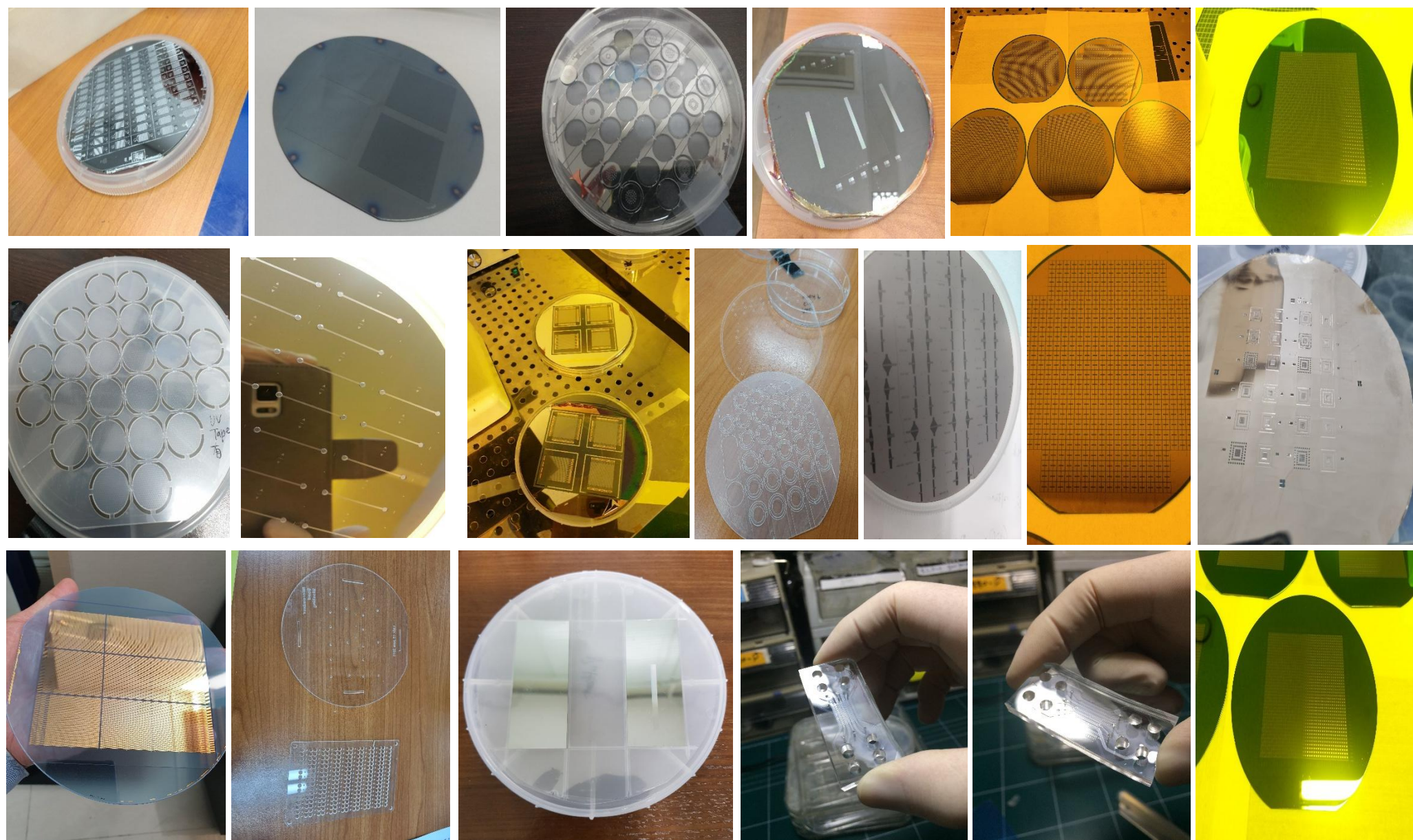
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Foundry Services



