【SP-01】

STM study of the 12 structure on the Ag/Si(110) surface

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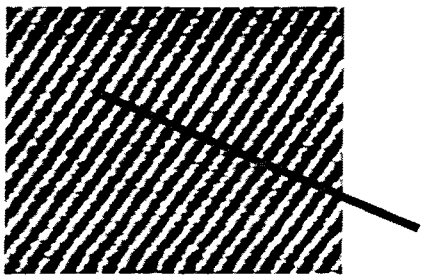
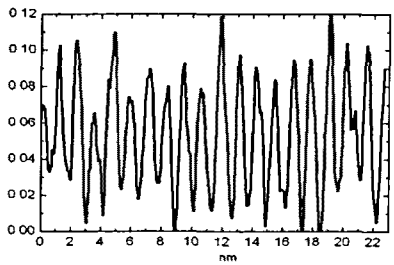
Due to attraction in the science and the technology, such as a ideal metal contact, Schottkey barrier, and chemical non-reactivity of Ag with Si. There are many studies on novel metal adsorption on low-index Si surfaces such as Si(111) or Si(100) surface . However, metal adsorption on Si(110) surface have been received last few years much less attention than one of low-index Si surfaces due to lack of fundamental information of clean Si(110) surface structure [1]. The "216"structure has been only reported as a reconstructed phase of the clean Si(110) surface[2]. Ag on Si(111) and Si(100) surfaces [3] rows in the Stranski-Krastanov mode and a lot of many superstructures were observed. For Ag/Si(110) system, when Ag was deposited on the Si(110)216 surface at 500oC, the (9,3)(-9,3) at 0.14 ML, 54 at 0.61ML, and 11 structures were reported by Yamamoto [4] using reflection high-energy electron diffraction total reflection angle X-ray spectroscopy (RHEED-TRAXS). But, these structures could not be observed from our careful experiment.

We report results of Scanning tunneling microscopy (STM) for the purpose of suggesting atomic structure of Ag/Si(110)-12 surface.





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