

E-Beam Evaporator

Lift Off Evaporation
Optical Coatings
Thin Film Transistors
Active CIGS layer
Josephson Junctions

Thermal Evaporator

Metallization in IC interconnects
Metal contact layer in CIGS Applications
Organics Field Effect Transistors
OLED
Perovskite Solar Cells Applications

Sputtering

Optical coatings, and ITO Coatings
Hard coatings
Protective coatings
Microelectronics patterning
TCO in OLED applications

PECVD

Encapsulation, isolation
Photonics structures
DLC's coating in Industrial applications
CNT's - Memory devices
Surface Passivation layer - Solar Cell
Graphene - Nano Scale Electronics Applications

Reactive Ion Etching System

Compound Semiconductors
GaAs – Sensor Applications
Photonic Applications
MEMS Device Fabrication

DRIE

Deep trenches in Silicon etching
Plasma dicing for advanced packaging
Via hole etching for TSV fabrication
High precision motion sensors
Nano Scale Etching
Microfluidics

Plasma Cleaning System

Photo resist stripping
Failure Analysis
Descum prior to lift off metallization process
Surface Cleaning
Removal of organics passivation layers

ALD

High-k dielectrics
Hydrophobic coating
Passivation layer in HEMT
Pinhole-free passivation layers
High aspect ratio diffusion barriers for Cu interconnects
Highly conformal coatings for micro fluidics applications
Fuel cells, e.g. single metal coating for catalyst layers

Ion Beam Etching

III-V Photonics Components.
Laser Gratings
High Aspect ratio etching of Photonics crystals.
Deep Trenches on SiO₂, Si and metals

MOCVD

III-V Semiconductor layers
LED's – Blue and White LED
Laser Diodes
InN Nanorods in UV-Vis-IR optoelectronics
MoS₂, BN and Graphene in 3D and 2D materials

Ion Beam Cleaning

Surface Cleaning
Surface Treatment
Ion Beam Milling
Nano-Patterning

Device Testing System

Mini Satellites
Device Testing
in Temperatures -100°C to 150°C in Extreme Vacuum for Space Simulation