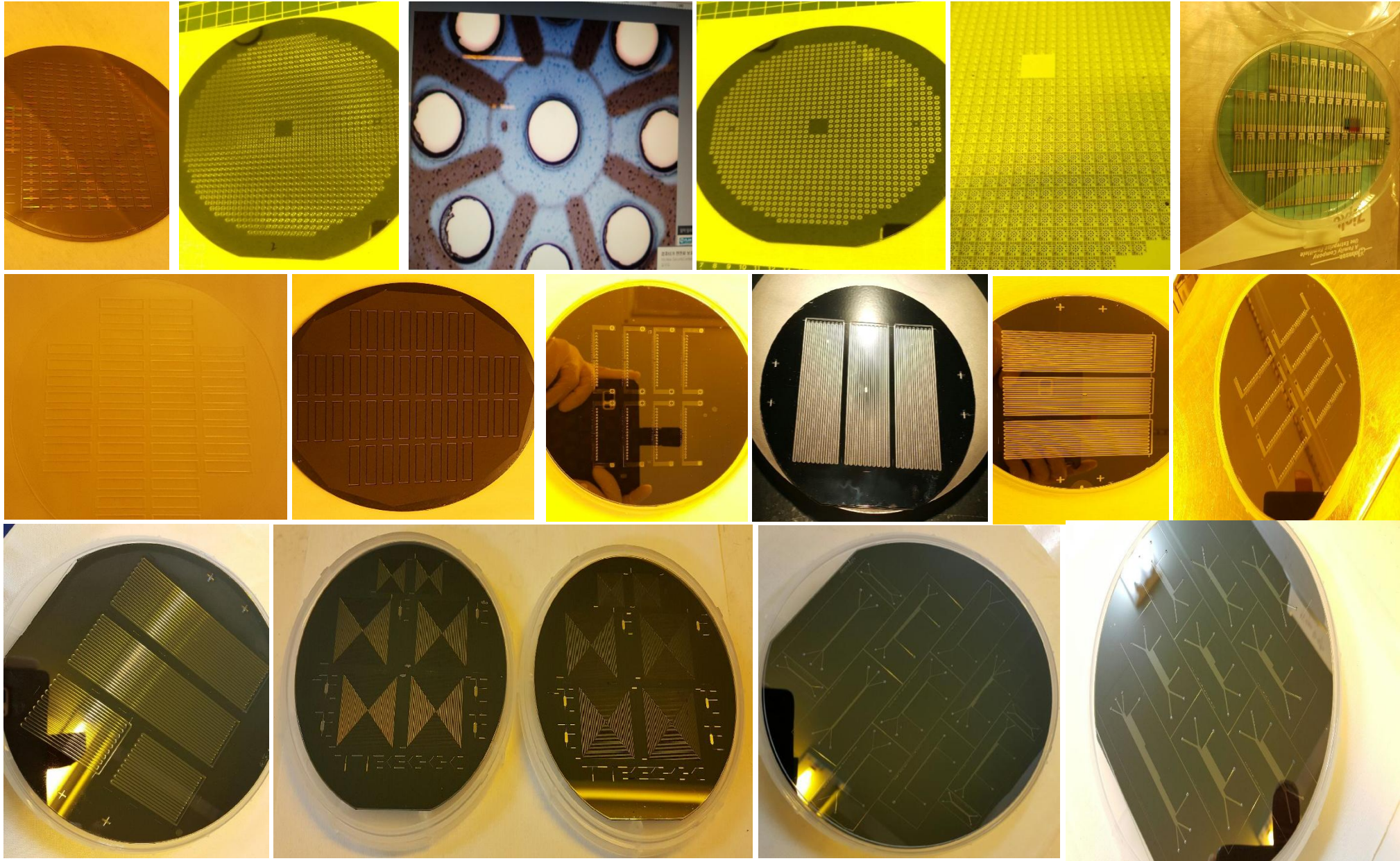
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Foundry Services



