

FORMATION OF REFLECTED ELECTRON
ENERGY LOSS SPECTRA IN THE REGION
OF EXCITATION OF SURFACE PLASMONS

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S u m m a r y

We investigate theoretically reflected electron energy loss spectra (REELS) in the region of excitations of surface plasmons by means of the elastic-inelastic scattering model. The model explains an azimuthal anisotropy of the REELS line intensity that was recently experimentally observed. A new peculiarity that follows from our method is the dependence of spectra on the elastic potential shape. The consideration of surface screening allows us to explain the dependence of the line halfwidth on the probe electron energy.