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 TEOS
  - Protec Furnaces Kiosk
  - Protec Furnaces 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
    - Spinner Allowed Chemicals - 2018 Version
- Photoresist Baking
  - Cascade Tek TVO-2 Vacuum Oven
- Optical Lithography
  - Nanoscribe GT2
  - Suss MA6 Mask Aligner
  - Suss MJ3 UV400 Mask Aligner
  - Suss MJ4 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 ACE
  - 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 Automegasamdri 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)
- Axic 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 - Lystar3
- LyoHUB - Revo Freeze dryer
- NanoChemistry Hoods

Roll-to-Roll
- Maxwell Roll to Roll System
- Dimatix Materials Printer
- Particle Processing Tools

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