

Atomic Force Microscopy

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STRESS E DAMAGE CHARACTERISATION UNIT



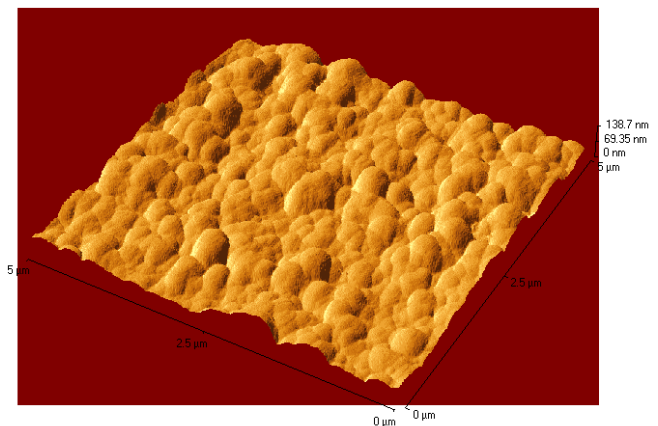
This technique provides topographic, friction force and adhesive force imaging of surfaces with lateral and height resolutions of approximately 2 nm and 0.3 nm, respectively. All classes of engineering materials can be examined. The surface is scanned with a sharp tip, several microns long and approximately 100 Å in diameter, located at the end of a delicate cantilever. Forces between the tip and sample surface cause the cantilever to deflect.

FACILITIES

The Explorer SPM from ThermoMicroscopes uses a Berkovich pyramid 4mm diamond tip, and incorporates a CCD video camera for viewing the tip and sample surface. Scanning range is 100mm in the X and Y directions, and 10mm in Z (height).

CASE STUDY

Salivary pellicle, grown on human dental enamel. The area scanned is 5mm x 5mm.



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