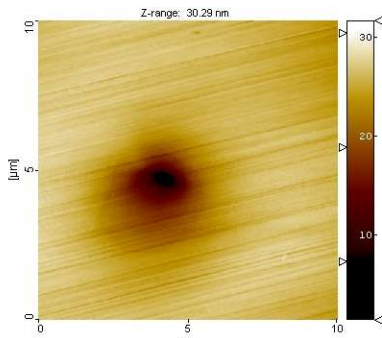


NANOStation HD

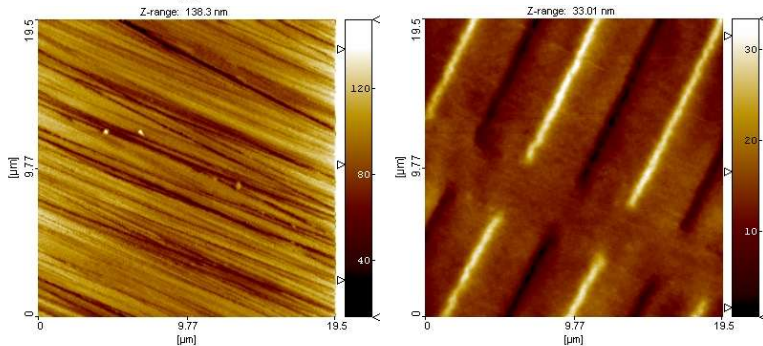
The perfect tool for Hard Disk/DVD/CD inspection

To localize and identify defects on Hard Disks or DVDs/CDs the sample is usually measured with optical inspection methods, scribed and then transferred to an AFM. With the *NANOStation HD* you can skip two of these time consuming steps: This system combines a high quality optical microscope and a state-of-the-art AFM: The S.I.S. *ULTRAObjective*! Now you localize the defect with the optical microscope, push one button and the sample is positioned beneath the AFM; one more button and the measurement is executed.



Left: Typical defect on a Hard Disk; image size is 10 µm by 10 µm.

Right: *NANOStation HD*; next to the turret a gantry with the *ULTRAObjective* AFM is placed. The translation stage moves the sample between microscope and AFM. The rotary stage allows to reach all positions on the sample with the microscope and the AFM.

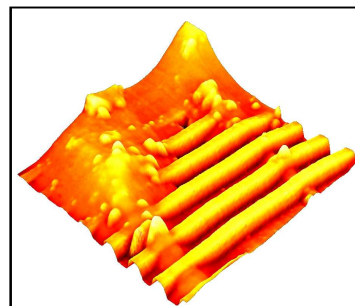
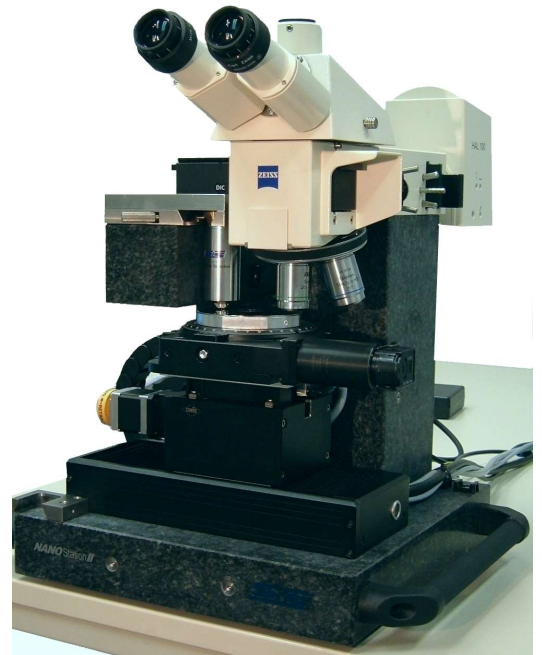


Above: Simultaneously acquired image of the topography (left) on a Hard Disk and its magnetic structure (right). Image size is 19.5 µm by 19.5 µm.

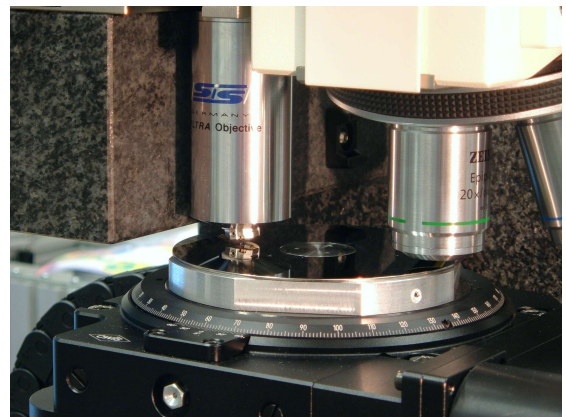
Features of the *NANOStation HD*

- Turret and AFM/SPM scanning head are separated; therefore the resolution of the AFM is even better than on a conventional *NANOStation II*.
- Rotary stage and translation stage are operated by a joystick. This allows easy and convenient "navigation" using the optical microscope on your sample.
- A vacuum chuck securely holds even delicate samples.
- Fast optical identification of defects and immediate AFM/SPM measurement on the same platform.

NANOStation HD	ULTRAObjective AFM with 80 µm x 80 µm x 6 µm X-Y-Z scan range vertical resolution < 0.1 nm rms
Position resolution rotary stage:	10 mgrad
Accuracy of rotary stage:	± 8 mgrad
Position resolution translation stage:	0.5 µm
Accuracy of translation stage:	± 2 µm
Microscope optics:	bright field, dark field, DIC, up to 1000 x magnification
Deviation between optical and AFM position:	< 2 µm



Left: Dirt particles on a CD. Image size is 12 µm by 12 µm.



Above: Close-up of the sample stage. The sample is fixed by a vacuum chuck.