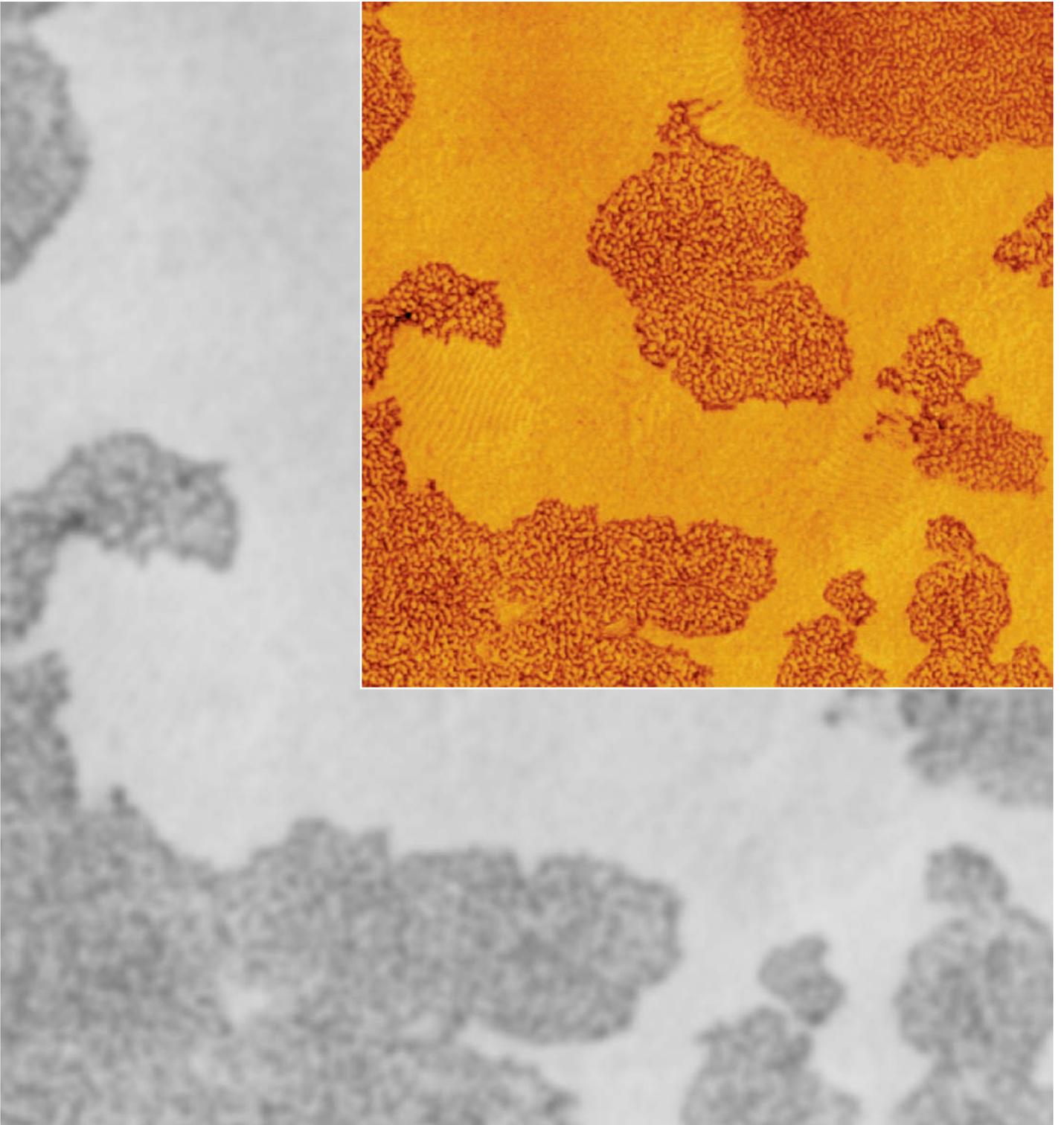


DIATOME

AFM

Extremely smooth sample surfaces
Best possible structure preservation





Your benefits of working with Diatome

Free customer service

Sectioning tests with biological and material research specimens of all kinds.

We send you the sections along with the surfaced sample, a report on the results obtained and a recommendation of a suitable knife.

Complete discretion when working with proprietary samples.

Re-sharpening and reworking service

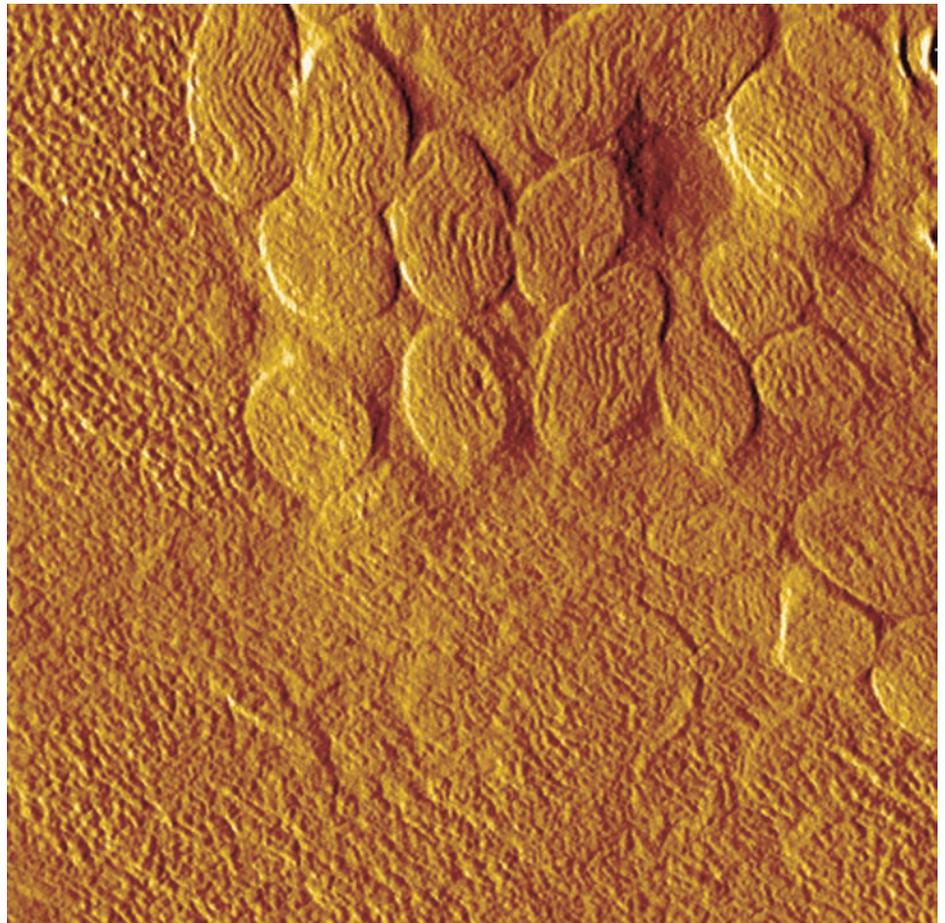
A re-sharpened Diatome diamond knife demonstrates the same high quality as a new knife.

