[IV~1] [초청]

Surface and Interface Analysis with Medium Energy Ion Scattering Spectroscopy

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Most of the surface/interface analysis tools have limited depth profiling capability in terms of the profiling range and the depth resolution. However, MEIS can profile the surface and subsurface composition and structure quantitatively and non-destructively with atomic layer depth resolution.

In this presentation, the MEIS system developed at KRISS will be briefly described with an introduction on the principle of MEIS. Recent MEIS results on the surface and interface composition and structural change due to ion bombardment will be presented for preferential sputtering of Ta_2O_5 and damage depth profiles of Si(001), Pt(111), and Cu(111) due to Ar^+ ion bombardment. Direct observation of strained Si lattices and its distribution in the Si(001)-SiO_2 interface and the initial stage of Co growth on Pt(111) will be reported. H surfactant effects on epitaxial growth of Ge on Si(001) will be discussed with STM results from SNU.