

【포스터 : 표면03】

**High-resolution photoemission spectroscopy on
Sn/Si(110) surface**

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Superstructures ((-1,6)x(2,2), (-3,3)x(1,2)) formed on the Sn/Si(110) surface have been investigated by high-resolution photoelectron spectroscopy. The Si 2p and Sn 4d core-level spectra for two surfaces have been measured at normal emission angle at several photon energies(See the results in Fig1). These spectra were fitted using spin-orbit splitting Voigt function in this paper. The spectra measured from both surfaces at surface sensitive photon energy were deconvoluted into bulk and several surface components (Si adatom, Sn-adsorbed Si atom, 2nd layer atom etc). The Sn 4d core level spectra showed to be consisted of several components in Fig.1(c) and (d). It seems that these fitting results support a structural model suggested by Toshu An et.al [1,2] from STM study.

(a) (b) (c) (d)

Fig 1. (a) and (b) shows results for the Si 2p core-level spectra taken at various photon energy at normal emission. (c) and (d) shows results for the Sn 4d core-level spectra taken at photon energy of 90eV at normal emission

Reference

- [1] Toshu AN, Masamichi YOSHIMURA, Kazuyuki UEDA, Jpn. J. Appl. Phys, 39 (2000) 4635-4636.
- [2] Toshu An, Masamichi Yoshimura, Kazuyuki Ueda, Appl. Surf. Sci, 130132 (1998) 11812.