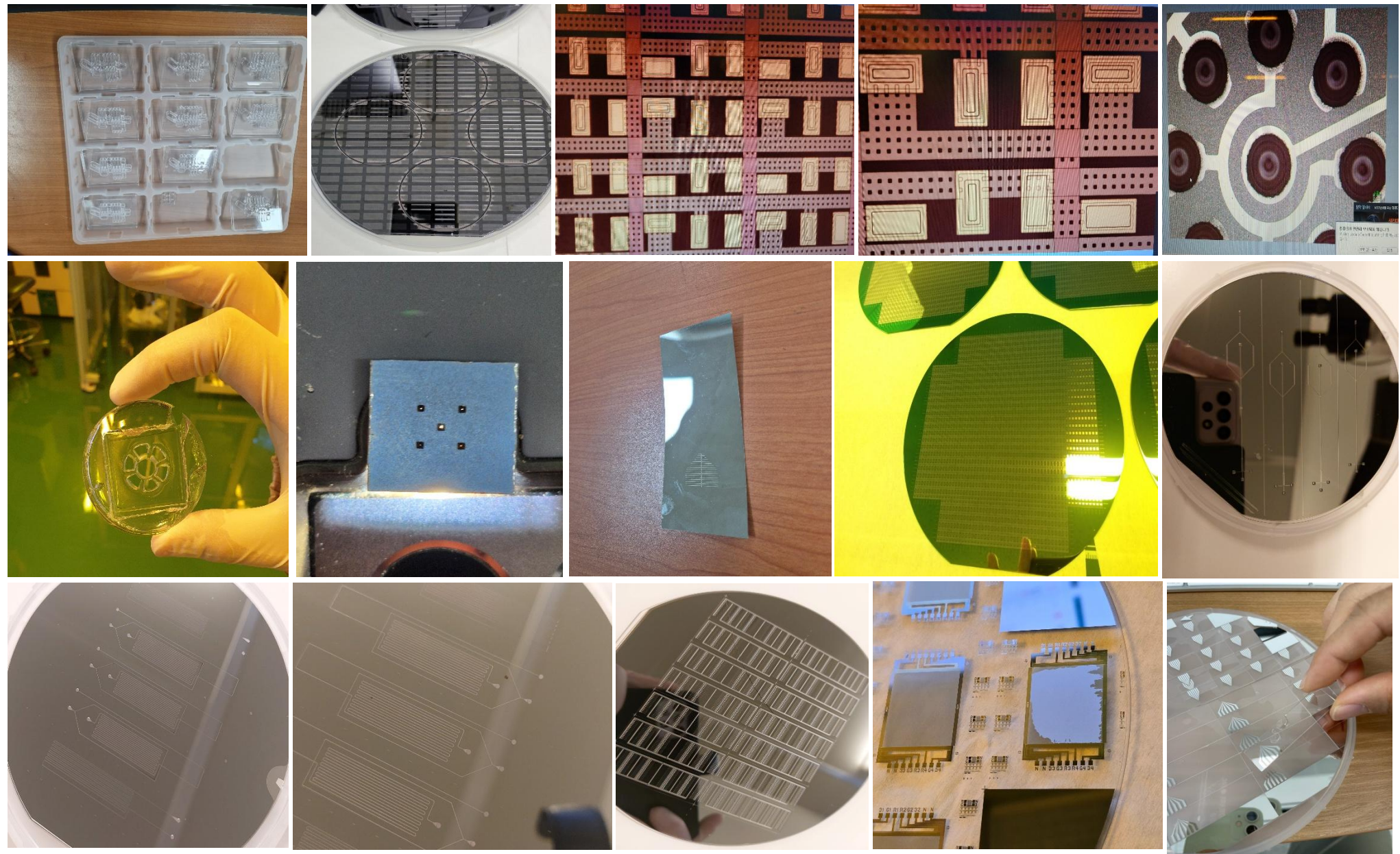
1-5₍₁₀₎

Foundry Services



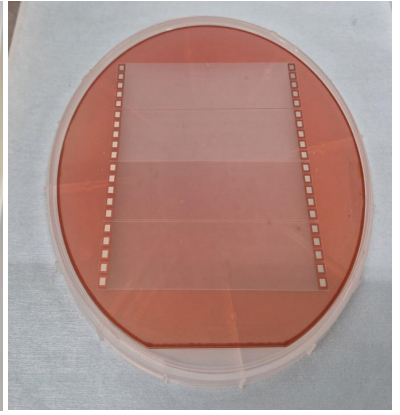
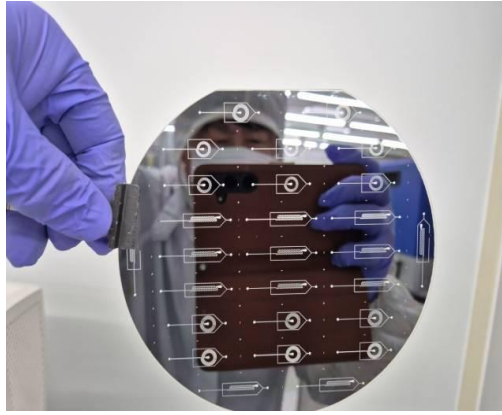
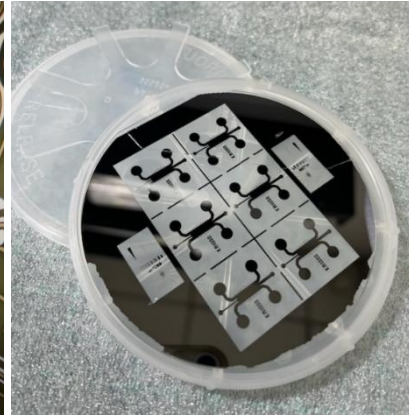
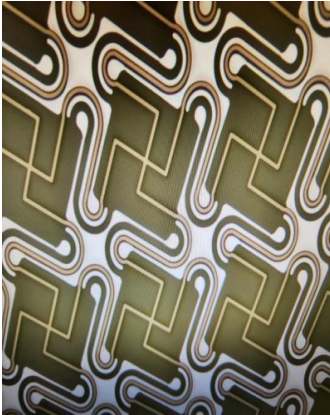
