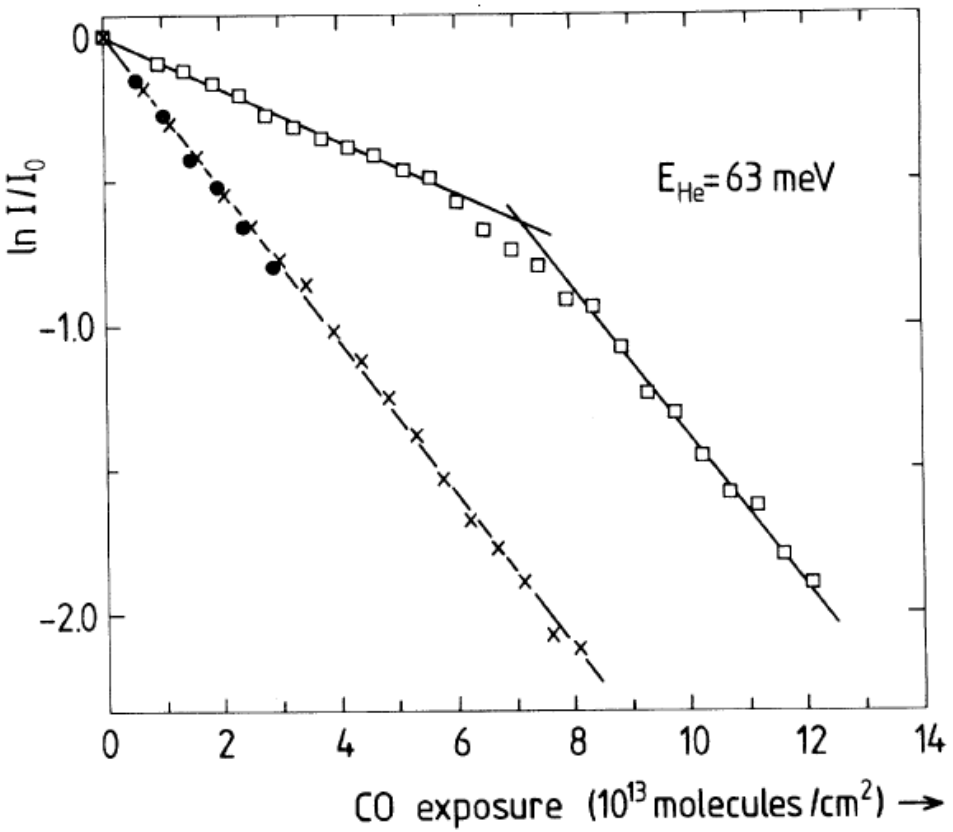


FIG. 1. He specular-beam intensity, I, vs CO exposure at constant pressure ($p_{CO} \simeq 3\times10^{-9}$ mbar) and constant temperature. The He beam is scattered from an "ideal" Pt(111) surface at 293 K (crosses) and from a Pt(111) surface with defects at 293 K (open squares) and 107 K (filled circles). I_0 is the He intensity from the corresponding clean surface at the temperature of the respective adsorption experiment.

