[V-1] [초청]

Quantitative Surface Analysis using Laser Ionisation Mass Spectrometry

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In laser ionisation mass spectrometry (LIMS) atoms and molecules which are desorbed from solid surfaces are ionised by an intense laser beam. The photoions which are created are then mass analysed in a time-of-flight mass spectrometer. In best situations, 10% of the ejected particles can be detected, giving the technique ppb sensitivity. Since the ionisation and desorption steps are separated, matrix effects are minimised, in contrast to competitor techniques like SIMS, so quantitation is improved. The talk will illustrate the application of LIMS to basic studies in sputtering in Sr, Cu3Au(100) and Ni3Al(100) as well as ultratrace analysis of Zr in Si.