

CNI Shared Facilities Equipment List



Thin film Deposition and thermal processing:

- Evaporator Thermal, Edwards BOC/Auto 306
- Evaporator (Thermal/E-beam) and Sputter, Angstrom EvoVac Multi Deposition System
- ALD, Cambridge Nano Tech Inc. Savannah 200
- PECVD, Oxford Instruments, PlasmaPro NPG80
- Cressington, 108 Manual Sputter Coater
- AJA Orion 3, Metal Sputter
- AJA Orion 8, Dielectric Sputter
- Furnace, Expertech LPCVD CTR-125

Photo and e-beam Lithography:

- Mask fabrication, Heidelberg DWL 66 +, Laser Writer
- Mask fabrication, Heidelberg μ PG 101 Laser Writer - 3 micron
- Electron Beam Lithography, Nanobeam nB4
- Electron Beam Lithography, Nanometer Pattern Generation System on a NovaNano SEM
- Mask Aligner, Süss MicroTec MA6
- DUV Mask Aligner, Süss MicroTec MA6
- Spinner, Laurell, Lite series
- ReynoldsTech FS5.0 Series Coaters

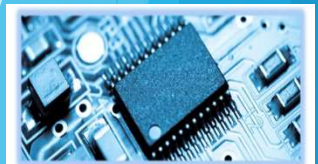
Dry Etch:

- ICP-RIE - Cl, Oxford Instruments, Plasma Pro System100 Cobra III-V
- ICP - F based, Oxford Instruments, PlasmaLab 80+
- ICP/DRIE - F based, Oxford Instruments, Plasma Pro System 100/1 Cobra300
- Plasma Asher/Etch, Anatech
- Plasma Asher/Etch, Diener Plasma Etch System

2D Materials Processing:

- Glove box N_2 inert environment 2D materials processing including NanoMagnetics ezAFM, Horiba XploRA micro-Raman, and Signatone CM300 transfer station

• For more information on CU equipment please contact Dr. Nava Ariel-Sternberg, na2661@columbia.edu





Metrology and Characterization:

- Optical Microscope, Nikon Eclipse
- Optical profiler, Wyko NT9100
- Surface Profilometer, Alpha-Step D-600, KLA-Tencor
- Ellipsometer, J. A. Woollam, Alpha-SE
- Atomic Force Microscope, Bruker, Dimension FastScan
- Spectrophotometer, Agilent 8453 UV/Vis
- SCXRD, Agilent SuperNova
- Powder XRD, PANalytical XPert3
- Cryogenic SQUID Magnetometer, R-700X
- Zetasizer, Malvern Nano-ZS
- TGA, TA Instruments Q500
- X-ray Photoelectron Spectroscopy, Phi Electronics, Phi 5500
- Micro-Raman spectroscopy, Renishaw inVia
- Agilent 1260 Infinity GPC
- Brunauer-Emmett-Teller (BET), ASAP 2020 Plus

Backend and Packaging:

- Dicing Saw, Disco, DAD3220
- Wire Bonder, West Bond, 7476D, Al
- Wire Bonder, West Bond, 7477E, Au
- Critical Point Dryer, Bal-Tec 030
- Chemical Mechanical Polishing (CMP), G&P Technology, Poli-400L
- Parylene Coater, SCS, PDS 2010

Electron Microscopy and Sample Preparation:

- Scanning Electron Microscope, Carl Zeiss, Zigma VP
- Scanning Electron Microscope, FEI, Nova Nano450
- Transmission/Scanning Transmission Electron Microscope (S/TEM), FEI, Talos F200X
- Optical Microscope, Zeiss, AxioScope A1
- Optical Microscope, Zeiss, stemi DV4
- Diamond Saw, Buehler 11-1280-160
- Dimple Grinder, Gatan 656
- Polisher, South Bay Technology, 910
- Precise Ion Polishing System, Gatan, PIPS II 695
- Plasma Cleaner, Gatan Solarus 950
- Sovall Dupont Ultra Microtome MT-2B

- For more information on CU equipment please contact Dr. Nava Ariel-Sternberg, na2661@columbia.edu

