



FIGHT

Najnowsze rozwiązania w ofercie firmy IGHT

Ignacy Mościcki

Oferta firmy IGHT

- Stoły antywibracyjne HWL
- Mikroskopia SPM
- Mikroskopia SEM
- Nanoindentacja
- Spektrometria
- Systemy PVD ALD PLD
- Sondy oraz akcesoria



Oferta firmy IGHT

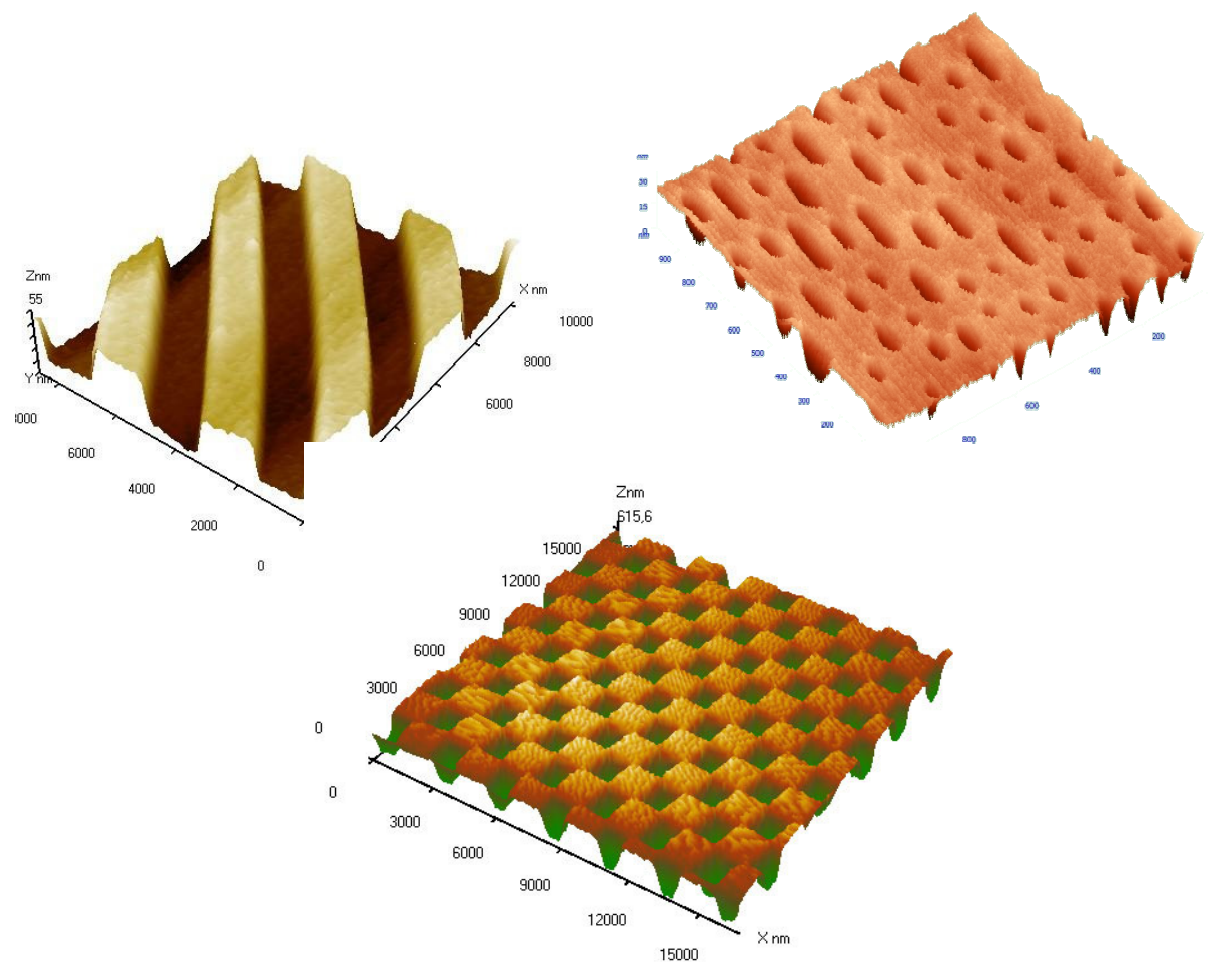
Edukacja

Laboratorium

Badania

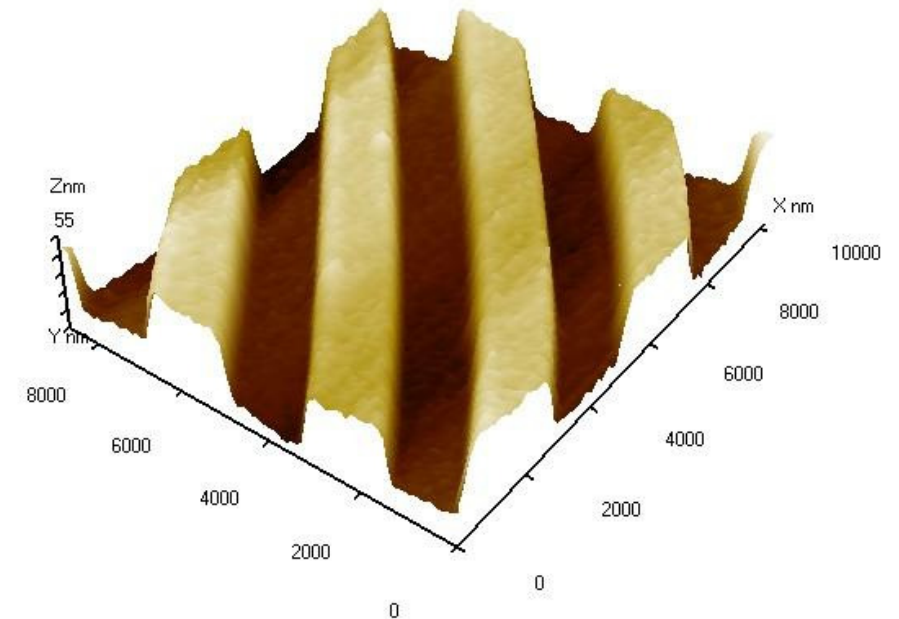
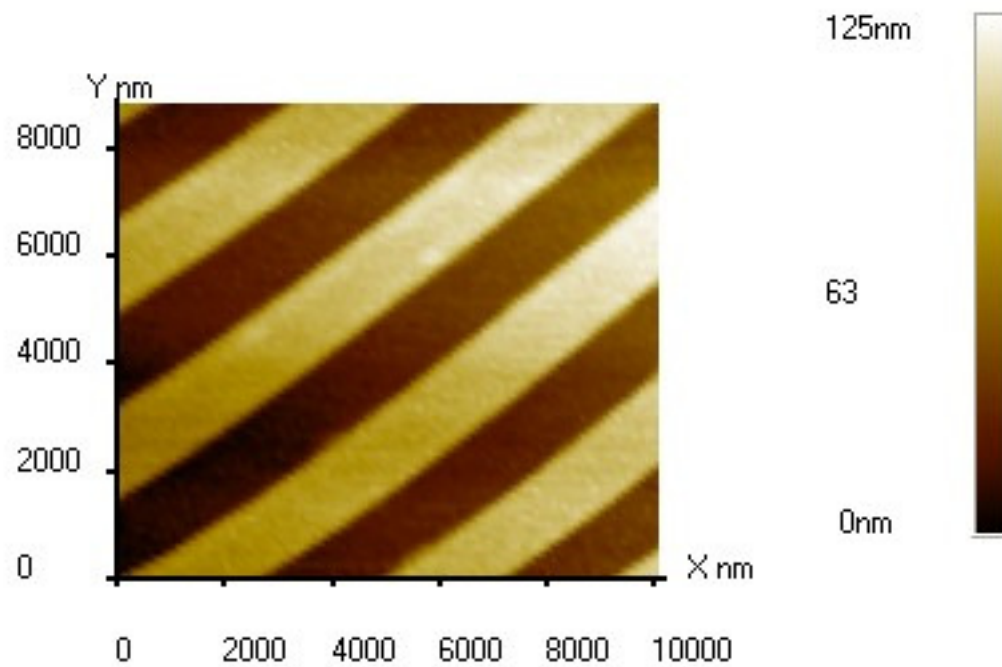
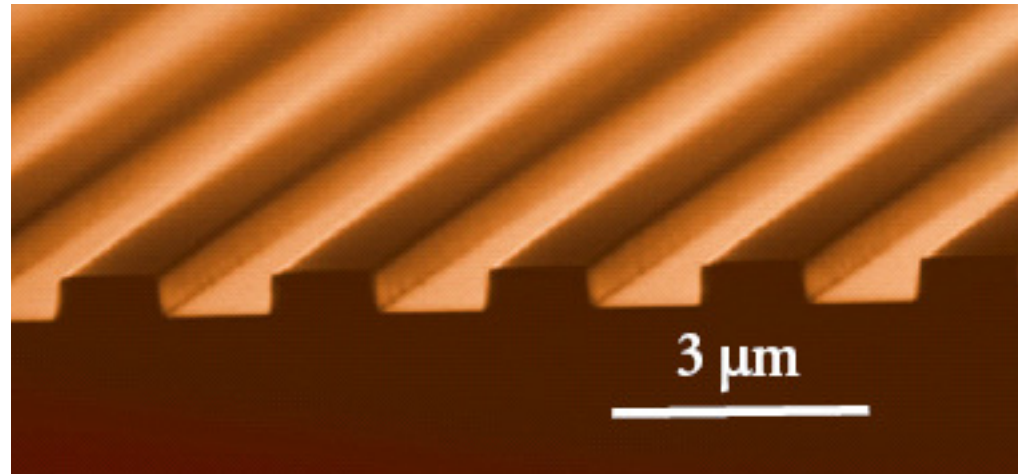
Wytwarzanie

Edukacja SPM



NANO EDUCATOR
SCANNING PROBE MICROSCOPE

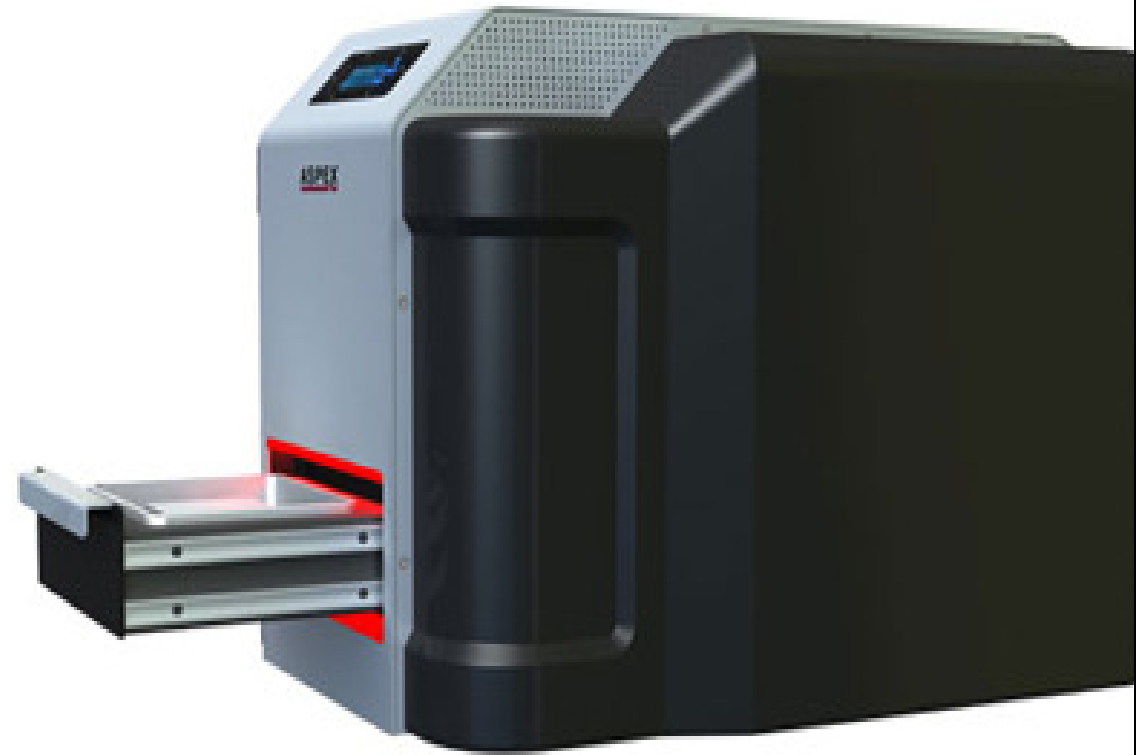
Edukacja SPM



Mikroskopia SEM

PSEM eXpress

- Napięcie 2 – 20 kV
- Detektor Quad BSED
- Rozdzielczość: 25 nm
- Rozmiar komory:
180 x 230 x 70 mm
- EDX
- AFA (100 nm – 5 mm)



Mikroskopia SEM

PSEM eXplorer

- Napięcie 0.2 – 25 kV
- Detektor SED, Quad BSED
- Rozdzielczość: 7 nm
- Rozmiar komory:
180 x 230 x 70 mm
- EDX
- AFA (30 nm – 5 mm)
- MQA, GSR



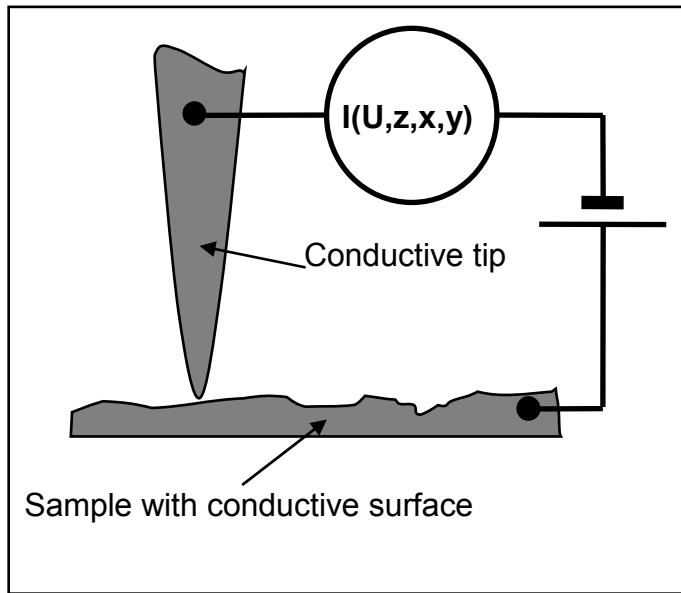
Powierzchnia nanocząstek

Acorn Area

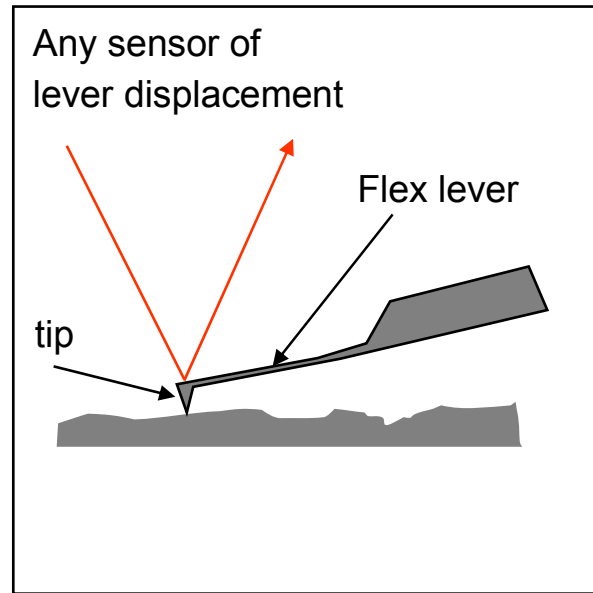
- Pomiar pola powierzchni (m^2/g)
- NMR
- Cząstki w cieczy
- 8 kg
- 360 x 240 x 160 mm



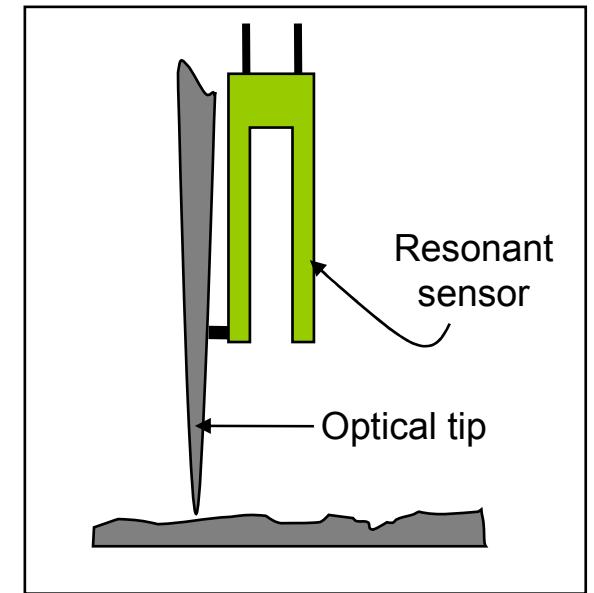
Techniki SPM



Scanning
Tunneling
Microscopy

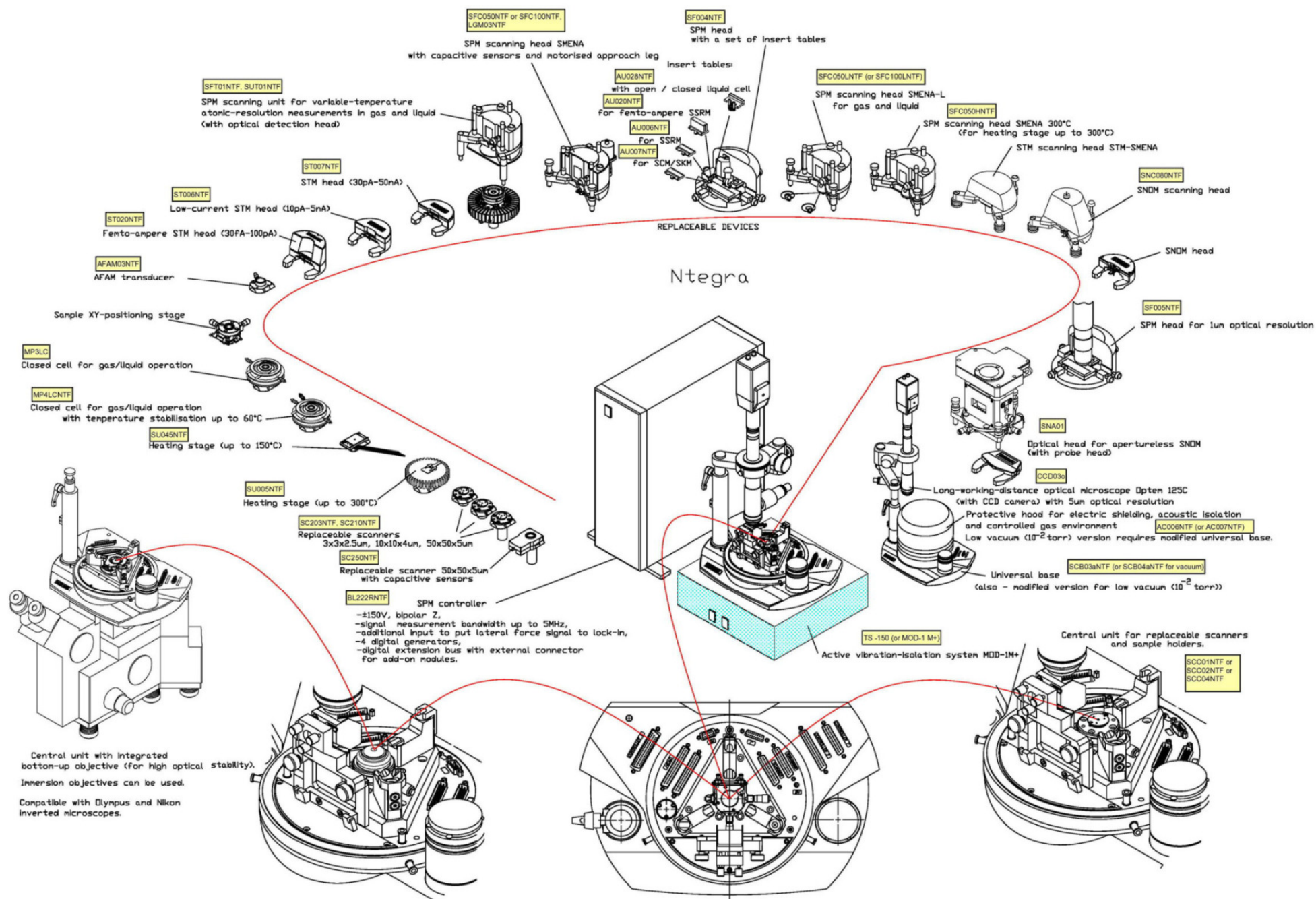


Atomic
Force
Microscopy



Scanning
Near-field
Optical
Microscopy

Techniki SPM



Techniki SPM

STM techniques

- [Constant Current mode](#)
- [Constant Height mode](#)
- [Barrier Height imaging](#)
- [Density of States imaging](#)
- [I\(z\) Spectroscopy](#)
- [I\(V\) Spectroscopy](#)

AFM

- [dc Contact techniques](#)
 - [Constant Height mode](#)
 - [Constant Force mode](#)
 - [Contact Error mode](#)
 - [Lateral Force Imaging](#)
 - [Spreading Resistance Imaging](#)
 - [Contact Scanning Capacitance Microscopy](#)
- [ac Contact techniques](#)
 - [Force Modulation mode](#)
 - [Contact EFM](#)
 - [AFAM](#)
 - [AFAM Resonance Spectroscopy](#)
 - [Piezoresponse Force Microscopy](#)
- [Semicontact techniques](#)
 - [Semicontact mode](#)
 - [Phase Imaging mode](#)
 - [Semicontact Error mode](#)
- [Non-Contact techniques](#)
 - [Non-Contact mode](#)
 - [Frequency Modulation mode](#)
- [Many-pass techniques](#)
 - [EFM](#)
 - [Scanning Capacitance Microscopy](#)
 - [Kelvin Probe Microscopy](#)
 - [DC MFM](#)
 - [AC MFM](#)
 - [Dissipation Force Microscopy](#)

▪ Spectroscopies

- [Force-distance curves](#)
- [Adhesion Force imaging](#)
- [Amplitude-distance curves](#)
- [Phase-distance curves](#)
- [Frequency-distance curves](#)
- [Full-resonance Spectroscopy](#)

▪ SNOM

- [Shear Force Microscopy](#)
- [Transmission mode](#)
- [Reflection mode](#)
- [Luminescence mode](#)
- [SNOM Lithography](#)

▪ aSNOM techniques

- [Scanning Plasmon Near-field Microscopy](#)

▪ Lithographies

- [AFM Oxidation Lithography](#)
- [STM Lithography](#)
- [AFM Lithography - Scratching](#)
- [AFM Lithography - Dynamic Plowing](#)

▪ Confocal Microscopy techniques

- [Laser mode](#)
- [Image mode](#)
- [Spectral mode](#)
- [Confocal Volume Lithography](#)

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NT-MDT
Molecular Devices and Tools for NanoTechnology

Scanning Probe Microscope
based Tools for NanoTechnology

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SPM Techniques

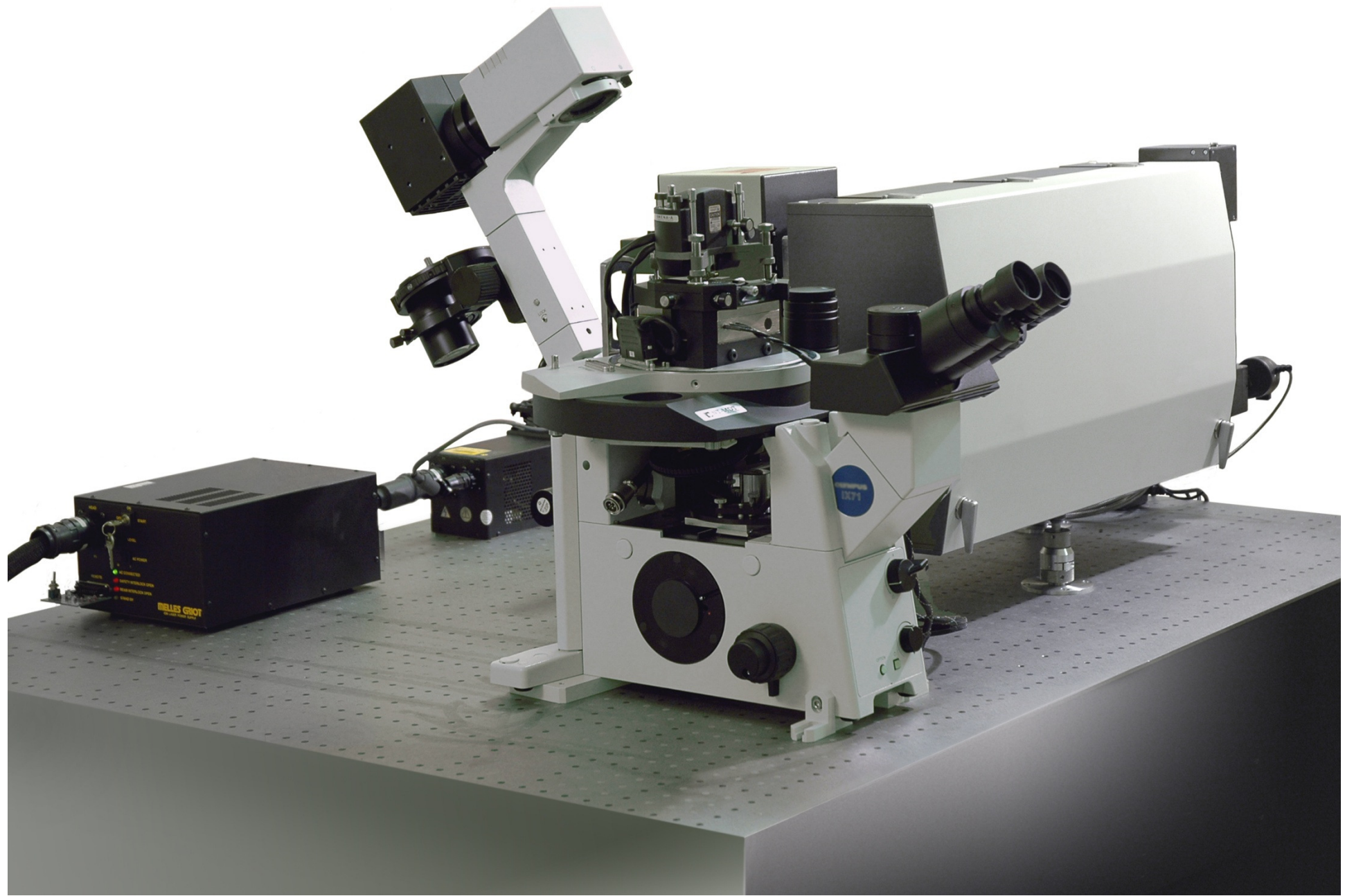
- [SPM Principles](#)
Animated schemes and short descriptions of operation modes for main types of SPM - Scanning Tunneling Microscope, Atomic Force Microscope, Magnetic Force Microscope, Scanning Near-Field Optical Microscope
- [SPM Basics](#)
Scanning Probe Microscopy physical basics including theoretical descriptions of main modes and interactive models
- [SPM Methodology](#)
Scanning Probe Microscopy methodologies of measuring different types of samples, in different environments, with use of different modes.
- [SPM Textbooks](#)
Scanning Probe Microscopy textbooks oriented to using of NT-MDT devices.

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Techniki SPM

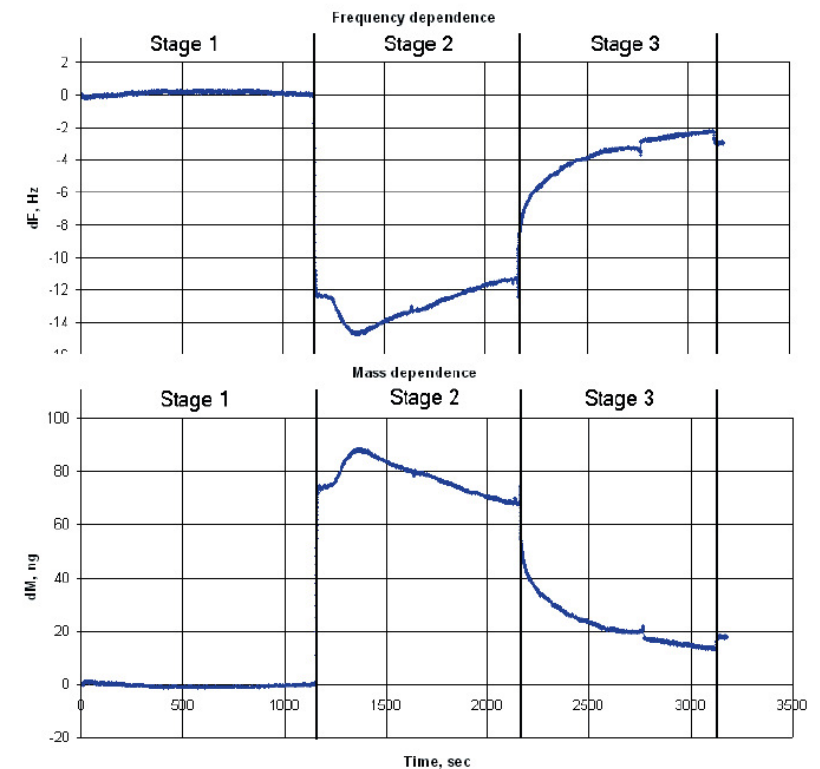
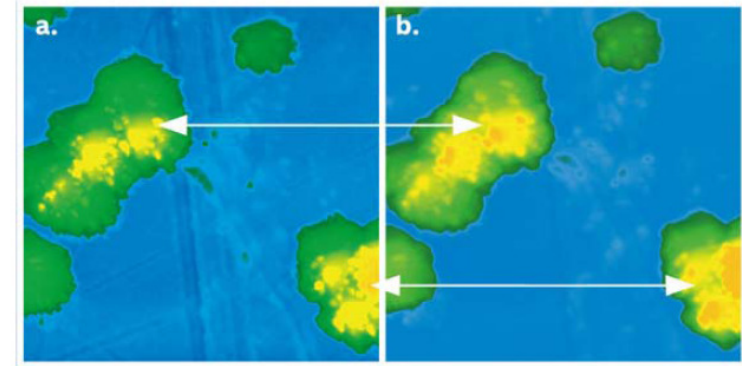
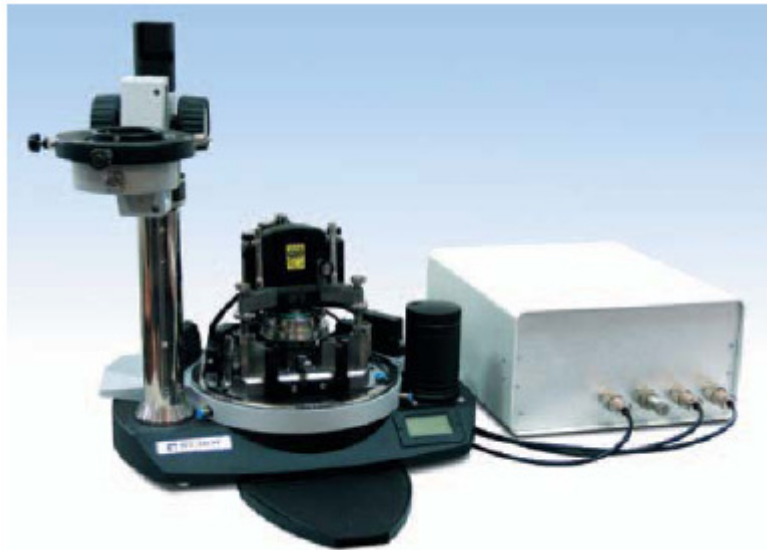


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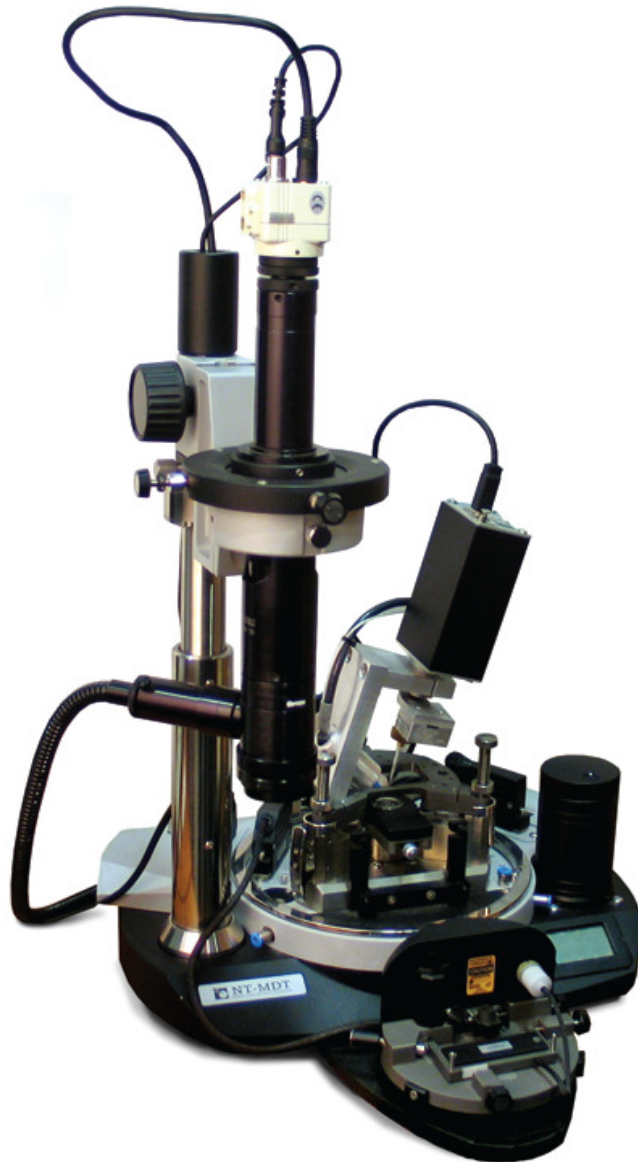
Techniki SPM

AFM QCM-D

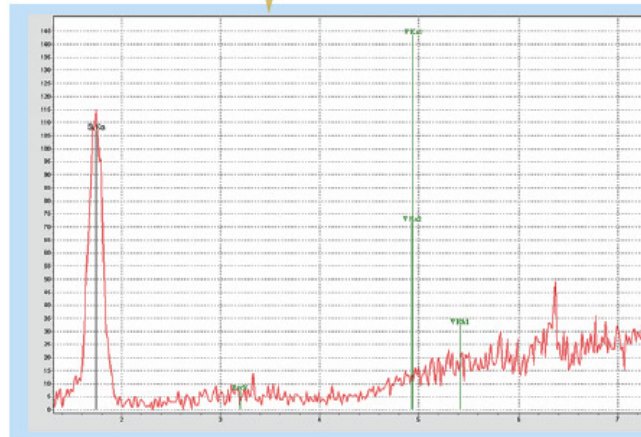
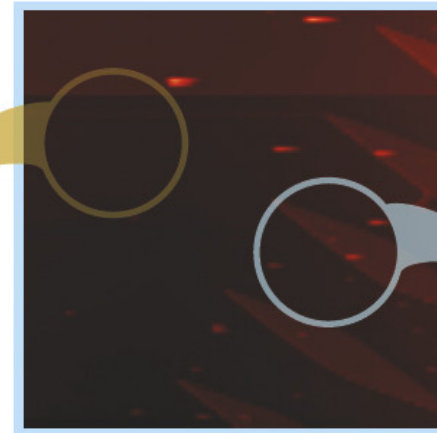


Techniki SPM

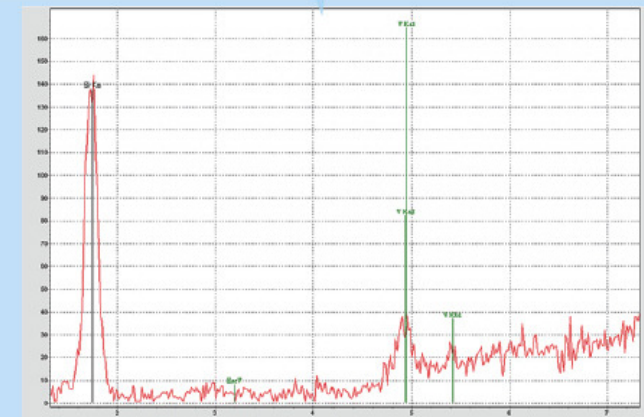
μ XRF



Surface Topography
Scan size: 40 x 50 μ m



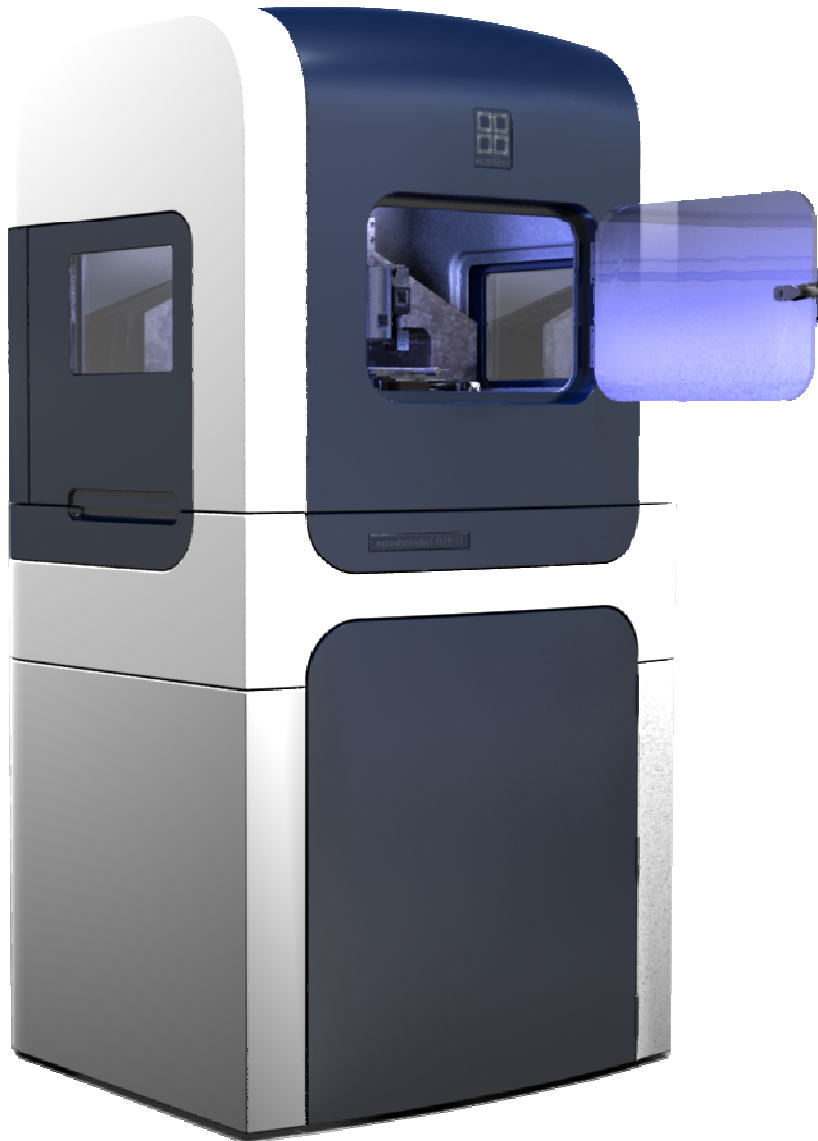
A. Spectrum of quartz substrate



B. Spectrum of vanadium deposition

Nanoindentacja

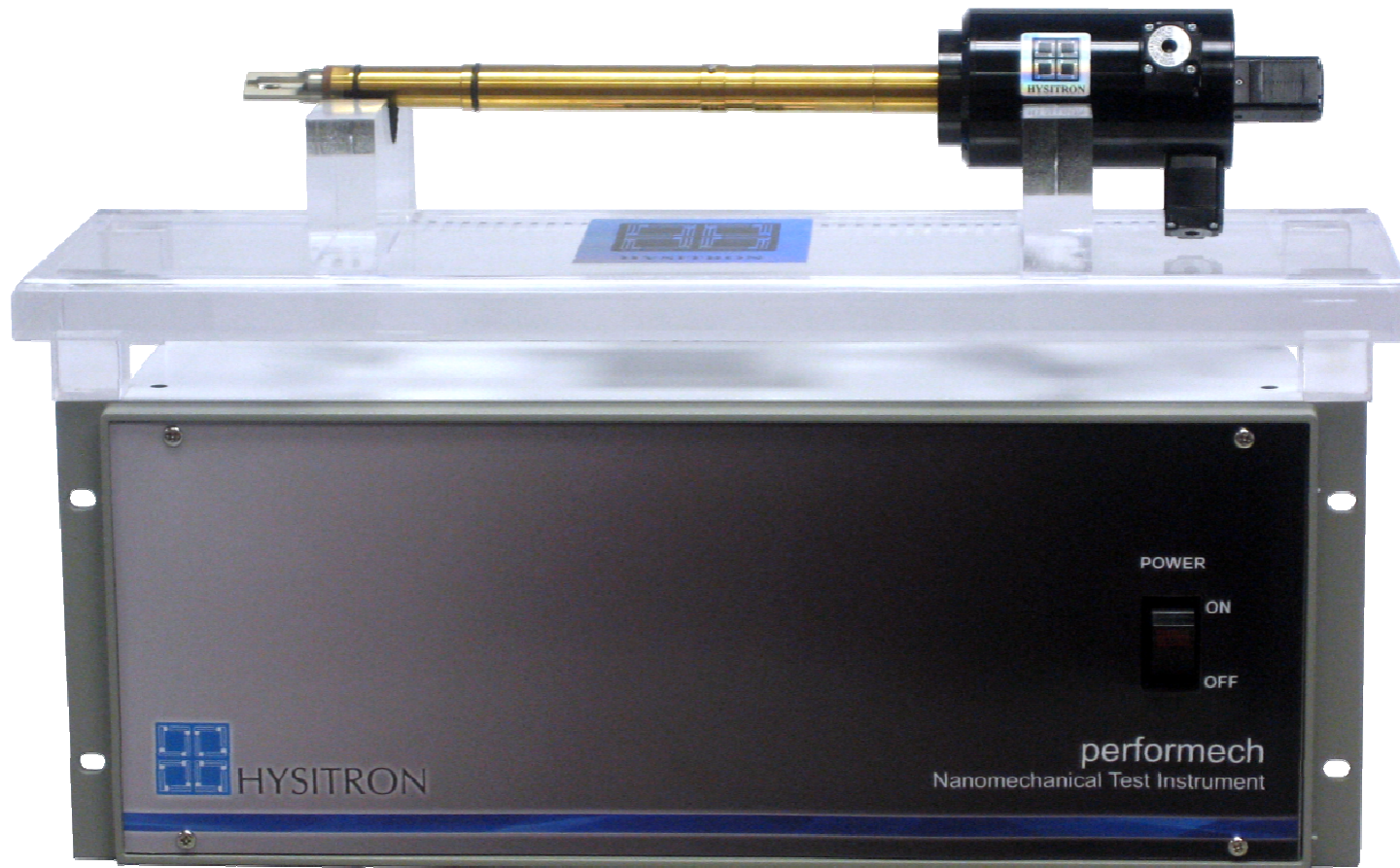
TI 950



- Noise floor < 30 nN
- Noise floor < 0.2 nm
- In-situ SPM
- Dokładność 10 nm
- Pomiar ilościowy
- Pełna automatyzacja

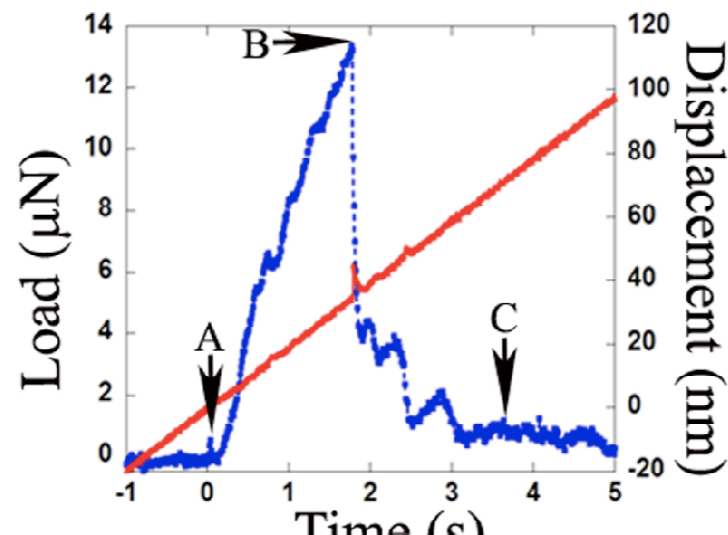
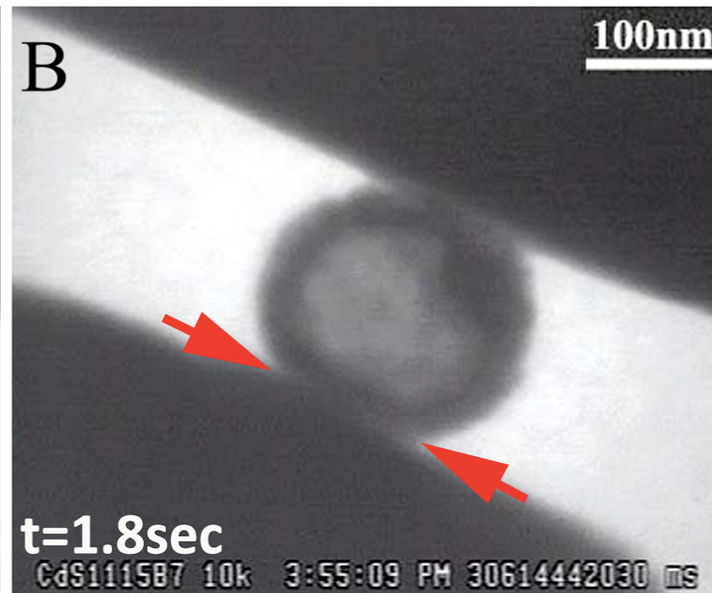
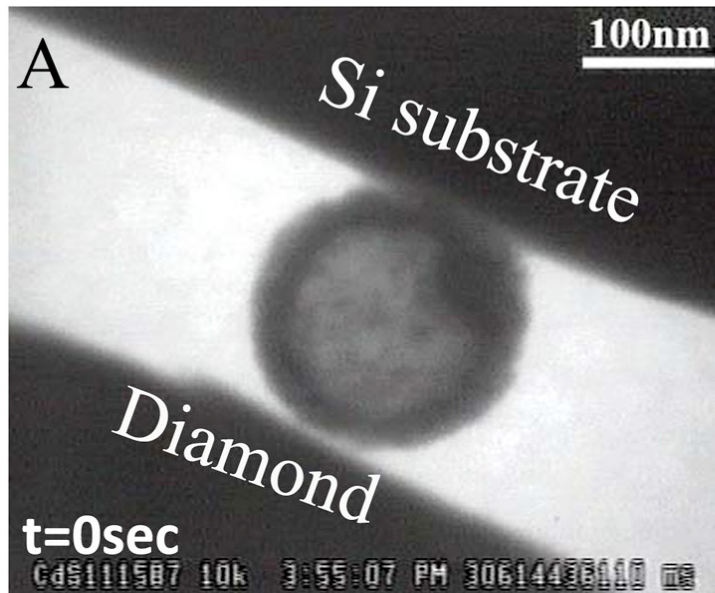
Nanoindentacja

Picoindenter



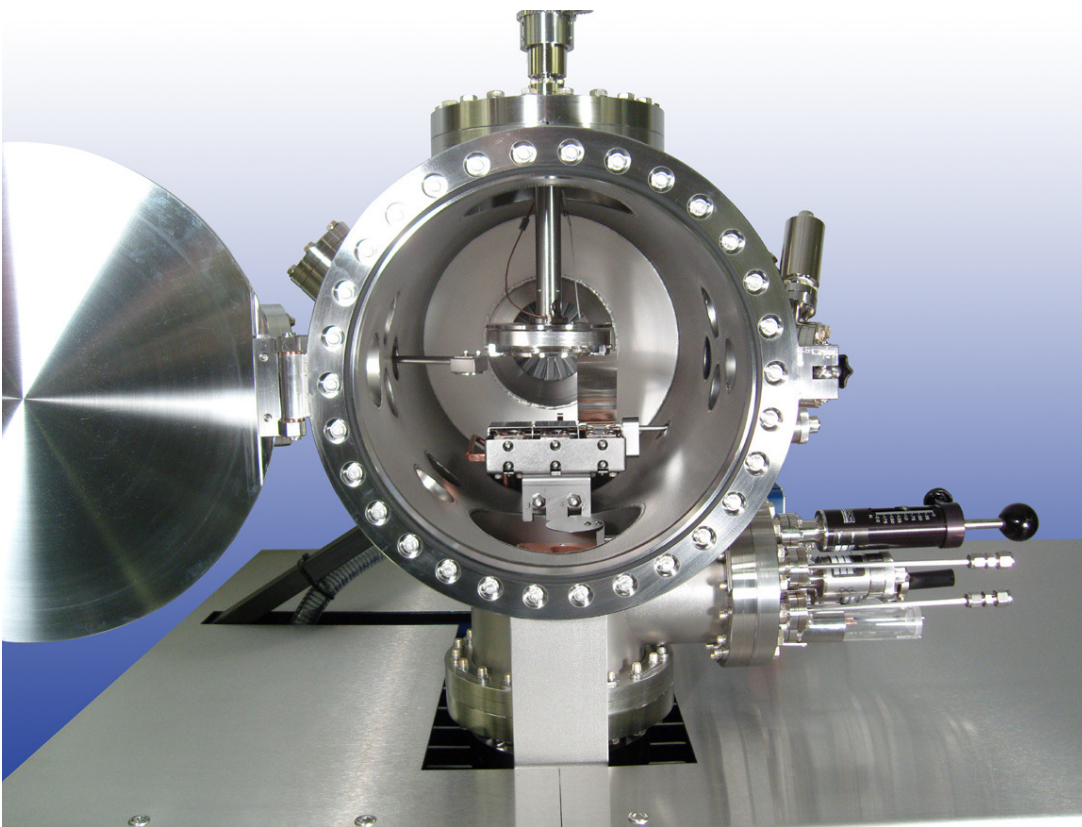
Nanoindentacja

Picoindenter



SVT

ALD PVD PLD



Dziękuję za uwagę!

