Preparing, Conducting and Customizing UHV NC-AFM experiments from Scratch

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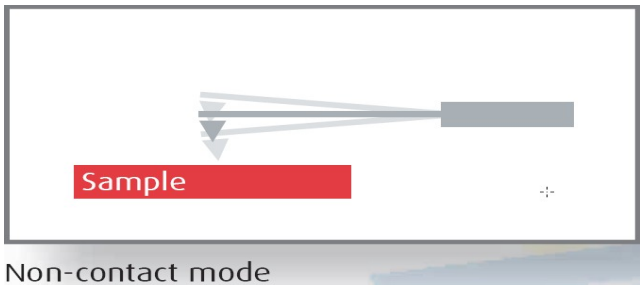
UHV NC-AFM is an exciting method for analysis of microscopic surface structures and interaction forces at high and ultra-high resolution. However, for most scientists at otherwise even experienced level NC-AFM in UHV exhibits a few obstacles and peculiarities which cause a relatively steep learning curve as compared to other more straight forward surface analysis techniques.

This talk is meant to give an introductory guide and overview of possibilities for the NC-AFM method in UHV starting from cantilever or QPlus sensor selection and characterization over setup procedures including PLL operation, parameter selections, specific measurements techniques such as Kelvin Probe Force Microscopy (KPFM), Magnetic Force Microscopy (MFM) and force spectroscopy, high spatial resolution and customization of experiments.



References

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