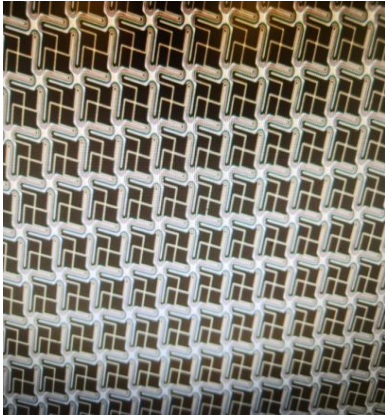
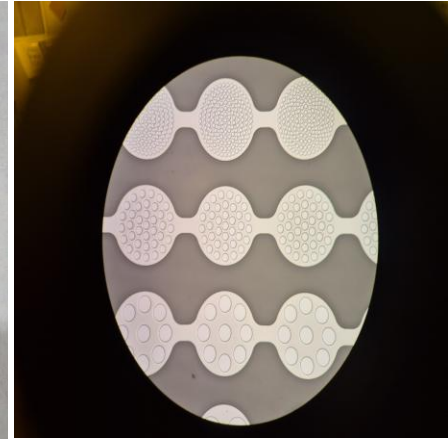
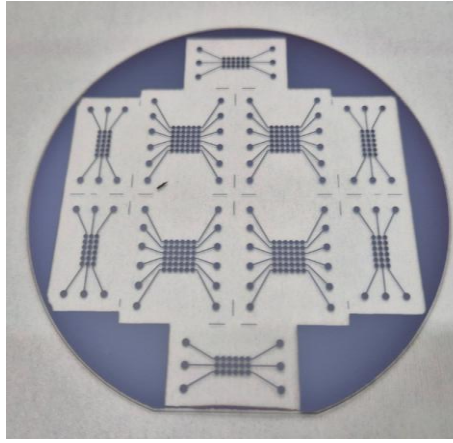
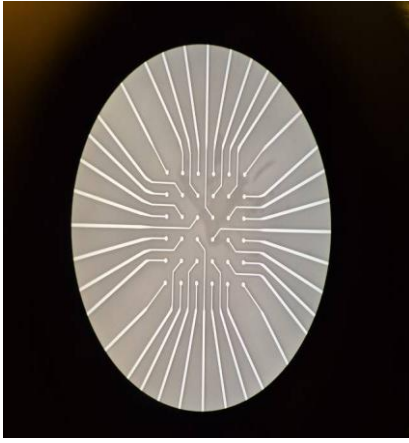
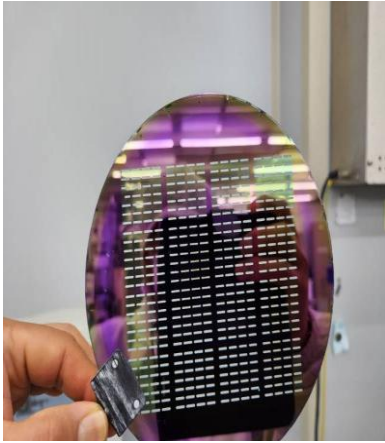
1-5₍₁₁₎

Foundry Services



1-5₍₁₂₎

Foundry Services



1-6(1)