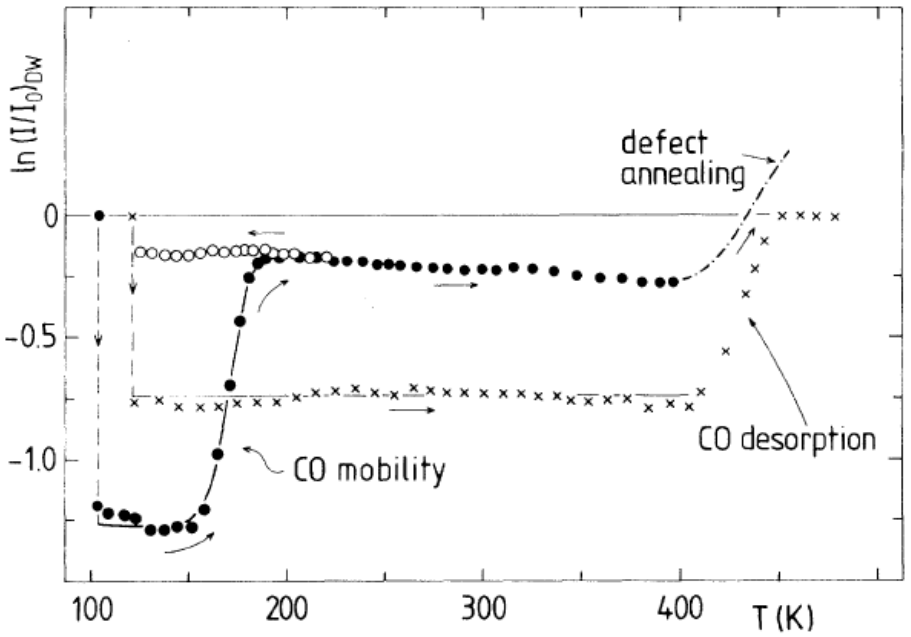
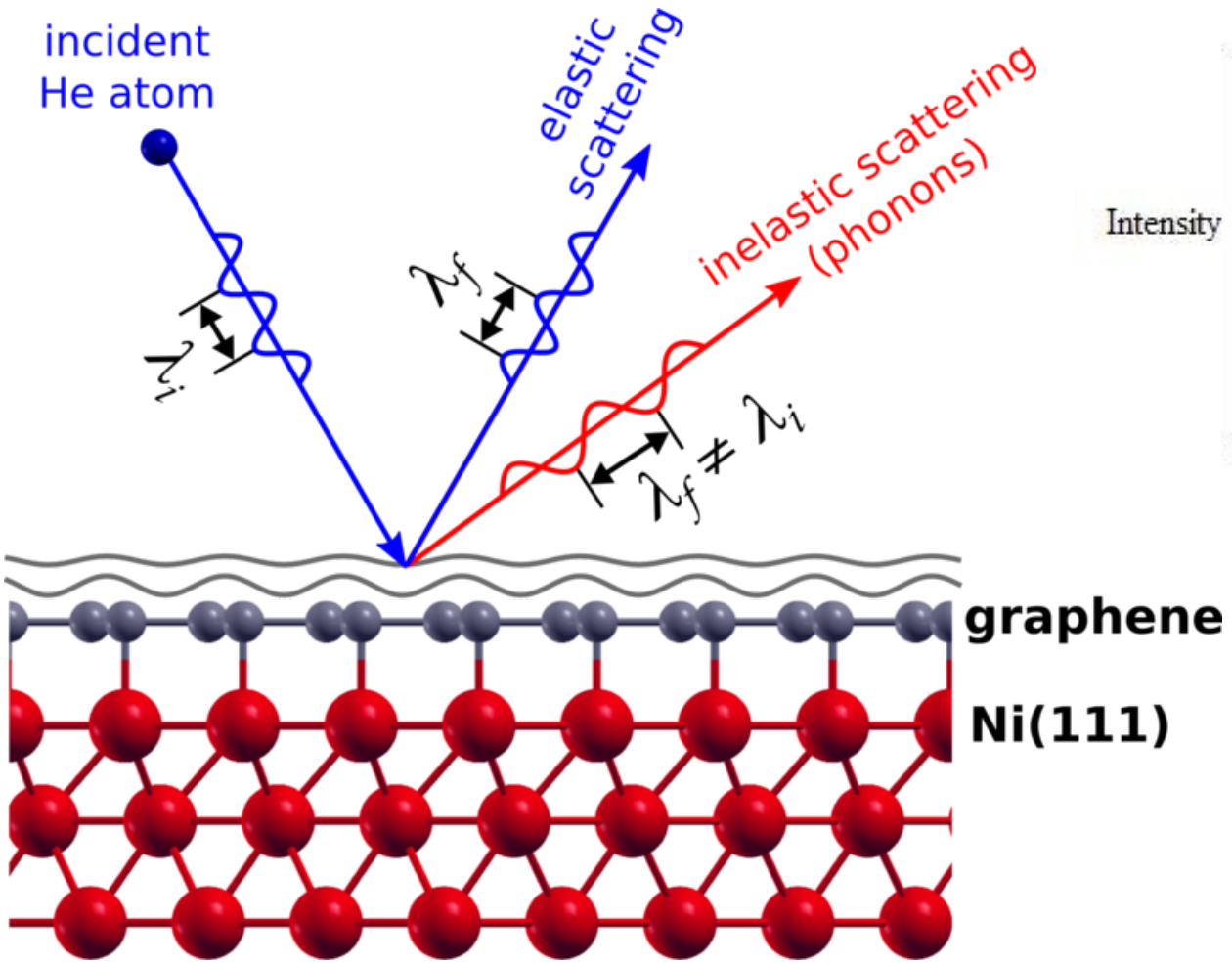
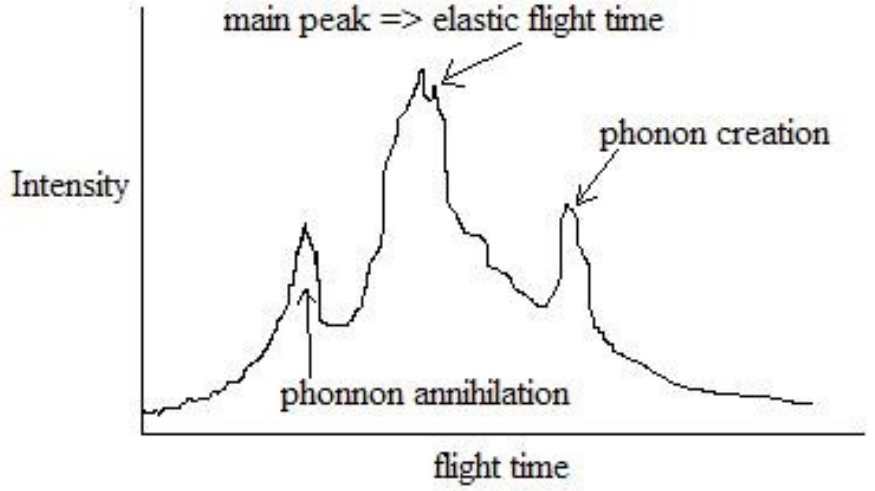