Even knives purchased in previous years can continue to be re-sharpened.

The knives can be reworked into another type of knife for no extra charge, e.g. ultra to cryo or 45° to 35°.

Exchange service

Whenever you exchange a knife we offer you a new Diatome knife at an advantageous price.



Morphology of a blend of two SBS block copolymers with different chain-architecture. AFM tapping mode, phase image, image size = 3x3µm.

Rameshwar Adhikari, Institut für Werkstoffwissenschaft, Martin-Luther-Universität, Halle-Wittenberg.



AFM amplitude image of the muscle of cat's mite *Otodectes cynotis*. The contrast covers amplitude variation in the 1-3nm range. Size of the whole image equals 4.6microns.

Nadejda Borisovna Matsko, Institut für angewandte Physik, ETH Zürich.

cryo AFM ultra AFM



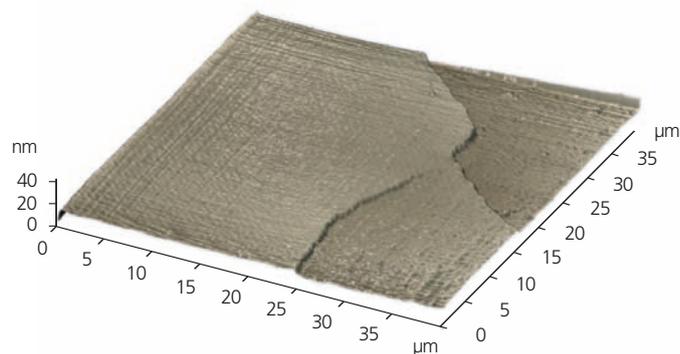
The high quality Diatome diamond knives are not just perfect for producing ultra-thin and semi-thin sections, but also for surfacing sectioning of all kinds of biological and industrial specimens for AFM investigation.

Instead of a section as for TEM, the specimen surface is investigated using AFM.

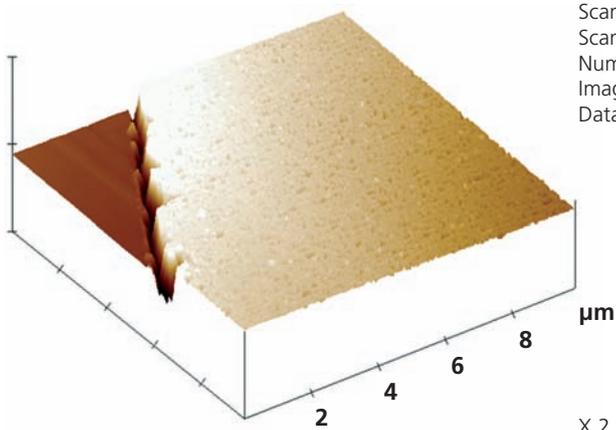
In order to achieve the best results for AFM investigation, only the highest quality diamond knives should be used.

Diatome ultra AFM and cryo AFM knives are specially tested to ensure that they meet the increased quality requirements of AFM investigation.

They produce extremely smooth sample surfaces and guarantee the best possible structure preservation.



▲
AFM image of a gold surface, sectioned with an ultra AFM knife, section thickness 15nm.
Scan 40x40μm, average roughness 1.28nm.
Robert Ranner, Leica Microsystems GmbH, Vienna.



Digital Instruments Nanoscope
 Scan size 9.785 μm
 Scan rate 1.489 Hz
 Number of samples 512
 Image Data Height
 Data scale 1.000 μm

X 2.000 $\mu\text{m}/\text{div}$
 Z 1000.000 nm/div

▲
 Superconducting oxide $\text{Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_8$ (BSCCO)
 Sample surfaced with a Diatome ultra AFM diamond knife, feed 20nm.

Specifications

cryo AFM and ultra AFM

Knife angle:	35°
Cutting range:	10 - 100nm
Available sizes:	2mm, 3mm

References

P.H. Vallotton, M.M. Denn, B.A. Wood and M.B. Salmeron: Comparison of medical-grade ultrahigh molecular weight polyethylene microstructure by AFM and TEM.

J. Biomater. Sci. Polymer Edn., Vol 6, No. 7, pp. 609-620, 1994.

N. Matsko and M. Müller: AFM of biological material embedded in epoxy resin. Journal of Structural Biology 146, pp. 334-343, 2004.

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