Customers

SAMSUNG DISPLAY

ALIGNED
GENETICS

NEO NANOTECH

SAMSUNG 삼성전기

SL VIONICS

(주)에스제이컴퍼니
SJ company

LIPAC

NanoEntek

CellFE

PCL

Samsung Advanced
Institute of Technology

BIOT

Next&Bio

bitronix

JTS INDUSTRY
The righteous shining the world

THINK SMALL
SMALLMACHINES

ORANGE BIOMED

MxT Biotech
MICROFLUIDICS X THERAPY

CURIOSIS

OHC

SILICON DISPLAY
실리콘 디스플레이

Novel Microfluidic DDS Platform
Inventage Lab

VIEWWORKS

MEPSGEN

Eloi Materials
EML

en·particle
Empowering Biotech Frontiers

LabEnt LabEnt

롯데중앙연구소

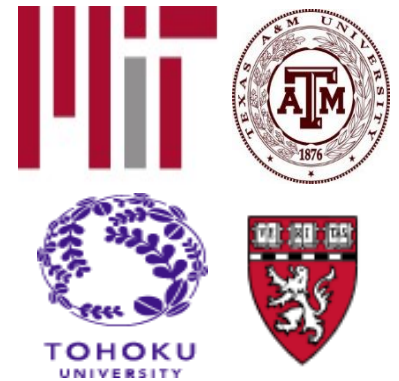
WeMEMS
Our Micro Solutions, Your Mega Innovations.

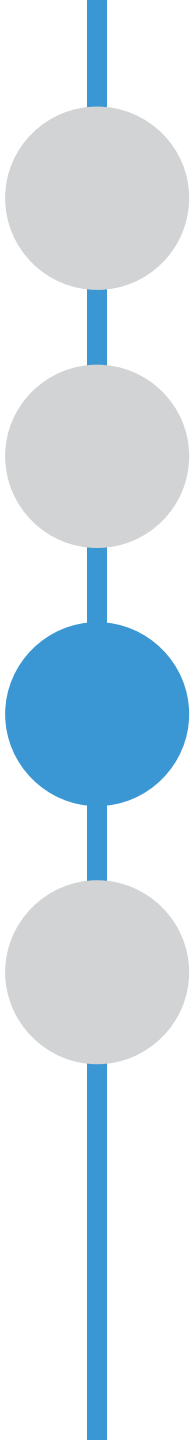
OPTOLANE
Technologies, Inc.

CJ CHEILJEDANG

OCI
mdL.
micro device Lab.