FIG. 2. Relative He specular-beam intensity (I/I_0) vs surface temperature. The He beam is scattered from a Pt(111) surface with defects (filled circles for heating and empty circles for cooling) and from an "ideal" Pt(111) surface (crosses) which were initially CO covered at low temperatures (coverage 2.5% and 1.5%, respectively). I_0 is the He intensity scattered from the corresponding clean surface. The ratio of the I_0 values for the "ideal" surface and the surface with defects is about 5. The data are corrected for Debye-Waller effects (see text).


incident
He atom
elastic
scattering
inelastic scattering
(phonons)
λ_i
λ_f
$\lambda_f \neq \lambda_i$
graphene
Ni(111)


main peak => elastic flight time
phonon creation
Intensity
phonnon annihilation
flight time

XRD

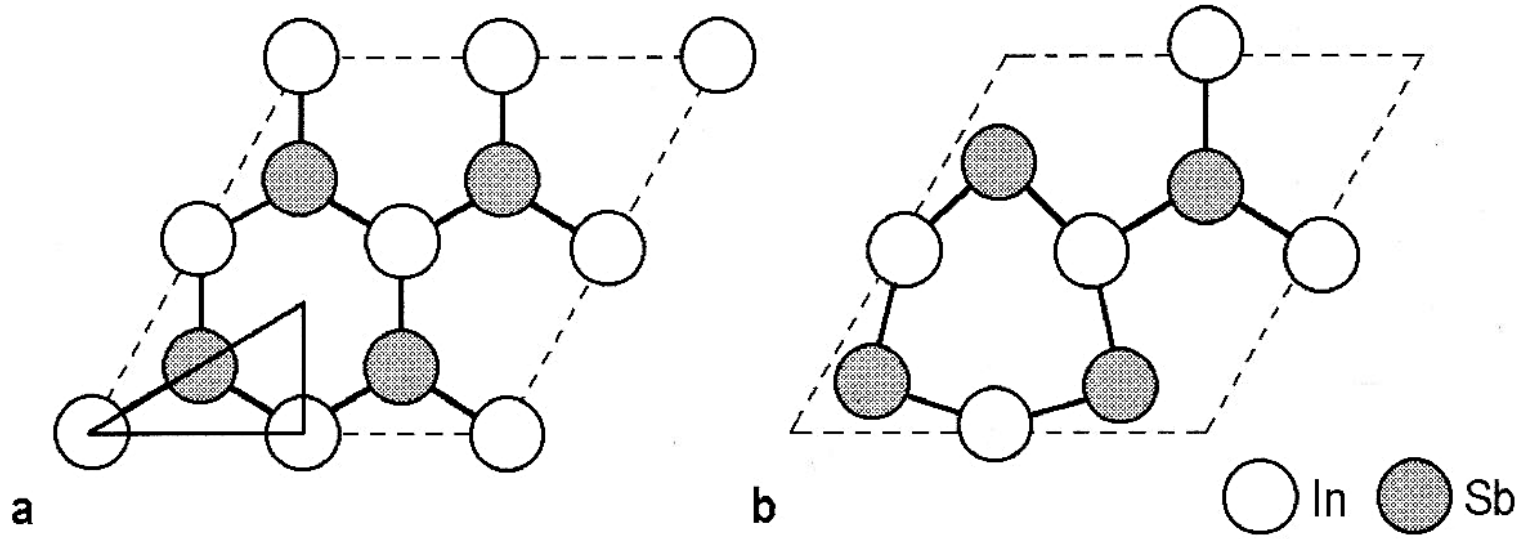


Fig. 4.19. The projection of atomic positions within a (2×2) unit cell in (**a**) the ideal bulk-like terminated InSb(111) surface and (**b**) the reconstructed InSb(111)2×2 surface structure as determined using GIXRD analysis. The triangle shown in bold lines in (**a**) is the smallest symmetrically inequivalent unit after taking into account the symmetry of the substrate and the inversion imposed in x-ray diffraction data (after Feidenhans'l [4.8])

