Instruments

The Materials Preparation and Measurement Laboratory (MPML) provides facilities for preparation, fabrication, processing, patterning and characterization of many types of samples. Instrumentation encompasses scanning probe microscopes (AFM and STM), scanning electron microscopes (SEM), optical lithography and imaging, sample cutting-polishing, surface coating, thermal characterization, optical characterization via steady-state and time-resolved fluorescence, absorbance, reflectance, Raman, and light scattering.

Available Instruments

- 3D Printer - Flashforge Creator Pro
- AFM - Asylum Cypher ES Gaertner Waferskan
- Evaporator - General Thermal Fluorometer - Lifetime ChronosBH
- Furnace - #6 Muffle
- KRUSS SDT Spinning Drop Tensiometer
- Microscope - Olympus BH2
- SEM - Hitachi S-2700
- Spincoater - SPS P6700
- Wire Bonder - K&S 4526
- 3D Printer - Formlabs Form2
- AFM - Bruker Multimode 5
- Etcher - Plasma Etch PE-100LF
- Evaporator - Gold Thermal
- Furnace - #3 Blue Quartz Tube
- Grinder/Polisher - ECOMET3
- Laser Cutter - ULS VLS4.60
- Microscope - Olympus LEXT OLS5000 Surface Metrology
- Software - COMSOL Multiphysics
- Sputter Coater - Ted Pella Cressington 208 HR
- Zetasizer / DLS - Malvern NanoZS
- 3D Printer - Objet Connex 350
- AFM - Bruker Multimode 8
- Etcher - RIE
- Evaporator - Silver Thermal
- Furnace - #4 Quartz Tube
- KRUSS DSA100 Drop Shape Analyzer
- Lithography - UV Exposure System
- SEM - Carl Zeiss Merlin
- Spectrophotometer - Agilent 8453 UV/Vis
- STM - Bruker Standalone
- TGA/DSC - TA Instruments SDT Q600

- AFM - Asylum MFP3D-BIO
- Diamond Saw
- Evaporator - E-gun
- Fluorometer - Horiba Fluorolog-3
- Furnace - #5 Muffle High Temp
- KRUSS K100 Force Tensiometer
- Microscope - Horiba LabRAM HR Evolux Confocal Raman
- SEM - FEI NanoSEM
- Spectrophotometer - Cary 5000 UV/Vis
- IR UMA
- Wire Bonder - K&S 4526
- Sputter Coater - Ted Pella Cressington 208 HR
- KRUSS SDT Spinning Drop Tensiometer
- SE - Carl Zeiss Merlin
- Spectrophotometer - Agilent 8453 UV/Vis