

Recent results with a small-amplitude AFM in UHV

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Recently, small-amplitude, off-resonance AFM (SAOR-AFM) has been shown to be a powerful method for quantitative measurements of conservative [1] and dissipative [2] interactions at the atomic scale. It can also provide atomic resolution images of the force gradient at semiconductor [3] and metal surfaces [4]. SAOR-AFM has the advantage of providing linear measurements [5] and thus allows for easy separation of conservative and dissipative effects. Here we present recent results on adsorbate covered surfaces, in particular copper surfaces covered with halogen atoms. We will explore the nanomechanics of adsorbed atoms, in particular with respect to dissipative interactions between the tip and adatom structures.

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