

Press Release

Thursday, 3 March 2022

Nanosurf launched a new atomic force microscopy measurement mode – *WaveMode* – at the Biophysical Society Annual Meeting (BPS2022) in San Francisco last week.

WaveMode is the fastest force curve-based imaging mode with applications for all kinds of samples and all environments, and is exclusively available on Nanosurf's DriveAFM. It represents the first commercially available off-resonance mode that can use photothermal actuation of the cantilever – instead of the traditional piezo actuation – to enable fast, stable, and gentle imaging.

Over the last 1.5 years Nanosurf worked on the commercialization of this technology, in close collaboration with EPFL and ZHAW, with financial support coming from the Innosuisse Agency.

“We like to implement new algorithms that we develop to solve industrial problems. One of the biggest challenges is processing data in real time, with machine learning algorithms being required to process a large amount of data within a millisecond.” – Prof. Matthias Rosenthal, ZHAW.

WaveMode is based on CleanDrive, Nanosurf's exclusive photothermal actuation of the cantilever. CleanDrive provides stable, low-drift, and high signal-to-noise cantilever actuation that is highly insensitive to changes in the environment – at and off the cantilever's resonance frequency. Providing these key advantages in both liquid and air environments, WaveMode offer users of all experience levels and backgrounds many advantages, including fast imaging rates, no cantilever tuning, and stable imaging conditions while maintaining force control throughout the imaging process. Combined with the fully automated laser and photodetector alignment of the DriveAFM, WaveMode enables a faster workflow and improved results for AFM imaging in life-science and materials science applications.

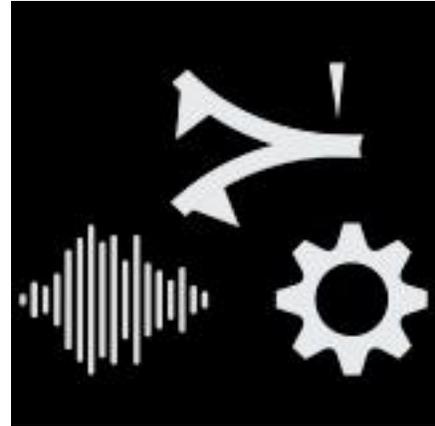
Dr. Christian Bippes, product manager of the DriveAFM and WaveMode, viewed the launch as an overwhelming success, and was positive about the initial reaction from high-profile AFM experts during the first live demonstrations at Nanosurf's exhibition booth: “I am very pleased with the product and the large positive feedback from the community we got here at the conference” he said when asked about his impressions of the market introduction.

The introduction of WaveMode marks another milestone in the tradition of Nanosurf's 25-year history of innovation in scanning probe microscopy.

About DriveAFM:

The DriveAFM was released in 2020 and is Nanosurf's flagship AFM platform based on a tip-scanning design combining atomic resolution, imaging capability from the atomic scale through 100 μm , full motorization, and fast scanning. With innovations in scanner design and optical beam path engineering, the DriveAFM offers superior research performance.

About Nanosurf:



Nanosurf was founded in 1997 in Liestal, Switzerland, and has since become one of the most trusted and established AFM brands in the market today. While Nanosurf continues to develop and manufacture AFMs at its Swiss headquarters, it is a global company with direct sales, service and support operations in China, Germany, India, Singapore, the UK and US.