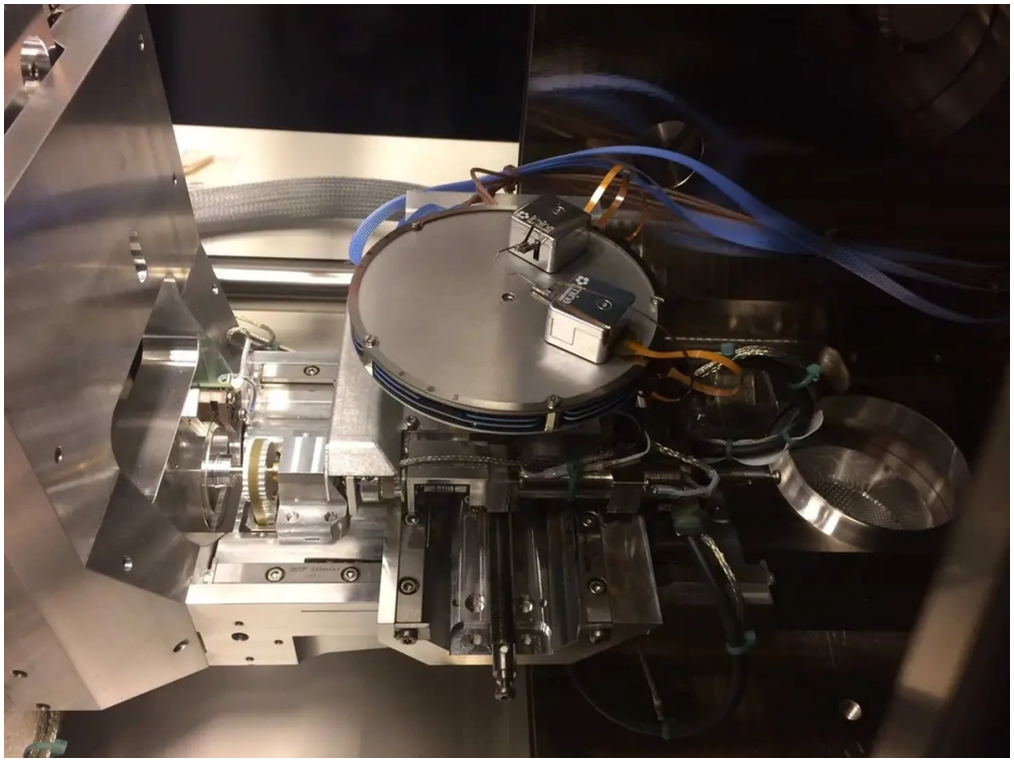
AGH Research Offer

miBot set of nanomanipulators



Technical description:

The system of two miBot-type nanomanipulators by IMINa, compatible with the scanning electron-ion microscope VERSA 3D. This system allows for in-situ resistance measurements during the nanostructuring process and manipulation of individual sub-micron objects. Each nanomanipulator has 3 axes along which it can move with precision to single nanometers and the ability to rotate. The radius of the measurement probe ranges from 100 to 500 nm, enabling the passage of currents with an intensity of 100 mA. External measurement electronics, such as the Keithley 2400 device, are used for resistance measurements.

Trade name: miBot Nanomanipulators

More details: /equipment/ukad-dwoch-nanomanipulatorow/

Access type: External

Type of accreditation / certificate: Not applicable

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Responsible body: Academic Centre for Materials and Nanotechnology

Group / laboratory / team: Department of Functional Materials and Nanomagnetism

Last update date: March 10, 2025, 1:27 p.m.

Year of commissioning: 2016

IDUB research areas:

(PRA 4) Technical solutions: from fundamental research, through modelling and design, to prototypes. The application of mathematical, information technology, and electronics tools to macro-, micro-, and nanoscale problems

Research capabilities:

Nanomanipulators enable advanced research on nanostructures and sub-micron objects, allowing for direct current-voltage measurements inside the microscope chamber during the nanostructuring process.

Measurement capabilities:

The system allows the passage of currents with an intensity of 100 mA using external measurement electronics.

For resistance measurements, we are using Keithley 2400 device.

Conditions for providing infrastructure:

Equipment is available in accordance with the Regulations for the Use of ACMiN's Research Infrastructure. (https://acmin.agh.edu.pl/home/acmin/5_Wspolpraca/Aparatura/Zasady_i_koszty_korzystania_z_infrastruktury_badawczej_ACMiN.pdf)