

# ERGO

All-New AFM User Interface



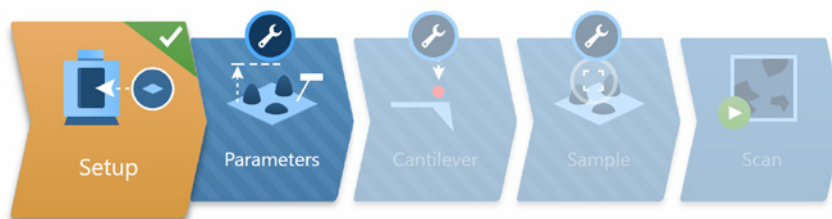
# Ergo

## Repeatable Results in Minutes

Ergo is the all-new software interface for Asylum Research atomic force microscopes. Based on the powerful Oxford Instruments AZtec® software platform, it improves productivity for both infrequent users and experts. With a streamlined workflow for quick AFM setup and simplified acquisition of high-quality images, Ergo users will more quickly be able to complete their measurements and confidently draw meaningful conclusions.

## Auto AFM Calibration in Seconds

Ergo's workflow guides you from loading a new probe to aligning the laser with a few clicks. In the background, Asylum's proprietary GetReal™ technology automatically calibrates the cantilever each time to help ensure the most consistent results from day-to-day.

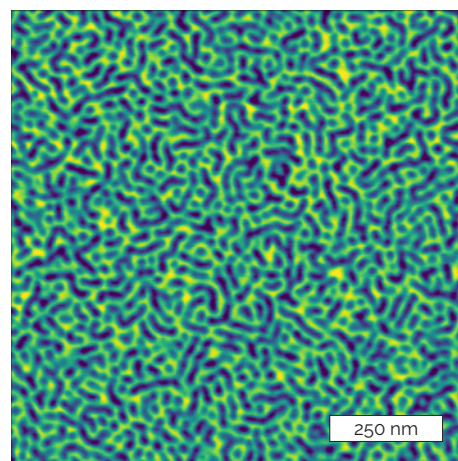


## Rapid Generation of High-Quality Images That You Can Trust

The most common routine AFM measurement is the acquisition of topographical images in air. Ergo has embedded Asylum's proprietary AUTOPILOT™ algorithm, which automatically calculates the optimal imaging settings and starts producing high-quality data from the first scan line.

## Minimal Training Required

Ergo shares a common core and workflow concept with the Oxford Instruments AZtec software for SEM and TEM analyzers. This tried and tested platform allows users to focus on results and not on the equipment. Lab managers report that new users quickly become more productive and require less ongoing support. Ergo is ideal for shared imaging facilities and research laboratories.

