

ELECTRON ENERGY LOSS SPECTROSCOPY

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Abstract

Determining electron energy losses is of great interest for basic studies of interaction of low energetic electrons with solid surfaces as well as for the interpretation of Auger electron spectra. The primary energies within the range of 100–2000 eV are realizable in commercial Auger electron spectrometers and, therefore, it is possible to measure structures based on electron energy loss processes, i. e. surface and volume-plasmon excitation simultaneously to Auger electron spectroscopy. The applicability of this method is demonstrated on Al and Al-oxide as well as on Ti and Ti-oxide. Consequently, statements on concentration gradients were possible by choosing the primary energy and thereby the information depth.

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