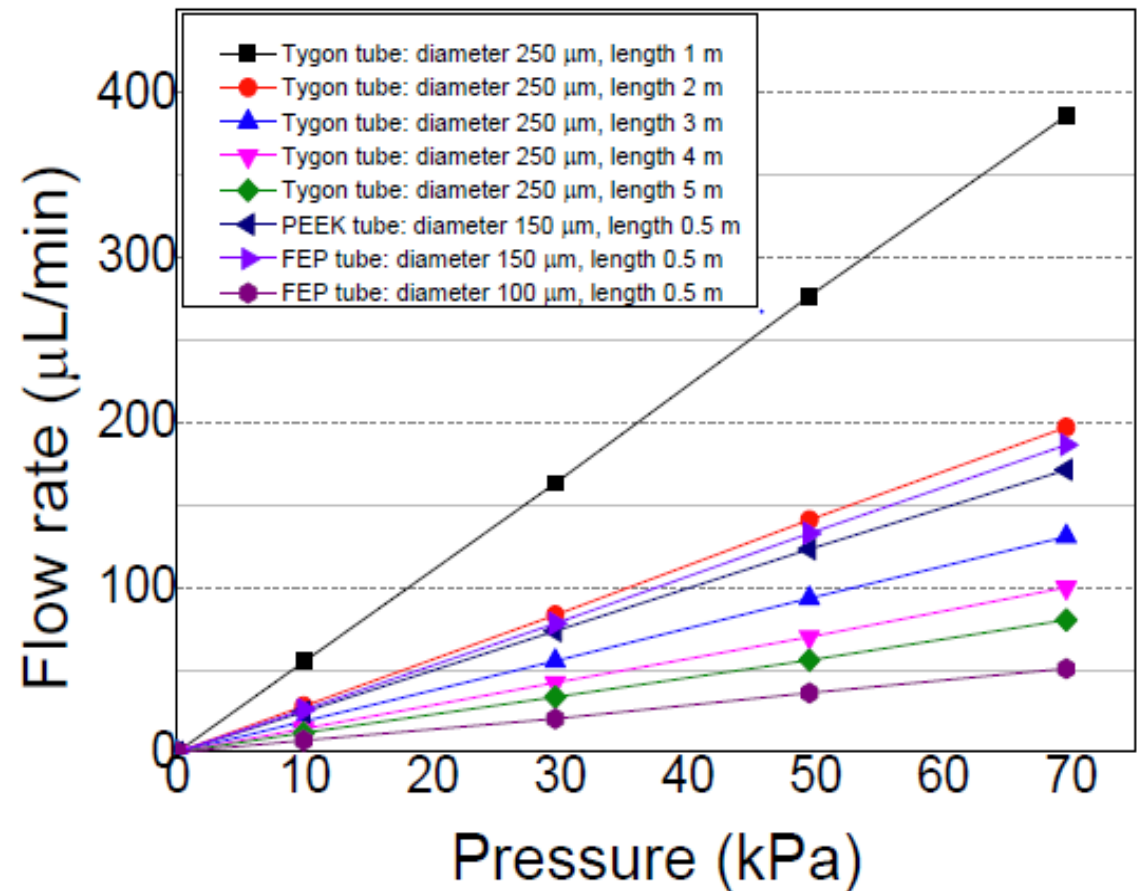


Micro Flow Control system

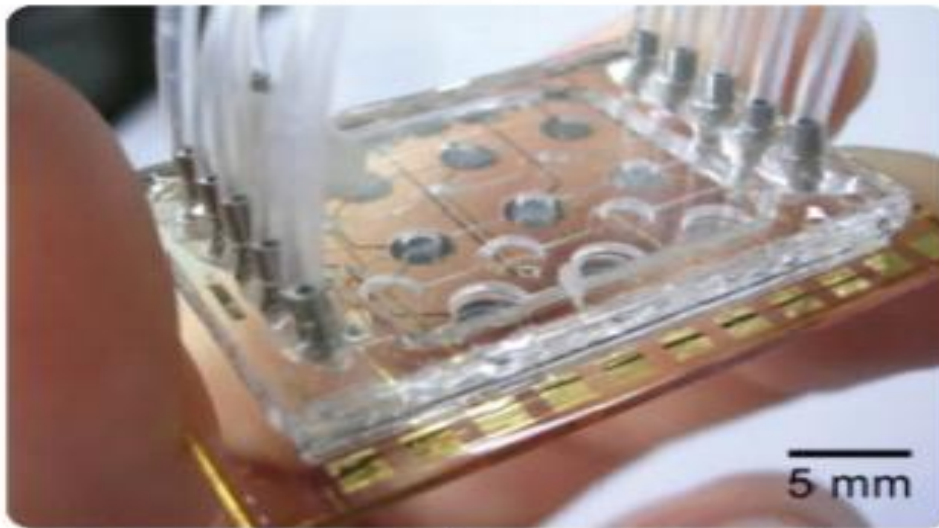
Amed- μ FluCon
Micro Fluidic Control System

Advantages of AMED- μ FluCon

- pulseless flow due to no mechanical part
- easily multichannel flow control
- fast response time & scalable digital micro flow

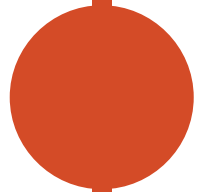
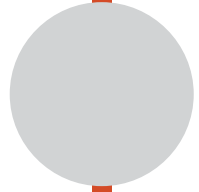
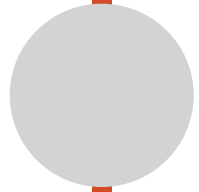
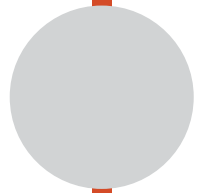