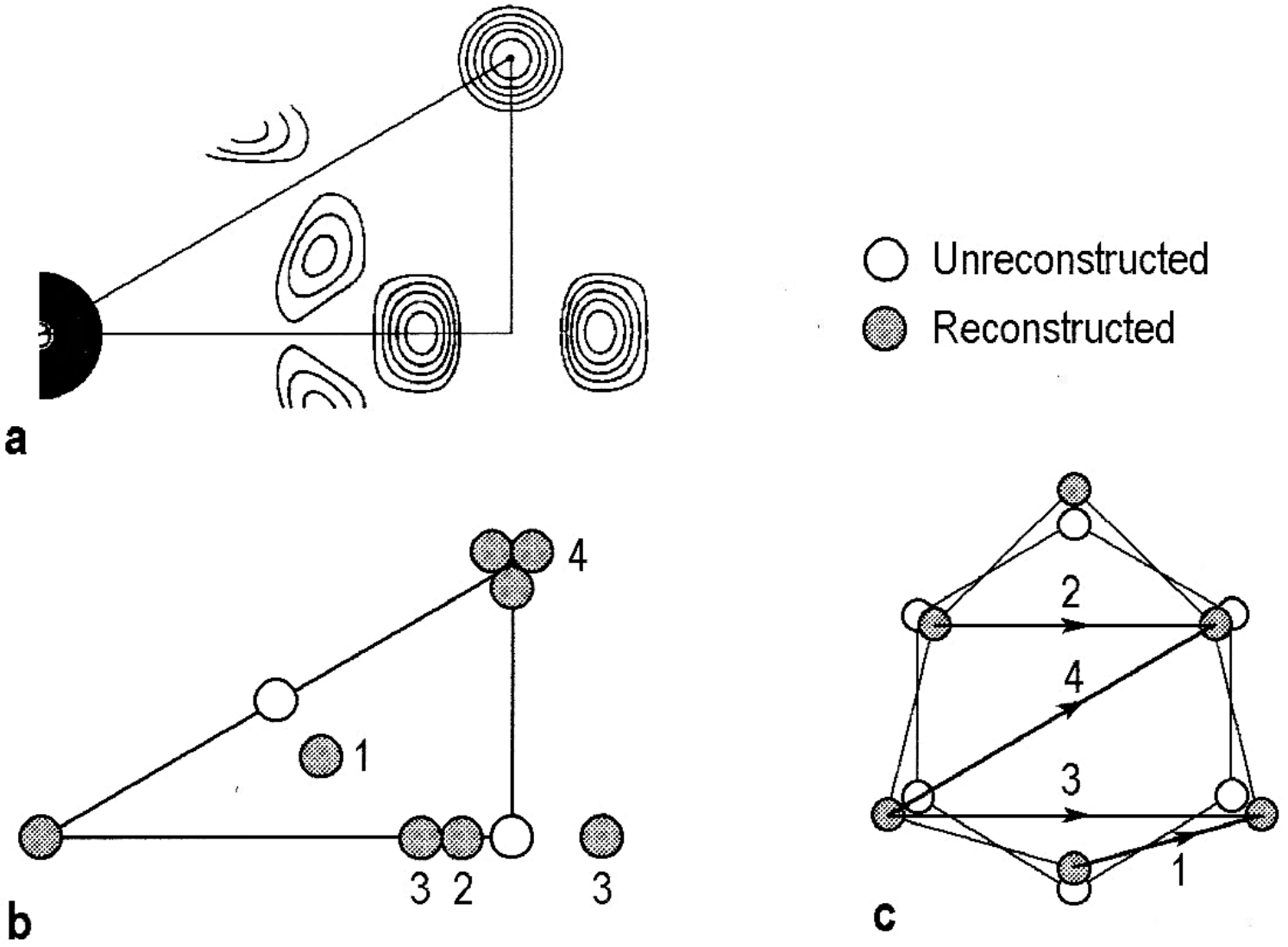
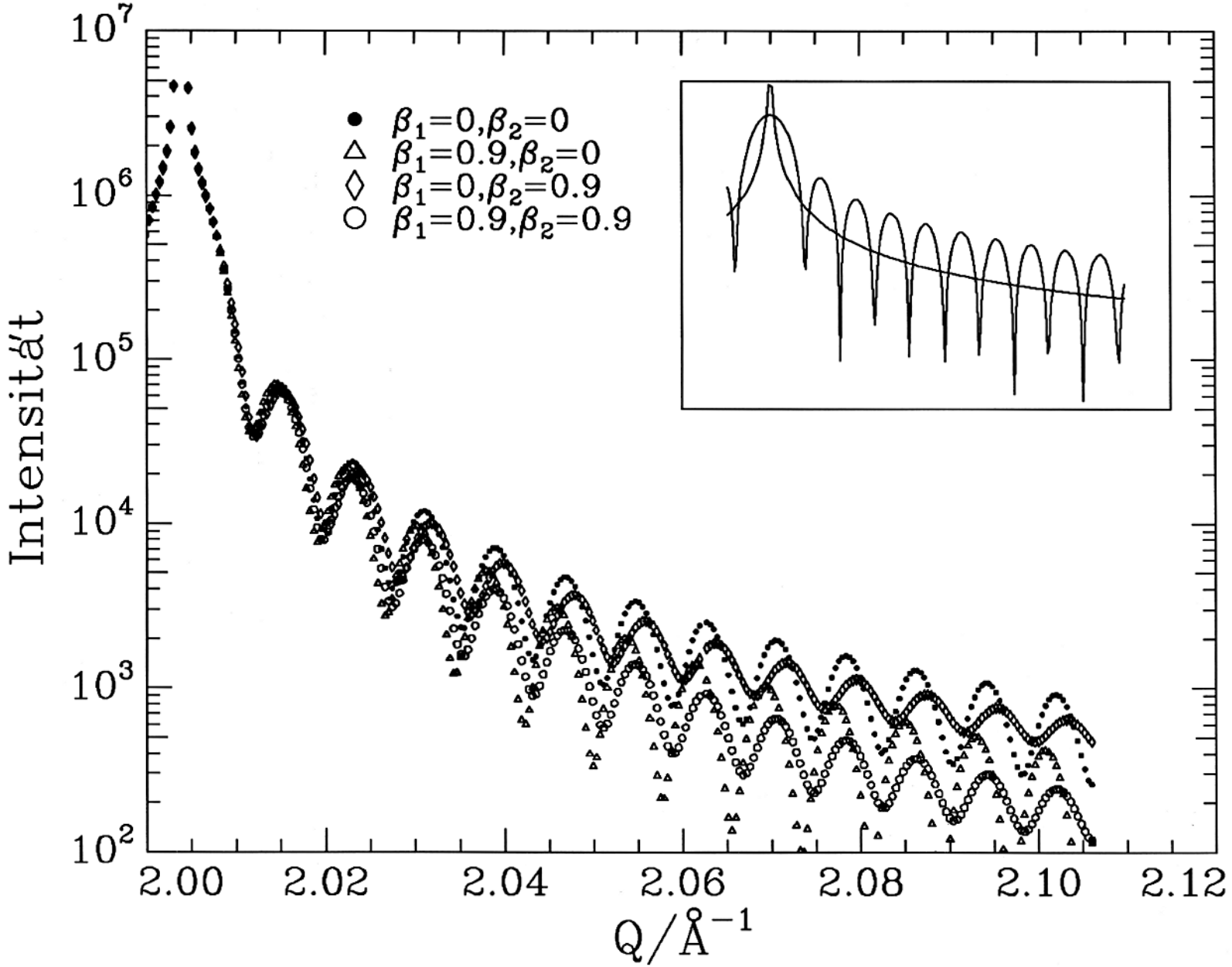
