Fabrication

Fabrication Equipment is used for top-down nanofabrication on a variety of substrates. Included in this category is equipment used to deposit a wide variety of materials, image those materials as well as substrates, oxidize and diffuse materials, provide back-end processing, and synthesize nanoparticles using wet-chemical methods.

For new visitors, Overview of capabilities are described at the top of each topic landing page.

Thermal
- Blue M Furnace
- H2S CVD Furnace
- Jipelec RTA
- Nitric Oxide Anneal
- Nitrogen Anneal
- Protec horizontal Furnaces
  - Tube 01 Clean Ox
  - Tube 02 Nitride Dep
  - Tube 03 LTO Dep
  - Tube 04 Field Ox
  - Tube 05 Anneal
  - Tube 06 Polysilicon
  - Tube 07 General Oxidation
  - Tube 08 Phos Drive
  - Tube 09 TEO
- Protec Furnaces Kiosk
- Protec Furnace Process Data
- Protec Furnaces Kiosk CB

Patterning
- Photomask Fabrication
  - Heidelberg MLA150 Maskless Aligner
- Spin Coating
  - Spinner Allowed Chemicals
  - Laurell WS-650
  - SCS 6808P Spinner
  - SCS G3P-8 Spinner
- Photoresist Baking
  - Cascade Tek TVO-2 Vacuum Oven
- Optical Lithography
  - Nanoscribe GT2
  - Suss MA6 Mask Aligner
  - Suss MJB3 UV400 Mask Aligner
  - Suss MJB4 UV400 Mask Aligner
- Electron Beam Lithography
  - JEOL JBX-8100FS E-Beam Writer
  - Raith eLine E-Beam Writer
  - Nanonex NX-2000
  - PL6MW Laser Engraver
- Photoresist Dry Film Laminator
- Laurell EDC-650 Spin Processor

Etching
- ICP RIE
  - Panasonic E620 ICP RIE Etcher
  - STS AOE
  - STS ASE
  - STS Etch Kiosk
  - Plasma-Therm Apex SLR
  - STS Etch Kiosk CB
  - Panasonic E620 Kiosk CB
- CCP RIE
  - Branson Asher
  - March Jupiter II Etcher
  - March Jupiter III Etcher
  - AJA ICP Argon Ion Mill Etcher
  - Xactix E1 Xenon Difluoride (XeF2) Etcher
  - Tousimis Automegasamtri 915B Critical Point Dryer
  - Wet Etching

Deposition
- Atomic Layer Deposition (ALD)
  - Aixtron BlackMagic ALD
  - ASM F120 ALD
  - Cambridge Nanotech Fiji ALD
  - LC Tech Glovebox and ALD Systems
VTI Glovebox and ALD Systems

PECVD (Plasma Enhanced Chemical Vapor Deposition)
- Axis PECVD
- Carbon Nanotube PECVD
- PECVD & Thermal Anneal Kiosk
- PECVD and Thermal Anneal Kiosk CB
- Plasma-Therm Apex SLR HDPCVD

CVD
- Easy Tube 3000 CVD
- Epigress
- SCS Parylene CVD

Evaporation
- CHA E-Beam Evaporator #1
- CHA E-Beam Evaporator #2
- Lesker E-Beam Evaporator - Flexible Substrate Compatible
- Leybold E-Beam Evaporator
- PVD E-Beam Evaporator - Metal/Magnetic Sources
- PVD E-Beam Evaporator - Glancing Angle Deposition (GLAD)
- Evaporator Kiosk Page CB

Sputtering
- PVD Sputtering System - Nitride
- PVD Sputtering System - Metal/Dielectric Sources
- PVD Sputtering System - 4 Target Magnetic Sources
- PVD Sputtering System - 6 Target Magnetic Sources
- PVD Sputtering System - Flexible Substrate Compatible
- Sputtering Kiosk Page CB

Other
- AJA E-Beam Evaporation and Sputtering System
- GaN MBE
- PVD Pulsed Laser Deposition (PLD) System

Electrodeposition
- Electrodeposition (Princeton Applied)
- IKO Jr Electroplater

Materials in Vacuum
- Vacuum Oven at BRK2031

Metallization Sources

Back-end

Bonding
- JFP WB-100 Wire Bonder
- SB6e bonder
- Westbond 7400A Thermosonic Wire Bonder
- Westbond 7476E Thermosonic Wire Bonder
- Hotplate Bonder
- K and S 4526 Wire Bonder

Dicing
- Disco DAD641 Dicing Saw
- Disco DAD-2H/6 Dicing Saw

LPKF PCB System
- LPKF Mill
- LPKF Plater
- LPKF Press

Polishing
- ASAP-1 IPS Digital Sample Preparation System

Bio-fabrication
- Basi C-3 Cell Stand
- Biohood
- Gamry
- LyoHUB - Lyostar3
- LyoHUB - Revo Freeze dryer
- NanoChemistry Hoods

Roll-to-Roll
- Maxwell Roll to Roll System
- Dimatix Materials Printer
- Particle Processing Tools
- Nordson Quantum Q-6800 Fluid Dispensing System

Other Fabrication
- Ozone Delivery System - IN USA Model ODS-9000 Series (Model ODS-9025-A)