

## Atomic Force Microscopy

**Category:**

C. Particle Characterisation in and ex-situ and/or

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**Short technology description/Overview:**

The Agilent 5500 AFM/SPM microscope offers numerous unique features, such as patented top-down scanning and unrivalled environmental and temperature control, while providing maximum flexibility and modularity. The universal microscope base permits easy integration with an environmental chamber or an inverted optical microscope. Sample preparation is made easy with the unique sample plates designed for many applications including imaging in fluids.

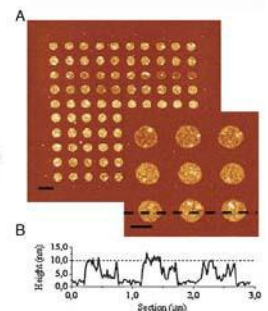
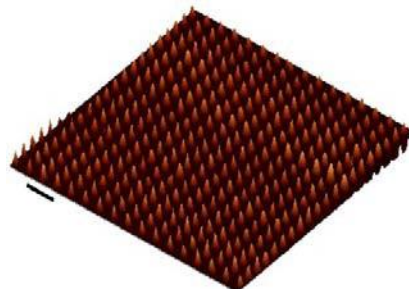
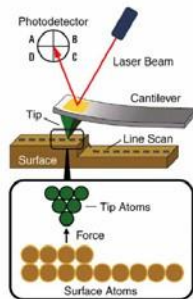
A top-down optical axis through the scanner allows an unobstructed view of the cantilever and the sample without sacrificing sample handling. The scanner's modular nose cone makes changing imaging modes quick and easy. The Agilent 5500 SPM/AFM is a high performance system that facilitates advanced applications solutions. It offers atomic resolution and is ideal for electrochemistry, polymers, and soft material applications.

**Main Features (Equipment Capabilities):**

- Measurements in different modes and techniques
  - Contact mode, Intermittent contact mode (acoustic AC mode, Magnetic AC mode, top MAC mode)
  - Current Sensing Mode (CSAFM), Force Modulation Microscopy (FMM), Lateral Force Microscopy (LFM), Dynamic Lateral Force Microscopy (DLFM), Magnetic Force Microscopy (MFM), Electrostatic Force Microscopy (EFM), Kelvin Force Microscopy (KFM)
- Open- and closed-loop scanners (two ranges available: 90µm x 90µm, or 9µm x 9µm) offer outstanding linearity, accuracy, versatility, and ease of use.
- Z Range limit = 8 µm
- Measurement in ambient conditions, controlled environment conditions (humidity and temperature) and fluids
- Combination of AFM and optical microscopy
- Vibration isolation

**Typical Samples & Images:**

**AFM topography of protein patterns**



Any further Information: <http://www.home.agilent.com/agilent/product.jsp?nid=-33986.426382.00&lc=eng&cc=ES>