Fig. 1. Relationship between the two unit cells of 2,4-dinitro-aniline shown on the *b* face.

and oscillation photographs of Lasheen's variety, taken about the *b* axis, were identical to the variety described here. At first this appeared to show that Lasheen's or Groth's variety was twinned. However a closer inspection of our variety revealed that Lasheen had selected the wrong *a* axis, as shown in Fig. 1. Easy cleavage about (100) of our variety with four sides produces Lasheen's variety with six sides, as shown by the broad lines in Fig. 1. Lasheen's and our choices of the unit cell are illustrated in Fig. 1 by dotted lines and thick lines, respectively. The *c* axis is common to both unit cells. One half of Lasheen's shorter diagonal corresponds to our unit-cell edge *a*. In spite of our utmost efforts the variety reported by Siddiq *et al.* (1959) could not be obtained.

From magnetic anisotropy and cleavage of Lasheen's variety he concluded that the nitro groups are coplanar with the benzene ring and that the molecule is planar and parallel to (100). The present variety also exhibits easy cleavage about (100) and the 200 reflexion is about 3 times as strong as the other strong reflexions. Therefore the molecule seems to be planar and parallel to the (200) plane, as was observed by Lasheen.

References

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Book Review

Works intended for notice in this column should be sent direct to the Book-Review Editor (M. M. Woolfson, Physics Department, University of York, Heslington, York YO1 5DD, England). As far as practicable books will be reviewed in a country different from that of publication.

Properties of polymers. By D. W. VAN KREVELEN. Pp. xi + 427, Figs. 118, Tables 119. Amsterdam: North Holland, 1972. Price *f*87.50 (*ca.* U.S. $27.50).

This book is for readers who are interested in practical problems concerning the field of polymers; the aim is to give the means for calculating, on a semi-empirical basis, the properties of polymers from a knowledge of their chemical structure, so narrowing the gap between polymer science and polymer practice.

Attention is restricted to those intrinsic polymer properties which are characteristic of the polymer itself, rather than to the problems of polymer processing or to the characteristics of polymeric end products. The aim has been well achieved in all the fields considered, which are the thermophysical properties, the behaviour of polymers in fields of force, the transport properties and physical and chemical changes of polymers. The products considered are mainly synthetic linear polymers, with somewhat less attention devoted to biological ones and to thermosetting materials. Crystallinity is considered from a general and practical point of view; crystal structures of single polymers are not treated.

The book is enriched with many interesting tables giving both calculated and observed polymer properties.

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