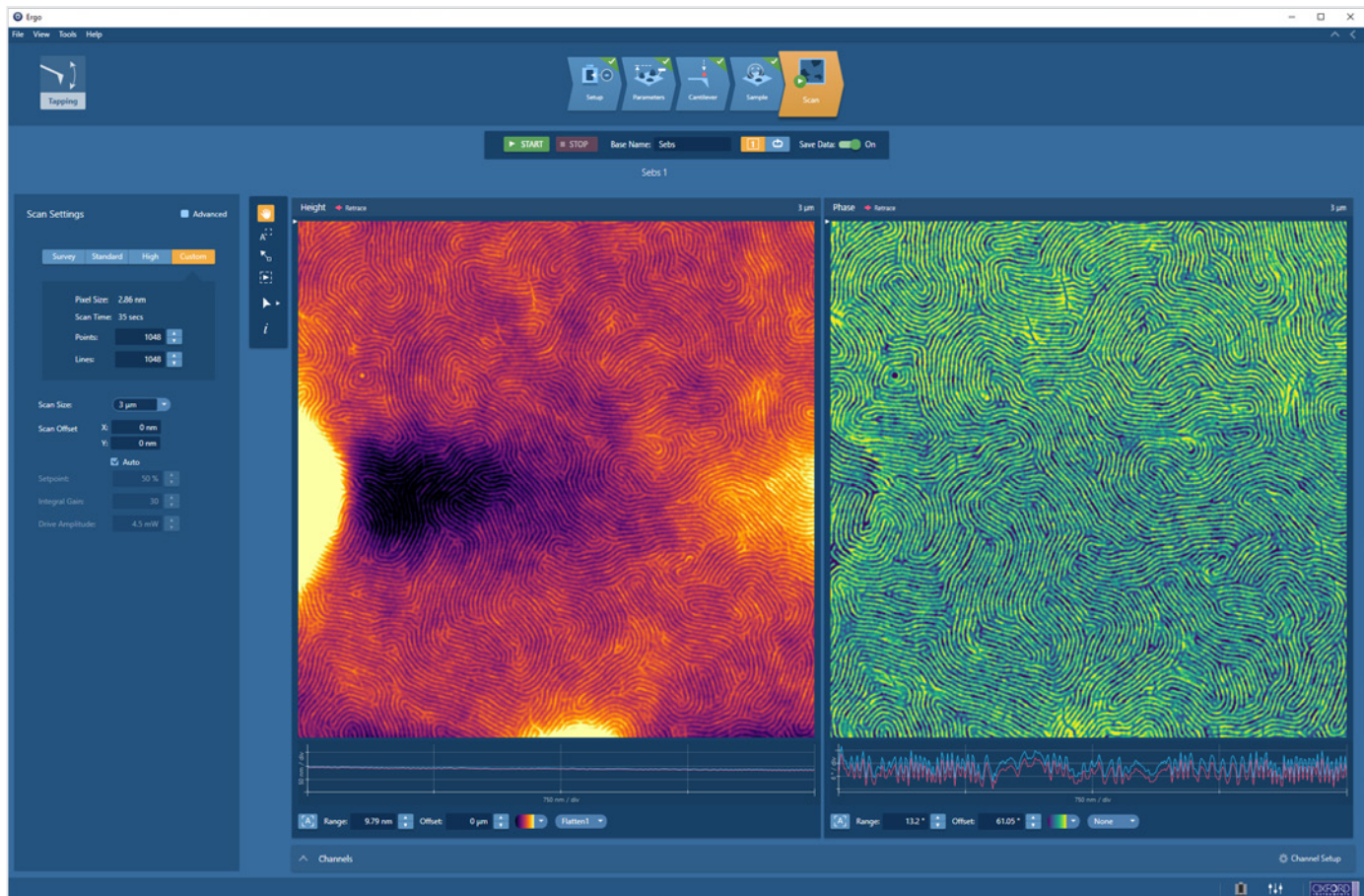


### **SEBS triblock copolymer**

Tapping mode phase image of a triblock copolymer (SEBS) spuncoat onto a silicon wafer, 1  $\mu\text{m}$  scan. The cover image shows the same sample but a 7  $\mu\text{m}$  scan.

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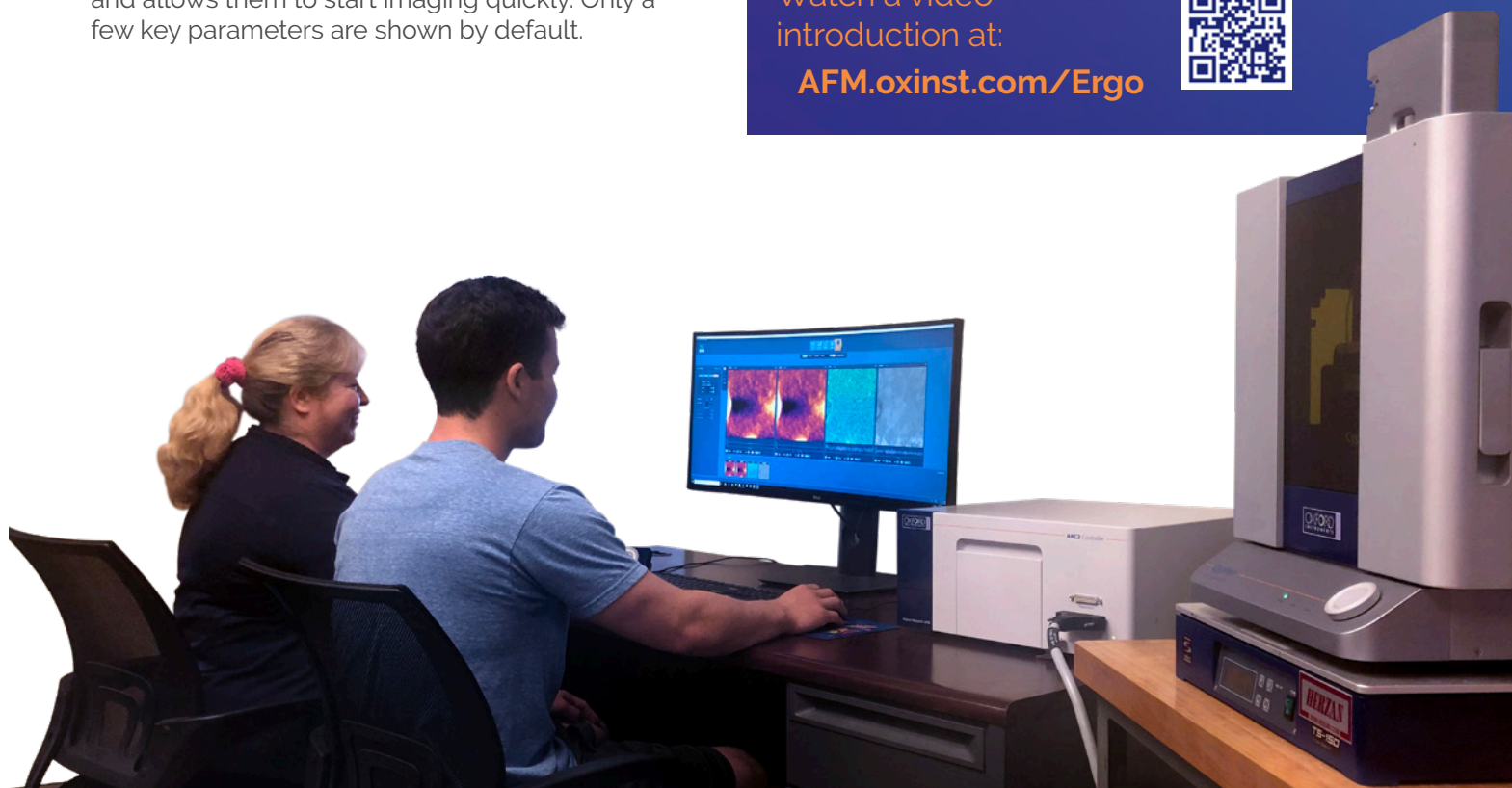
## The Future of AFM Control



