NANOSURF AFM SOLUTIONS FOR BIOLOGY, ELECTROCHEMISTRY AND MEDICAL APPLICATIONS

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Abstract
We would like to present Nanosurf AFM and STM systems. Besides introducing the brand new Scanning Tunneling Microscope NaioSTM dedicated to teaching, we will focus on a few special applications of Nanosurf FlexAFM that address topics on different and exciting research areas.
We will discuss the FluidFM (working with hollow cantilever to locally manipulate samples), the EC-AFM package (Electrochemical AFM) and the ARTIDIS technology (tissues diagnostic tool in development at the Biozentrum of Basel University in collaboration with Nanosurf).
FluidFM is an AFM based solution that, due to its versatility, minimal invasive nature, automation capabilities and ease of use, allows single cell experiments at high throughput and is expected to play a significant role in areas like proteomics, metabolomics, drug discovery, cell mechanics and stem cell research.
The EC-AFM from Nanosurf allows in-situ monitoring of morphological changes during electrodeposition of material on an electrode surface, and studies of charged solid-liquid interfaces.
The ARTIDIS project relies on the very high nanomechanical sensitivity of AFM to detect and differentiate between the various stages of disease in soft human tissues (e.g. breast, cartilage, skin, retina, blood vessels, bladder etc.).

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