NANO Research Infrastructure

Atomic Force Microscopy (AFM)

Category:
C. Particle Characterisation in and ex-situ

Institute: **Uppsala University (UU)**

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Short Technology Description

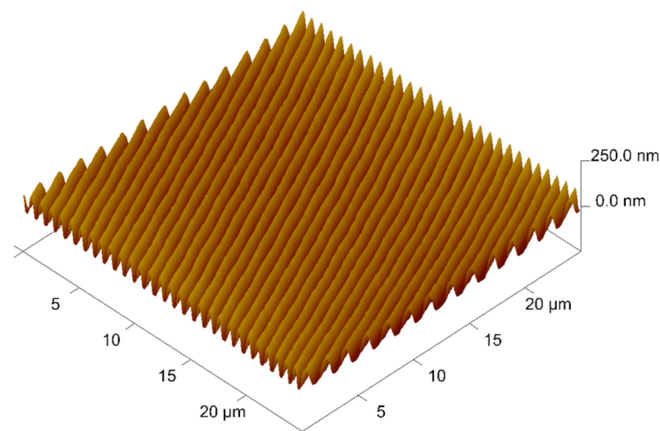
The AFM is a type of scanning probe microscope with very high resolution. A cantilever, with a small tip, is scanned across the sample surface and deflected by a repulsive (contact mode) or attractive (non-contact mode) force between the tip and the surface. This deflection is measured with a laser during the scan to create a surface profile.

Main Features (Equipment Capabilities):

Park Systems XE150 AFM

- Scan modes:
  - Contact AFM (C-AFM)
  - Non-contact AFM (NC-AFM)
  - Hybrid (C-AFM / NC-AFM)
  - Dynamic force microscopy (DFM)
  - Lateral force microscopy (LFM)
  - Electrostatic force microscopy (EFM)
- Atomic resolution
- Max XY scan area: 100×100 μm^2
- Max Z scan range: 12 µm
- Max sample size: 150×150×20 mm^3

Typical Samples & Images:



Any further Information: