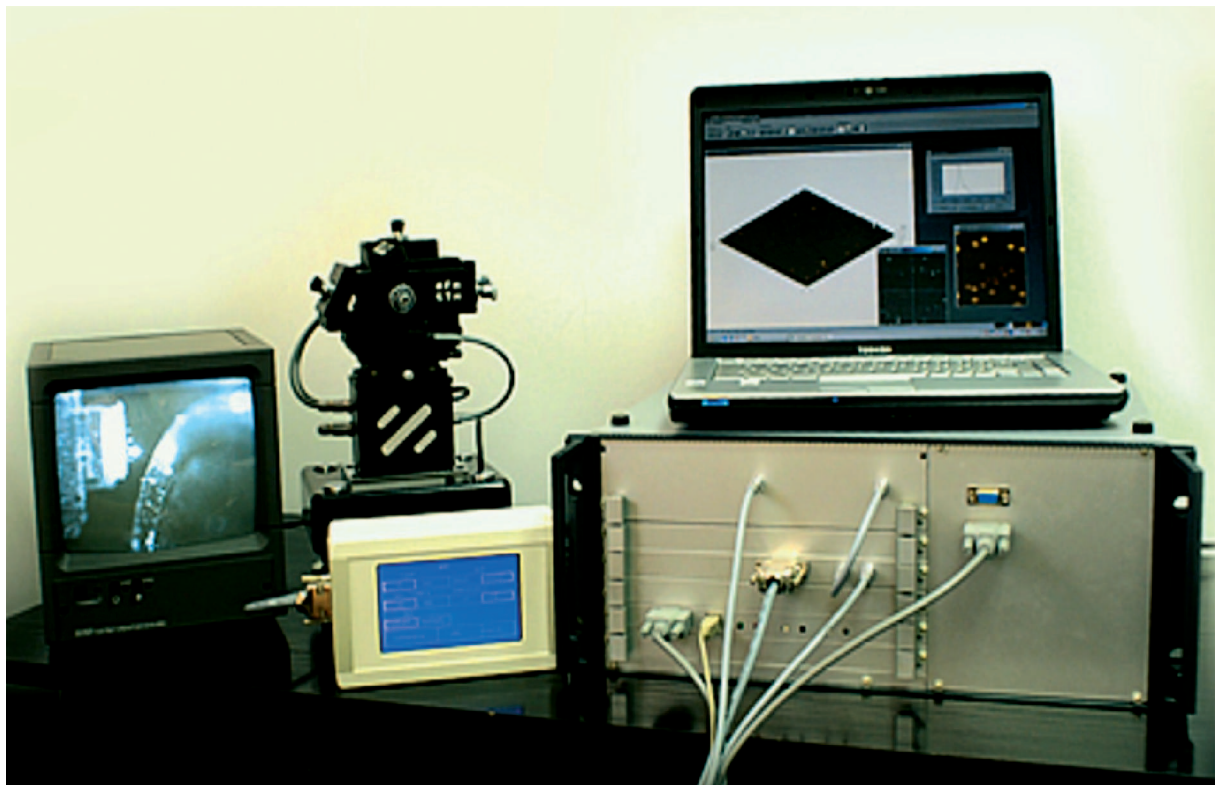


# **STM/AFM microscope for application in advanced technologies in industry and education**



**Executors**

## MAIN CHARACTERISTICS

It is a scanning tunnelling microscope (STM) and atomic force microscope (AFM) that consists of three main units:

- A gauge head with changeable elements allowing work in STM mode and AFM mode,
- An operator control panel designed for adjustment of AFM microscope, and
- Electronic modules placed in the cassette with VME bus module.

The microscope is characterised by simplicity and comfort of operation achieved thanks to the use of the following:

- A preview of the approaching process on the TV screen with high magnification,
- A preview of the adjustment of the AFM microscope on the TV screen or LCD operator panel,
- Hardware and software support of the initial approaching process.

Modular construction of the microscope enables the installation of additional electronic and software units and the implementation of new work modes increasing the range of applications.

## TECHNICAL PARAMETERS

Scanning range	5 to 100 micrometer
STM operation modes	constant distance constant current tunnelling spectroscopy and CITS current imaging tunnelling spectroscopy surface nano-modifications
AFM operation modes	constant force and distance non contact broken contact side force measurement options: phase contrast, magnetic force measurement
Electronic control system	modular construction, connection with PC via USB
Scanner type	tubular piezoelectric, exchangeable
Control system of the microscope	analogue with digital control
AFM control generator	DDS - Direct Digital Synthesis
Software package	control software for downloading data, adjustment microscope parameters and displaying current results graphic software presenting the measurement results and data analysis
Resolution	
STM microscope	atomic resolution on the HOPG sample
AFM microscope	mono-atomic dodges of the layers
Initial positioning range	x:10mm, y:10mm, z:8mm
Extension possibilities options:	MFM, EFM, LFM, CITS, SRM, SCM, KPM

### Contact