halides, also can exist in a β modification with a wurtzite structure above 407° C. The intensity of the 101 line, however, is much smaller than one would expect for the wurtzite structure. This high-temperature phase of CuCl is being studied further.

We could observe no further phase transition to a cubic α form in CuCl as is found in the other two halides.

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Unit-cell parameters and space groups for L-cystine, L-cystine hydrochloride and L-cystine hydrobromide.

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In connection with the very high specific rotations observed for acid solutions of cystine (Toennies, Lavine & Bennett, 1936), we have found it desirable to study the solid-state structure of cystine and two of its salts, namely, the hydrochloride and hydrobromide. Furthermore, the configuration of the cystinyl group is of importance in protein structure.

We have grown single crystals of L-cystine, L-cystine hydrochloride and L-cystine hydrobromide satisfactory for X-ray structure determination. Unit-cell parameters have been measured from the appropriate oscillation or Weissenberg photographs, using Cu $K\alpha$ radiation. Density (D) and number of molecules per unit cell (Z) as well as the space group (or probable space group) have also been determined. The results follow.

L-Cystine:

$a_0 = 5{\cdot}42$, $c_0 = 56{\cdot}08$ Å; $\gamma = 120°$.

Space group: $P6_122$ (or $P6_522$).
D_o: 1·677 g.cm.$^{-3}$; D_c: 1·679 g.cm.$^{-3}$.
Z: 6.

L-Cystine hydrochloride:

$a_0 = 18{\cdot}61$, $b_0 = 5{\cdot}25$, $c_0 = 7{\cdot}23$ Å; $\beta = 103{\cdot}6°$.

Space group: $C2$, probable.
D_o: 1·520 g.cm.$^{-3}$; D_c: 1·515 g.cm.$^{-3}$.
Z: 2.

L-Cystine hydrobromide:

$a_0 = 17{\cdot}85$, $b_0 = 5{\cdot}35$, $c_0 = 7{\cdot}48$ Å.

Space group: $P2_122_1$.
D_o: 1·870 g.cm.$^{-3}$; D_c: 1·869 g.cm.$^{-3}$.
Z: 2.

The space group we find for L-cystine is the same as that reported by Bernal (1931), and his a_0, after converting to the same units, agrees very well with ours. On the other hand his c_0 is 3·1% greater than ours.

For L-cystine hydrochloride the X-ray extinctions indicate $C2/m$, $C2$ or Cm. Since the general positions in these space groups are at least fourfold, the molecules must lie in special positions. It seems unlikely that the molecules can have symmetry m or $2/m$ but may have 2. It has, therefore, been assumed that the space group is $C2$. This is the same as that found for N,N′-diglycyl-L-cystine dihydrate (Yakel & Hughes, 1952).

Integrated intensity data for two-dimensional projections have been collected and work is in progress on these structures.

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Die Kristallstruktur des Natriumhexafluoroantimonats (V).

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Über die Kristallstruktur des $NaSbF_6$ liegt eine Veröffentlichung von Schrewelius (1938) vor, mit der sich der vorliegende Strukturvorschlag mit Ausnahme der Positionen für die Fluoratome deckt. Die kubische Elementarzelle ist 8,184±0,005 Å gross, Schrewelius fand 8,18 Å, und es werden nur Reflexe beobachtet, die einem flächenzentrierten kubischen Gitter entsprechen. Dies führt dazu, die Na- und Sb-Atome wie die Atome im NaCl-Gitter anzuordnen, und nach eigenen Berechnungen zeigt eine zweidimensionale Fourier-Synthese,

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