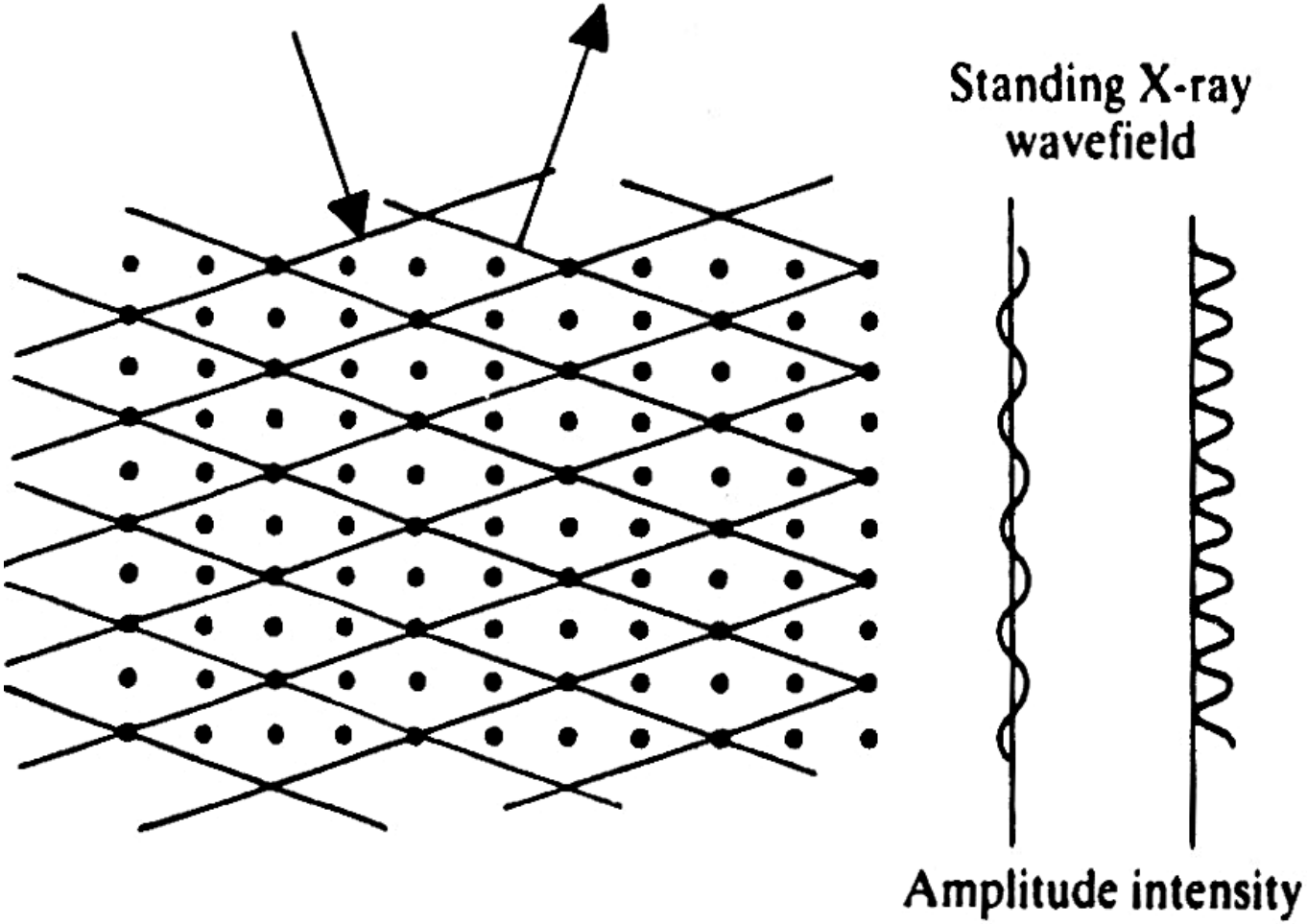


