C147-E020

SHIMADZU
Excellence in Science

Scanning Probe Microscope/Atomic Force Microscope

SPM-9700HT Plus

Observations Independent of the Operator

ANALYTICAL INTELLIGENCE

The system and software are equipped with Analytical Intelligence, our user support technology that provides maximum support for the overall workflow, from data acquisition to analysis.

Instrument preparation

Cantilever master (Optional)

This jig ensures easy and secure mounting of the cantilever.

Startup

Observation Navigation

The entire sequence from startup to measurement is supported by observation navigation. Everything up to observation can be implemented by anyone without consulting the instruction manual.

Optimization of observation conditions

NanoAssist

With the SPM-9700HT™ Plus, the observation conditions, including the operating points and gain values, are configured automatically.

Observation

HT scanner, Nano3D Mapping™ Fast (Optional)

Ultra-fast observations have been achieved by improving the processing speed of the control system and optimizing the drive unit.
The time needed for observations has been significantly reduced while maintaining optimal performance.

Data analysis

An assortment of data analysis functions

Multiple data analysis tools accommodate a variety of samples and applications, including surface roughness, particle data analysis, and morphological analysis.

To the next sample

Head slide mechanism

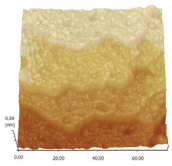
The cantilever does not need to be configured again. You can start observing the next sample with the current settings.

ANALYTICAL INTELLIGENCE

Analytical Intelligence is a new concept for analytical instruments proposed by Shimadzu.
The system and software operate like an experienced engineer. The status and the quality of the results are determined automatically, and users are given feedback and solutions for problems.
This compensates for differences in knowledge and experience with regard to the analytical instrument, ensuring data reliability.

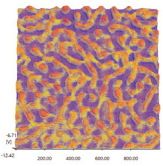
Application Mode Accommodates an Assortment of Samples

Contact/Dynamic



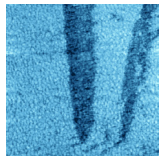
Zeolite

Phase/Force Modulation



Blended Polymer

Lateral Force (LFM)

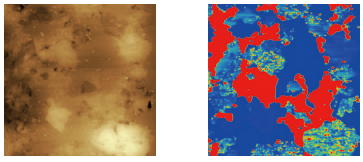


Platinum Iridium Film

Observation in Liquid*

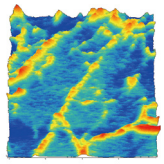
Scan here for detailed data.

Current*



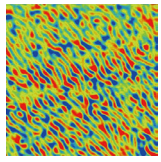
Positive Battery Electrode

Surface Potential (KPFM)*



CNT/Polymer Composite Material

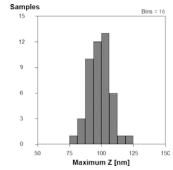
Magnetic Force (MFM)*



Magnetic Thin Film

Particle Analysis*

Cellulose Nanofibers



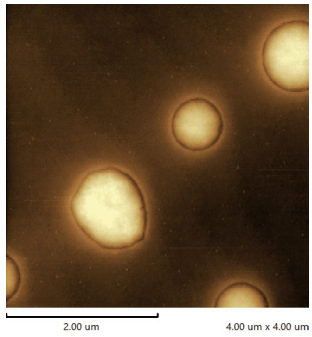
Particle Distribution

* Option

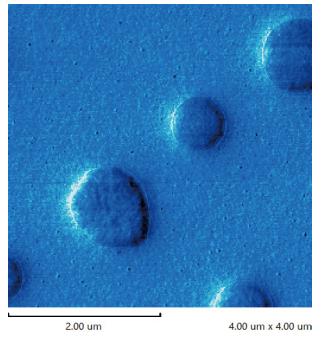
NEW Nano3D Mapping Fast (Optional)

The time required for physical property mapping has been significantly reduced compared to the previous machine (SPM-9700HT). The shorter mapping time enables stable physical property evaluation.

Observation time
Approx. 27 min



Surface Shape



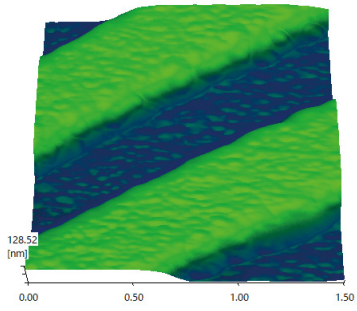
Adhesive Force

NEW NanoAssist Optimizes Observation Conditions

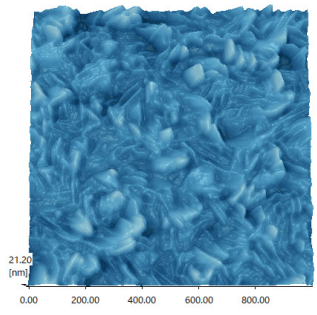
ANALYTICAL INTELLIGENCE

Only the observation range needs to be set. Other observation conditions are set automatically.

Shape Images Obtained with NanoAssist



Diffraction Grating



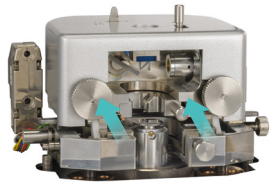
Vapor-Deposited Nb Coating

High-Throughput Observations

Head Slide Mechanism

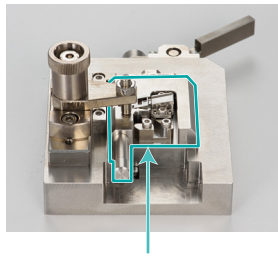
The design allows space around the sample, while maintaining a high level of rigidity.

- Samples can be replaced without removing the cantilever holder.
- Samples can be accessed even during SPM observations.
- Samples are approached automatically, regardless of the sample thickness.



Cantilever Master
Cantilever Mounting Jig (Optional)

Even small cantilevers can be attached with ease.



Installation Specifications

- Installation Environment

The following conditions are preferable for the installation environment.
Temperature 23 °C ± 5 °C
Humidity 60 % max. (no condensation)

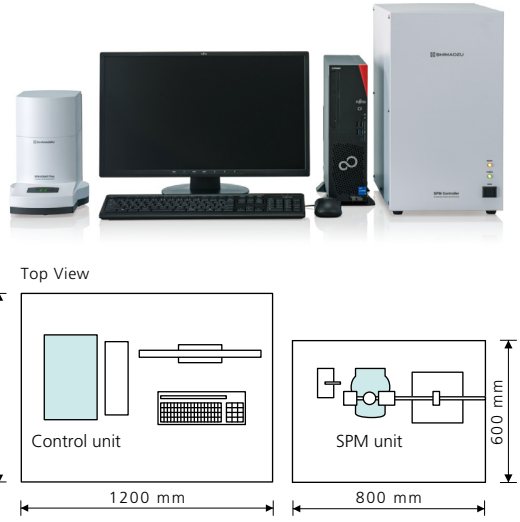
- Power Supply

The power supply listed is required for operating this instrument.
SPM-9700HT Plus
Single-phase 100 to 120 V, 50/60 Hz, 15 A, 2 circuits
Grounding Type D grounding (maximum resistance 100 Ω)

- The above-mentioned is the power supply for the basic SPM-9700HT Plus specifications. This will change depending on the optional configuration. For details, refer to the specifications.

- Size and Weight

SPM unit: W180 × D255 × H260 mm, 5.5 kg
Control unit: W250 × D420 × H454 mm, 18.5 kg



- This figure is one example of a configuration.
- The sizes of the OA table and desk-type air-spring vibration damper are for reference.

SHIMADZU

Shimadzu Corporation
www.shimadzu.com/an/