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Lattice parameters of $ZnAs_2$.

M. E. Senko, H. M. Dunn, J. Weidenborner and H. Cole, *Research Laboratory, International Business Machines Corporation, Poughkeepsie, New York, U.S.A.*

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Rotation and precession data taken using single crystals of $ZnAs_2$ indicate a primitive monoclinic unit cell. Using the second setting for a monoclinic cell, we obtain

$a = 9{\cdot}28$, $b = 7{\cdot}68$, $c = 8{\cdot}03$ Å, and $\beta = 102° 19'$.

Systematic extinctions indicate that the space group is $P2_1/c$. With a density of approximately 5 g.cm.$^{-3}$, there are 8 $ZnAs_2$ units per cell. The previously reported cell (Stackelberg & Paulus, 1935) was orthorhombic with a 36·28 Å axis perpendicular to b and c. Our pictures indicate that the [101] and [10$\bar{1}$] directions in this orthorhombic cell are non-equivalent. This material has interesting semiconducting properties with radically different resistivity along the orthorhombic 36 Å direction.

Fig. 1 shows the first few lines in the powder pattern obtained using filtered Co radiation and linear recording.

Reference

Stackelberg, M. von & Paulus, R. (1935). *Z. Phys. Chem.* B, **28**, 427.

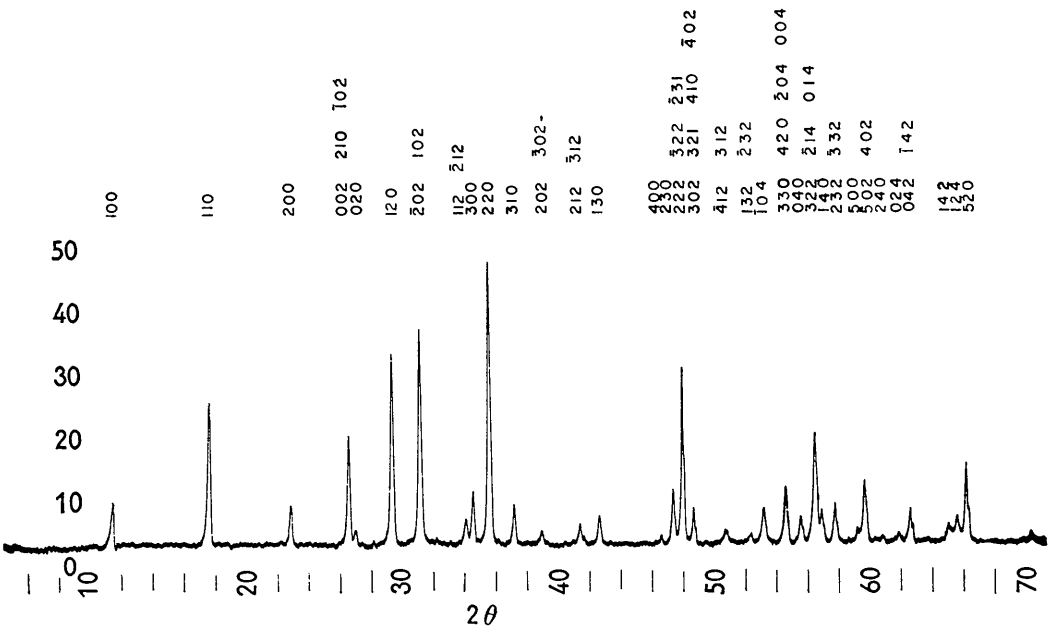

Fig. 1. Powder pattern of $ZnAs_2$; filtered Co radiation.

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X-ray diffraction structure of monochloracetic acid.

By Manny Weiss, *Polytechnic Institute of Brooklyn, Brooklyn* 1, *N. Y., U.S.A.*

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Single crystals of monochloracetic acid were grown from solution in a number of organic solvents, including trichloroethylene, carbon tetrachloride and benzene. No differences among the crystals were detected by either optical or X-ray diffraction examination. The crystals are monoclinic with

$a = 5{\cdot}38$, $b = 19{\cdot}27$, $c = 8{\cdot}01$ Å; $\beta = 109{\cdot}5°$.

The space group is $P2_1/c$, and for eight molecules per unit cell one obtains an X-ray density of 1·61 g.cm.$^{-3}$, as compared with a measured density of 1·58 g.cm.$^{-3}$. The asymmetric unit of structure contains two molecules. Preliminary intensity studies indicate that the molecules lie in or close to the 10$\bar{2}$ planes.