Amed- μ FluCon
Micro Fluidic Control System



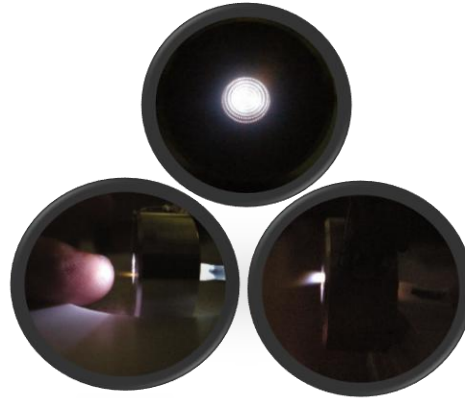
- Microfluidics
- Droplets Manipulations
- Cell & Particles
- Chemistry
- General precise flow control



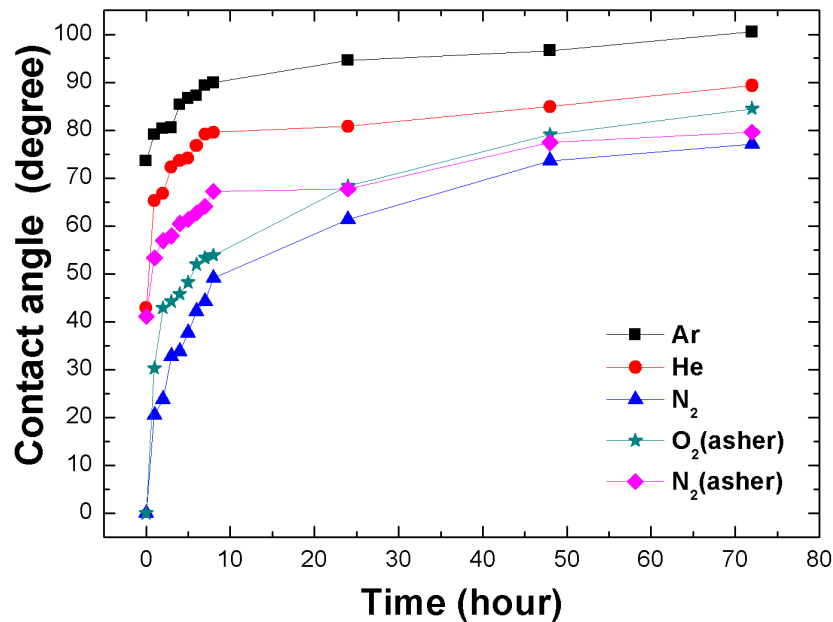


Plasma Treatment Sytem

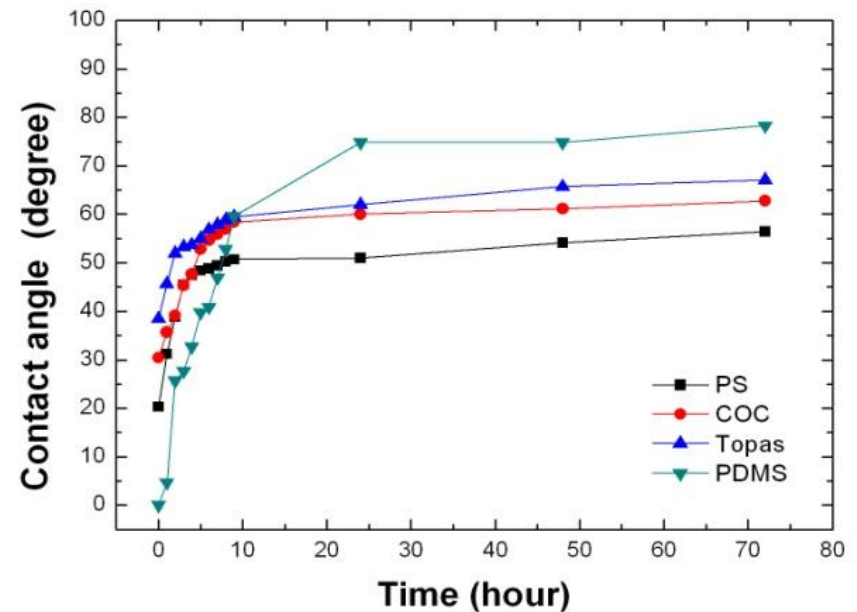
AMED AT-Plasma



- Medical & Bio Application
- Surface Treatment
- PDMS & Glass Bonding
- Microfluidic Chip
- Contact Lens applications



[Changes of contact angle with the lapse of time (PDMS)]



[The surface treatments of various plastics by N₂ plasma]