### Ergo user interface is simple and uncluttered

A clear workflow guides users through setup and allows them to start imaging quickly. Only a few key parameters are shown by default.

Watch a video  
introduction at:  
[AFM.oxinst.com/Ergo](https://AFM.oxinst.com/Ergo)

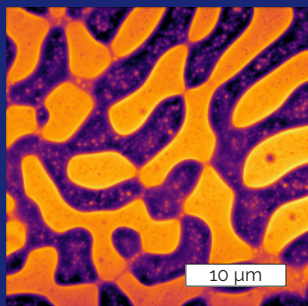




## Automated Image Optimization Works on a Wide Variety of Sample Types

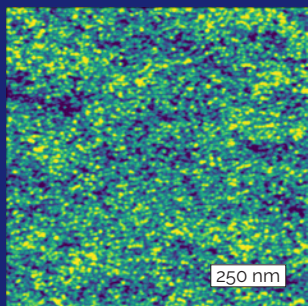
Asylum's AUTOPILOT algorithm has been developed to work on all sample types commonly found in academic and industrial research, even very challenging samples like those that are very rough or exhibit high tip-sample adhesion. Here are just a few examples:

Learn more about Ergo:  
<https://AFM.oxinst.com/Ergo>



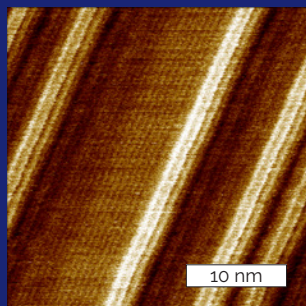
### Polymer blend

AFM is a powerful tool for visualizing the microstructure of polymers, here a polystyrene - polycaprolactone blend.



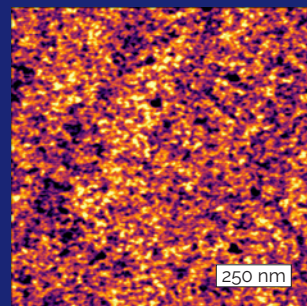
### PMR disk drive media

Roughness and defects are key quality control metrics on disk drive media that affect data storage density.



### PTFE membrane

Ergo easily achieves high resolution using AUTOPILOT, here resolving the individual PTFE molecule chains.



### Silicon wafer

Substrate roughness is one of the most common AFM measurements. Ergo makes it simple and repeatable.

## Advanced Mode Operation

Ergo works in concert with Asylum's IGOR Pro-based software that is supplied with every system. Expert users have the ability to operate "advanced modes" and exercise the full customization capabilities of the AFM. The combination of the two provides users an unmatched flexibility.

Specifications	Ergo v1.0	Notes
Supported AFM Models	Cypher S, Cypher ES, Cypher VRS	Ergo v1.0 does not yet support Cypher ES accessories or video-rate imaging on the Cypher VRS.
Supported Modes	Tapping Mode (AC Mode)	Available signals include: Height, Height Sensor, Amplitude, and Phase
Supported Probes	Olympus: AC55, AC160, AC200, and AC240. Nanoworld: Arrow UHF, FM, NCH Asylum Research: FS-1500	Variants of these same probes with the same cantilever dimensions can also be used.  Other probes can be used without automatic calibration and automatic image optimization.
Image Acquisition	Up to 8 simultaneous image channels. Up to 4096x4096 pixels per channel.	Currently limited by the available data channels in tapping mode.
Operating System	Microsoft Windows 10	
Language	English	Additional languages in future versions.

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