

Liquid Surface X-ray Scattering User Help

Measured β Offset

Small and random
Constant with increasing angle
needed
Increasing with increasing angle
needed

Calls for...

A smiling face, Good!
Correction to zero angle correction
Correction to geometry parameter

Find g₁₂. Perform sample height scans for a number of different α 's (like 0.03, 0.05, 0.10, 0.15) and determine the sample height (negative number) corresponding to the center of each scan. Determine g₁₂ in same manner as g₁₁.

Find g₁₃. Perform an oscan for four different α 's and determine OH for each angle. Perform a fit, using the value of g₁₂ that you determined in the previous step.

$$\tan\alpha = (\text{SH}-\text{OH}) / (\text{g}_{13})$$

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$$\text{but, SH} = (\text{g}_{12})\tan\alpha = (\text{g}_{12})(\alpha)$$

$$\text{so, } \alpha = [(\text{g}_{12})(\alpha) - \text{OH}] / (\text{g}_{13})$$

$$\text{OH} = (\text{g}_{12} - \text{g}_{13})(\alpha)$$

Therefore, for linear fit to graph OH versus α , the slope = (g₁₂ - g₁₃)