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The unit-cell dimensions and space group of the twinned crystal of the dihydroiodide of 4,4′-bis(dimethylamino)diphenylamine.

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The dihydroiodide of 4,4′-bis(dimethylamino)diphenylamine crystallizes in space group $P2_1/c$ with $a=6{\cdot}06$, $b=21{\cdot}10$, $c=12{\cdot}18$ Å, $\beta=100°\ 21'$, $Z=4$. Crystals are twinned along the a axis through the angle 180°.

The unit-cell dimensions, space group and the type of twinning of the twinned crystal of the dihydroiodide of 4,4′-bis(dimethylamino)diphenylamine were determined in connexion with X-ray studies on the structures of the iodide and perchorate of 4,4′-bis(dimethylamino)diphenylamine radical (Toman & Očenášková, 1966; Toman, Očenášková & Huml, 1967).

The compound, corresponding to the formula

$$[(CH_3)_2NH.C_6H_4.NH.C_6H_4.NH(CH_3)_2]^{2+}2I^-,$$

was prepared by Dr J. Honzl of this Institute: to 0·9072 g of leuco-base 18 ml of 0·75*M* hydrogen iodide, prepared from hydroiodic acid (purified by distillation with hypophosphorous acid) and deaerated water were added. Water and residual hydroiodic acid were evaporated under vacuum (oil pump) and the total solids were heated 3–4 hours to 70–75°. Colourless crystals, m.p. 199–202° were obtained by crystallization in absolute ethanol. All procedures were carried under nitrogen. On exposure to air and under the influence of X-rays the crystals become darker, because of their changing into the radical salt.

From oscillation and Weissenberg photographs, using Cu $K\alpha$ radiation, the crystals were found to be monoclinic with unit-cell dimensions $a=6{\cdot}06$, $b=27{\cdot}10$, $c=12{\cdot}18$ Å, $\beta=100°21'$. From the systematic extinctions $h0l$ with l odd and $0k0$ with k odd the space group $P2_1/c$ was determined unambiguously. The observed density 1·734 g.cm^{-3} is very close to the calculated value 1·737 g.cm^{-3}, corresponding to 4 stoichiometric units in the unit cell. The crystals are twinned along the crystallographic a axis, with the rotation angle $\tau=180°$ (*International Tables for X-ray Crystallography*, 1959). The only common points of the reciprocal lattices, belonging to both twinned individuals, are those with indices $0kl$.

No further work on this compound is contemplated at present.

References

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Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the General Secretary of the International Union of Crystallography (G. Boom, Department of Metallurgy, University of Oxford, Parks Road, Oxford, England). Publication of an item in a particular issue cannot be guaranteed unless the draft is received 8 weeks before the date of publication.

International Union of Crystallography

International Tables for X-ray Crystallography

The Executive Committee of the International Union of Crystallography announces that from 1 April 1968 the price of each of the three Volumes of *International Tables for X-ray Crystallography* will be revised to £6.10*s*. The preferential price for *bona fide* crystallographers, who must give an undertaking when purchasing that the volume is for their *personal use only*, will be £3.15*s*. per volume. For prospectus and order forms write to the publishers, The Kynoch Press, Witton, Birmingham 6, England.

Volume II (*Mathematical Tables*) has just been reprinted with corrections. Stocks are available both of this and of Volume I (*Symmetry Groups*). Volume III (*Physical and Chemical Tables*) is being reprinted and will be available again shortly.

It is regretted that these slight price rises have occurred. They are due to the need to meet the costs of reprinting and increased distribution charges.