Short Communications

Contributions intended for publication under this heading should be expressly so marked; they should not exceed about 1000 *words; they should be forwarded in the usual way to the appropriate Co-editor; they will be published as speedily as possible. Publication will be quicker if the contributions are without illustrations.*

Acta Cryst. (1971). A**27**, 296

Contrast reversal of Kikuchi lines with specimen thickness: Corrections.

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(*Received* 16 *September* 1970)

Corrections to a previous paper [*Acta Cryst.* (1970), A**26**, 349] are given.

In a recent paper with the above title (Nakai, 1970), it was stated that Thomas & Bell (1968) observed the normal Kikuchi line contrast for nl and reversed contrast for $(n+\frac{1}{2})l$. In their paper there was unfortunately no mention whether their electron micrographs were bright field or dark field images, and the above statement was made by understanding that they were bright field images. However, recently Thomas & Bell (1970, private communication) informed the present author that their electron micrographs were dark field images. Therefore, their result was that they observed the normal Kikuchi line contrast for $(n+\frac{1}{2})l$ and reversed contrast for $(n+\frac{3}{4})l$. Thus, the result by the present author is in accord with theirs so far as the normal Kikuchi line contrast is concerned.

The following corrections should be made in the previous paper (Nakai, 1970):

p 352. The formulae $d=2\pi l/\sqrt{1+W^2}$ and $d'=2\pi l/\sqrt{1+W'^2}$ in the second column should be replaced by $d=2\pi\sqrt{1+W^2}/l$ and $d'=2\pi\sqrt{1+W'^2}/l$, respectively.

p. 353. Parts (*c*) and (*d*) of Fig. 8. should be interchanged.

References

NAKAI, Y. (1970). *Acta Cryst.* A**26**, 349.

THOMAS, G. & BELL, W. L. (1968). *Proceedings Fourth European Regional Conference on Electron Microscopy, Rome*, p. 283.

Acta Cryst. (1971). A**27**, 296

Comment on Y. Nakai's correction.

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Comment on the preceding Short Communication.

The critical point of the effect of specimen thickness is that changes in thickness change the Kikuchi intensities. To experienced microscopists it should be obvious that Fig. 2(*b*) of our Rome abstract is a dark field image and there was really no basis for Nakai to infer otherwise.

We accept his acknowledgement of his error in this regard and his correction, in the second paragraph above, of errors to which we had drawn his attention.

Acta Cryst. (1971). A**27**, 296

Kristallstruktur und Doppelbrechung fehlgeordneter ZnS Einkristalle.

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(*Eingegangen am* 30. *Dezember* 1969 *und wiedereingereicht am* 27. *Februar* 1970)

By comparing the crystal structure (investigated by means of X-ray diffraction) and the birefringence of disordered ZnS crystals it is shown that the birefringence Δn is proportional to the hexagonality σ, *i.e.* $\Delta n = \sigma \cdot \Delta n_{\mathrm{Wurt}}$. The hexagonality σ is the part of hexagonal packing elements, Δn_{Wurt} the birefringence of Wurtzite.

Einleitung

Im Gegensatz zum optisch isotropen kubischen ZnS bewirkt hexagonales ZnS eine Doppelbrechung der Stärke $\Delta n = n_a - n_0 = 0{,}024$. Eindimensional fehlgeordnete ZnS-Kristalle zeigen bei der Betrachtung im Polarisationsmikroskop farbige Streifen unterschiedlicher Breite (<1 μm bis einige 100 μm), die durch unterschiedliche Doppelbrechungswerte