Fig. 4.20. (**a**) Contour map of the Patterson function for the InSb(111) surface within the unit triangle shown in Fig. 4.19a. (**b**) Interatomic vectors as derived from vectors 1 to 4 in (**a**). (**c**) Undistorted and distorted hexagonal arrangement of atoms producing the peaks in (**b**) (after Feidenhans'l [4.8])


Intensität
10^7
10^6
10^5
10^4
10^3
10^2
2.00
2.02
2.04
2.06
2.08
2.10
2.12
Q/Å^{-1}
β_1=0,β_2=0
β_1=0.9,β_2=0
β_1=0,β_2=0.9
β_1=0.9,β_2=0.9

X-ray standing waves (XSW)

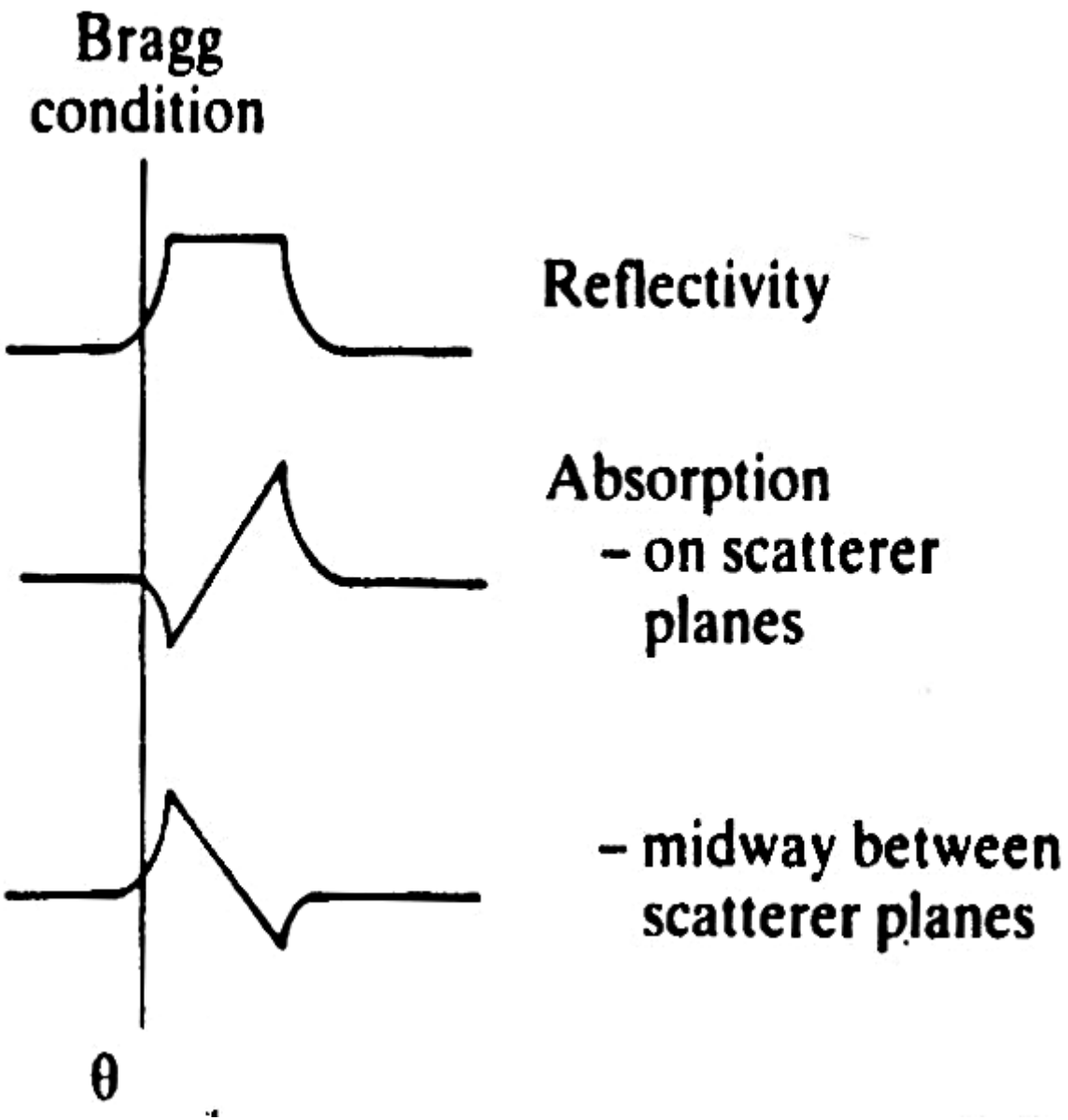
D P Woodruff, Rep. Prog. Phys. **68** (2005) 743 *Surface structure determination using XSW*
doi:10.1088/0034-4885/68/4/R01

