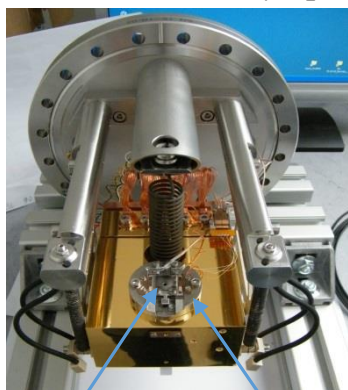


Preface

Scanning Probe Microscopy (SPM) is a group of methods, like Scanning Tunneling Microscopy (STM) and Atomic Force Microscopy (AFM), that uses a probe to sense a probe-to-surface atom interaction. By two-dimensional scanning of the probe on the surface in Ultra High Vacuum (UHV) condition reveals atomic resolution microscopic image.

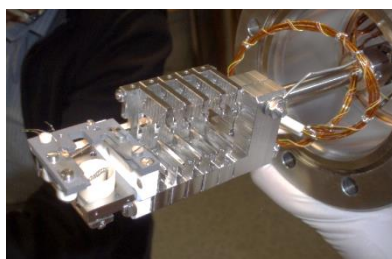
Infrastructure

SPM 150 Aarhus by Specs



Sample holder

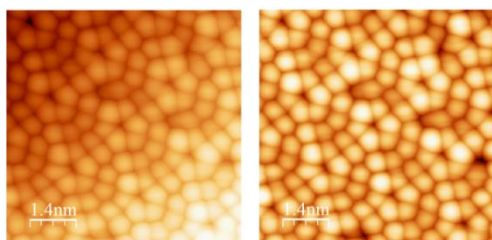
Housing of the scanning unit



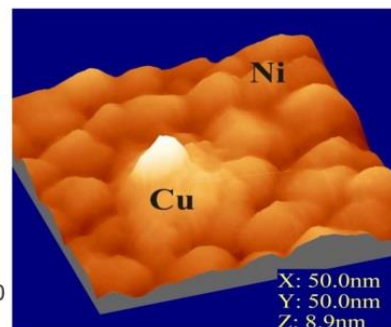
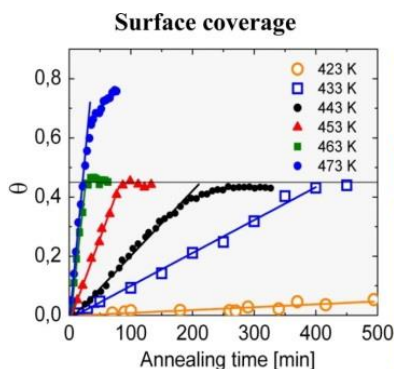
Transporting samples in UHV to X-ray Photoelectron Spectroscopy (XPS) or Secondary Neutral Mass Spectrometer (SNMS) equipment

Due to common vacuum system with other equipment as XPS and SNMS it is possible to measure complex tasks, without exposition samples to air

Example

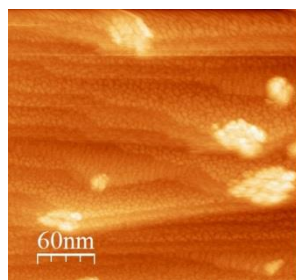


Reconstructed surface of Si(111) surface



Combined measurement on Grain Boundary Diffusion by STM and SNMS

[V. Takáts et al., Applied Surface Science 440 (2018) 275-281]



Surface contamination on atomically flat copper surface