Next-Level Nanotechnology Tools swiss quality

NaioAFM

The leading AFM for nanoeducation

nanosurf

All-in-one atomic force microscope

The NaioAFM is the ideal atomic force microscope for nanoeducation and small sample measurements. This all-in-one AFM system provides solid performance and easy handling, with a price tag and footprint that fit anyone and any place.

Key Features

Integrated controller, XY-table, airflow shielding, and vibration isolation

High resolution top view camera and side view sample observation built in

Feature-complete: all standard operating modes available

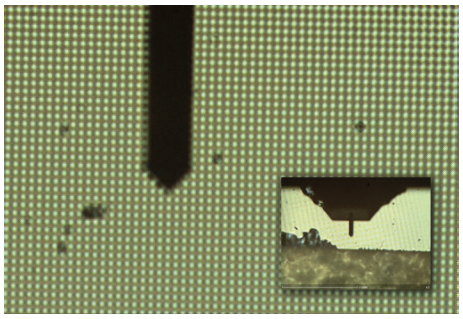
Simple cantilever exchange: no laser or detector adjustment required

No system setup needed: just plug into your PC and start the software

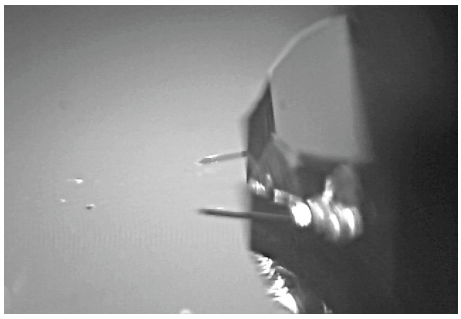
Full system in transport case

NaioAFM system overview: connected and ready to measure

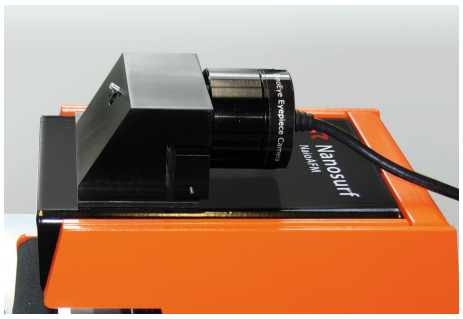
"The NaioAFM allows new users to acquire meaningful AFM images and data in as little as two hours. In the context of a highly time-constrained course, when perhaps only a total of twelve lab hours are planned, this efficiency is a significant advantage over many other AFMs, for which the time commitment might be two or three times greater." – Prof. Nancy Burnham, WPI



