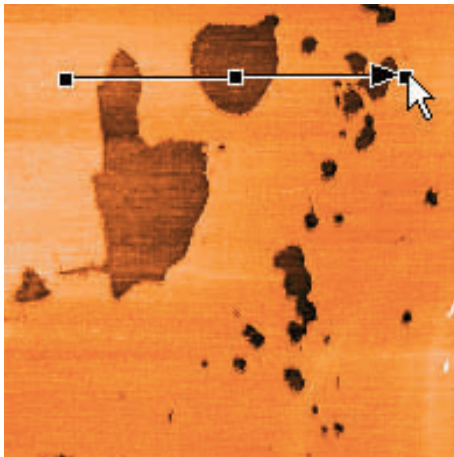


STM study of TiS₂ single crystals

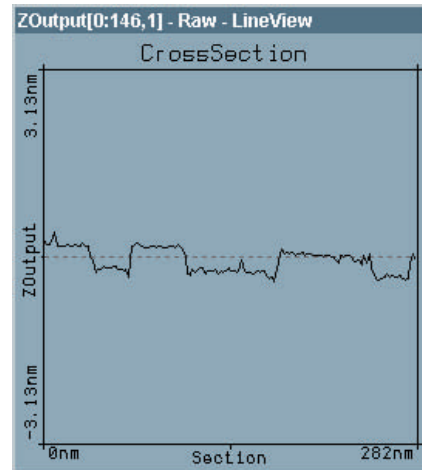
Nanosurf® STM Application Note

With the easyScan STM synthetic TiS₂ single crystals have been investigated. On the 'as grown' material holes are observed on a large scan size. Closer examination (cross section) reveals that the depth of the holes amounts to about 4 Angstrom which corresponds to a single atomic layer.

STM measurements on TiS₂ single crystal (raw data)

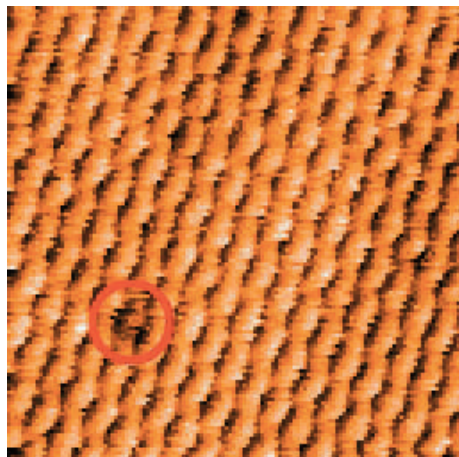


scan size: 375 nm



crosssection along the arrow

The image below shows a scan with atomic resolution showing the regular atomic rows and an atomic defect (encircled).



scan size: 4.8 nm

The STM experiments were performed under ambient conditions using mechanically prepared Pt-Ir tips. Typical tunneling parameters of 3.8 nA tunneling current and 180 mV GapVoltage were applied.