AFM - Asylum MFP3D-BIO

Atomic Force Microscope - Asylum Research MF3D-BIO

Description
The Asylum MFP-3D-BIO is mounted on an inverted optical microscope to enable simultaneous brightfield, widefield epi-fluorescence, or phase imaging. The extended Z-head allows tapping mode and contact imaging within a range of 40µm in Z and 90µm in X and Y. It also is capable of nanomechanical property mapping, bimodal dual-AC imaging, single-molecule force extension measurements, conductive AFM, and STM. An open-access sample area and a range of environmental chambers (BioHeater, Petri Dish Holder, Heater/Cooler, and Polymer Heater) ensure compatibility for nearly any kind of sample (material, chemical, or biological) in air, fluid, or inert atmosphere. Excellent high-temperature (+300 °C) time-lapse imaging in inert atmospheres with minimal drift is a key advantage.

Configuration
- Extended Z head (40µm)
- Heater/Cooler Stage
- Polyheater Stage
- Bioheater Stage
- Nikon TE200 Inverted Fluorescence Microscope
- ORCA Conductive AFM
- Electrical AFM modes such as SKPM and EFM
- Magnetic Force Microscopy
- Gas/Liquid Perfusion

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 complete basic AFM training before training on the MFP3D.

Location
Scanning Probe Lab: ESB43A

Contact
Justin Jureller