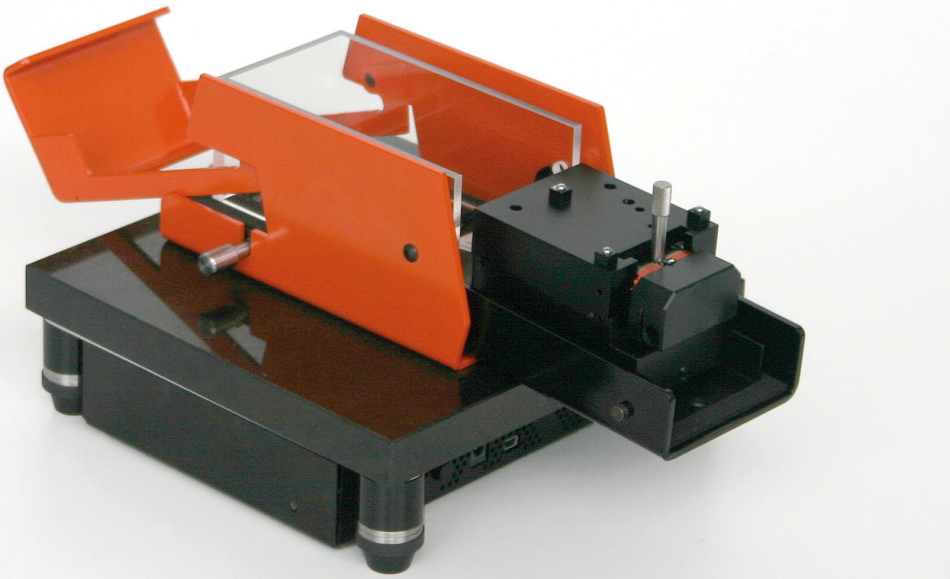
Top view camera with zoom



Side view observation

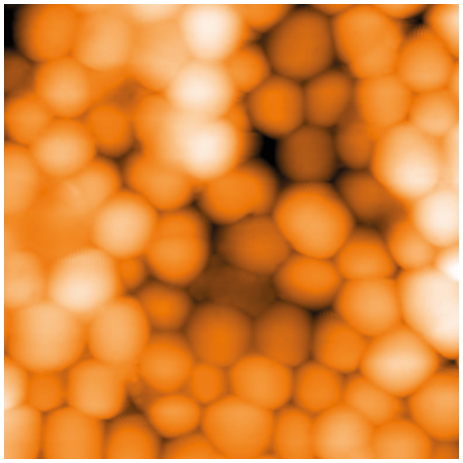


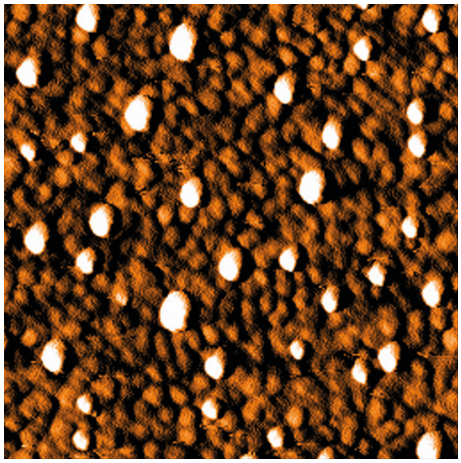
Optional side view camera



Cantilever exchange

Quick and simple cantilever exchange with the NaioAFM's flip-over scan head design and cantilever exchange tools.

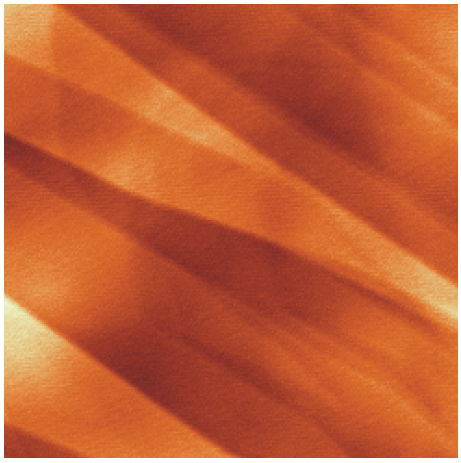




Particle size

Left: Staphylococcus aureus bacterial sample. Scan size 5.0 µm.

Right: Gold colloids. Scan size 1.5 µm.



Left: data storage

Digital backup tape with magnetically stored data, as revealed by MFM. Scan size 50 µm.

Right: atomic steps

HOPG. Single layer height is 0.34 nm. Image Z-range is 3.5 nm. Scan size 3.2 µm.

Compatible options and accessories

NaioAFM side view camera, Naio advanced modes option, Isostage adapters for Naio, AFM extended sample kit

NaioAFM specifications

Max. scan range / scan height (resolution)[1]	70 µm (1.0 nm) / 14 µm (0.2 nm)
Static / Dynamic RMS Z-noise	typ. 0.4 nm (max. 0.8 nm) / typ. 0.3 nm (max. 0.8 nm)
Max. sample size / height	12 mm / 3.5 mm
Max. sample stage positioning range	12 mm travel in X and Y
Top view camera	2 × 1.5 mm FOV, 2 µm optical resolution, 5.0 MPixel color CMOS, 4× digital zoom, in-axis LED illumination
Side view observation	5 × 5 mm FOV, variable LED illumination (optional camera : 2 × 2 mm FOV, 1.3 MPixel monochrome CMOS)
Approach	4 mm linear motor, continuous or step-by-step approach
Imaging modes	Static force, dynamic force[2], phase contrast[2], MFM[2], EFM[2]
Advanced imaging modes[3]	Spreading resistance, force modulation
Spectroscopy modes	Force–distance, amplitude–distance[2], voltage–distance
Advanced spectroscopy modes	Current–voltage[3], stop by end value[4], fwd & bwd pause[4], cantilever calibration[4]
Lithography modes	Static force, dynamic force[2], oxidation
Advanced lithography modes[3]	Draw and load CAD vector graphics, bitmap images
Remote control/add-ons[3]	Windows scripting interface: compatible with LabView, C#, Visual Basic, MatLab, and other software
Operating system and PC requirements	Windows 7 or higher (32/64-bit), 1280x1024 px screen resolution, Core 2 CPU, 4 GB RAM, 1 free USB 2.0 port
Size (LWH) / weight / power	204×204×160 mm / 6.5 kg / 100–240 VAC (30 W)
Power	100–240 VAC, 50/60 Hz, 50 W