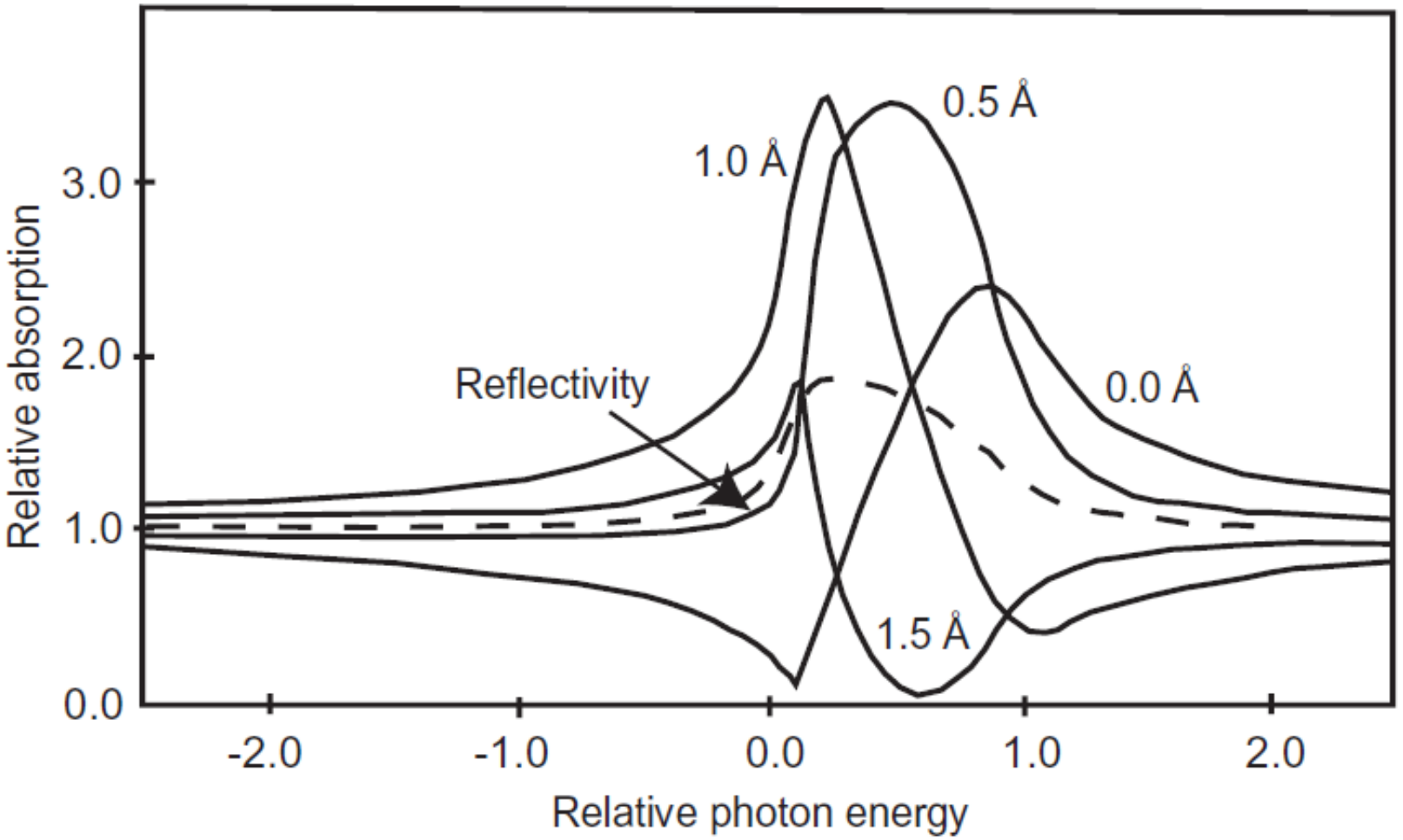


Messung der Absorption via Photo- oder Augerelektronen

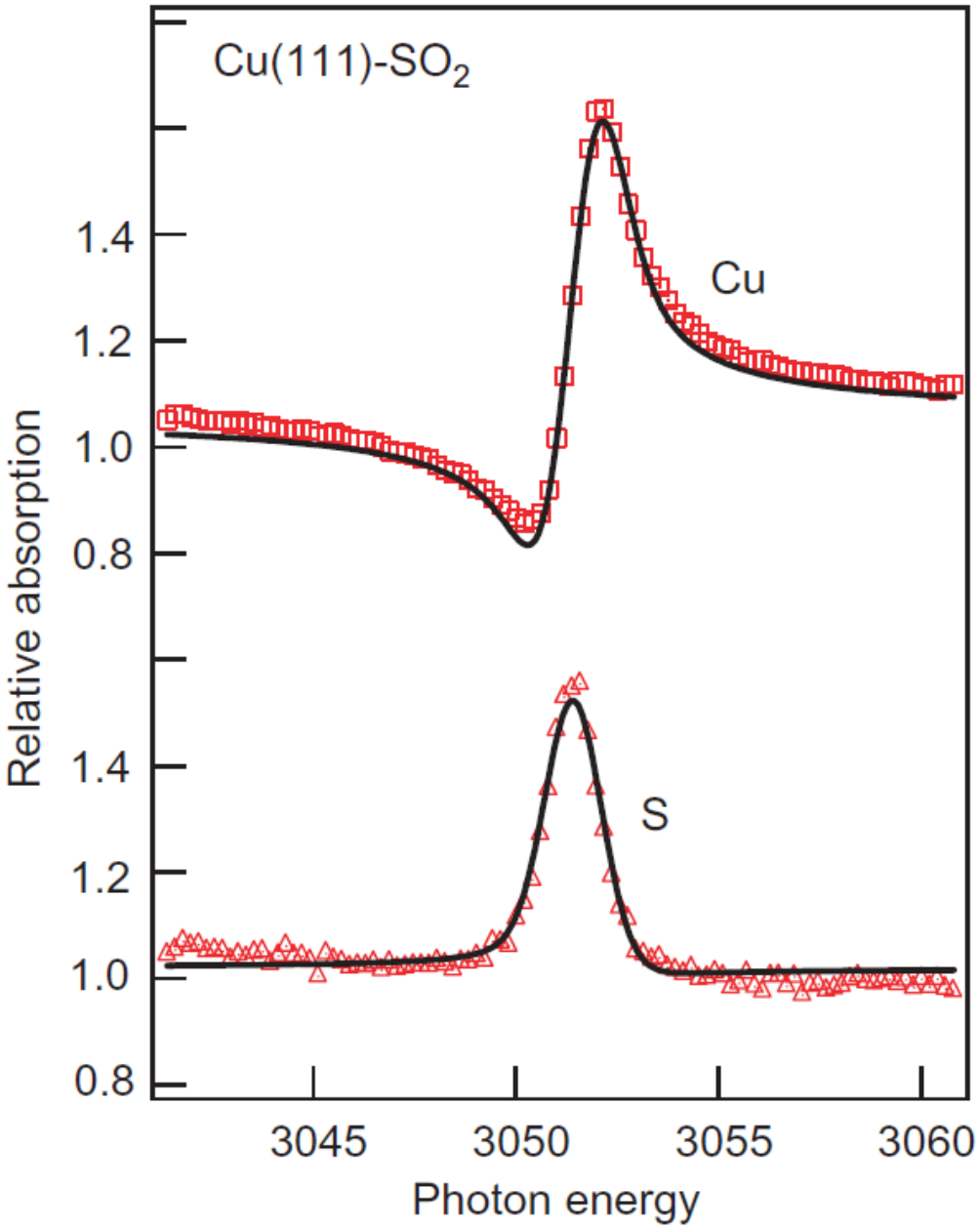
Brechung, Darwinkurve

Rep. Prog. Phys. **68** (2005) 743





Relative absorption profiles expected for an absorber atom placed in different positions relative to the (111) scatterer planes in Cu. No instrumental energy broadening is included.



Expt'l absorption profiles of SO_2 on Cu(111) measured in (111) NIXSW.

Lines are theoretical fits: Cu substrate corresponds to 0 spacing relative to the Cu scattering planes. S corresponds to 2.74 Å spacing (= 0.66Å + 1 substrate layer spacing of 2.08 Å).