**AFM - Asylum Cypher ES**

**Atomic Force Microscope - Asylum Research Cypher ES**

- **Description**
  
  The Cypher ES acquires high-resolution images in seconds rather than minutes; thereby enabling dynamic AFM measurements in diverse active systems like lipid bilayers, polymerizing actin networks, nanoparticle membranes, and diblock copolymers. Our Cypher ES is equipped with multiple sample scanners for fast high-resolution imaging in almost any environment: air, fluid, perfusion, and heating/cooling from 0°C to 250°C. We have the only system in the Midwest configured with BlueDrive, Asylum’s novel photothermal drive technique that removes parasitic noise sources associated with traditional piezo cantilever actuation. The Cypher ES also has conductive AFM, Kelvin Probe, and atomic-resolution STM modes. The Cypher has quickly become one of our most popular and powerful AFMs.

- **Configuration**
  
  - S Scanner for standard samples
  - ES Scanner for environmental AFM
  - ORCA Conductive AFM
  - Electrical modes such as SKPM and EFM
  - Magnetic Force Microscopy
  - STM holder for air/liquid
  - BlueDrive
  - Heater/Cooler Stage
  - Polyheater Stage
  - AM/FM nanomechanical property measurement
  - Gas/Liquid perfusion
  - Fast Force Mapping mode

  The Cypher uses special small cantilevers. The MPML purchases in bulk to maintain a small stock of common cantilevers with spring constants for various applications. Users may purchase cantilevers at cost.

- **Training**
  
  Users are required to pass basic AFM training before training on the Cypher.

- **Location**
  
  Scanning Probe Lab: GCIS ESB43A

- **Contact**
  
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