(1) Manufacturing tolerances are ±10%
(2) Naio Dynamic Modes Option required
(3) Naio Advanced Modes Option required
(4) Naio Spectroscopy and Calibration Option required

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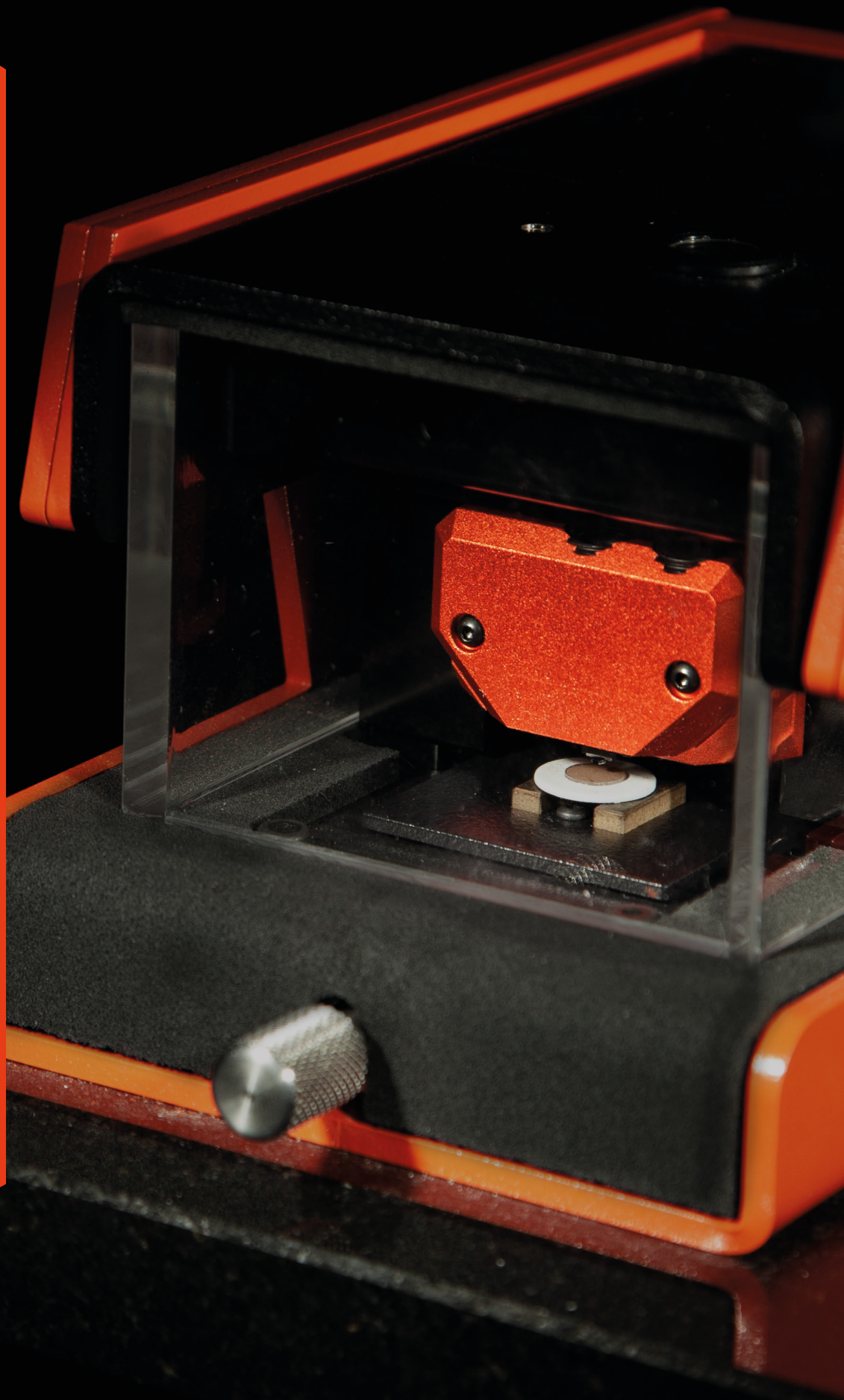
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