

sessing a monoclinic, pseudo-orthorhombic structure (Dunitz, 1964). The cell dimensions were refined with the aid of powder data obtained on a Norelco diffractometer using Ni-filtered Cu *K* radiation.

The crystal data are as follows:

System: Monoclinic. Space group: $P2_1/c$.

$a = 5.633 \pm 0.005$, $b = 9.679 \pm 0.009$, $c = 8.740 \pm 0.008$ Å;
 $\beta = 90.0^\circ$, $Z = 4$, $V = 476.3$ Å³.

$D_x = 2.330$ g.cm⁻³, $D_m = 2.317 \pm 0.002$ g.cm⁻³.

The systematic absences were $h0l$ with l odd and $0k0$ with k odd. The crystals grew in the shape of flat platelets. These platelets were formed with the b and c axes along the face diagonals and the a axis perpendicular to the face. A number of crystals in the shape of rain-drops were also formed. These were examined and found to be of the same phase as the platelets.

The crystal structure of lithium ammonium hexafluorosilicate is related to that of ammonium hexafluorosilicate (Gossner & Kraus, 1934). $(\text{NH}_4)_2\text{SiF}_6$ is hexagonal with $a = 5.76$, $c = 4.77$ Å. The following table shows the relationship between the pseudo-orthorhombic cell ob-

tained from this hexagonal unit cell (allowing for doubling of the c -axis) and the unit cell of $\text{LiNH}_4\text{SiF}_6$:

| Cell constant | a (Å) | b (Å) | c (Å) |
|-------------------------------|---------|---------|---------|
| $(\text{NH}_4)_2\text{SiF}_6$ | 5.76 | 9.54 | 9.98 |
| $\text{LiNH}_4\text{SiF}_6$ | 5.633 | 9.679 | 8.740 |

It can be concluded that the structure of $\text{LiNH}_4\text{SiF}_6$ is a distorted $(\text{NH}_4)_2\text{SiF}_6$ structure. This is due to the fact that the lithium ion is considerably smaller than the ammonium ion.

The powder data have been submitted for inclusion in the ASTM X-Ray Powder Data File.

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References

- DUNITZ, J. D. (1964). *Acta Cryst.* **17**, 1299.
 GOSSNER, E. & KRAUS, O. (1934). *Z. Kristallogr.* **88**, 223.
 SKARULIS, J. A., DARNOWSKI, V. N., KILROY, W. P. & MILAZZO, T. (1964). *J. Phys. Chem.* **68**, 3074.

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 (D. W. Smits, Rekencentrum der Rijksuniversiteit, Grote Appelstraat 11, Groningen, The Netherlands). Publication of an item in a particular issue cannot be guaranteed unless the draft is received 8 weeks before the date of publication.

Non-Conventional Electron Microscopy

The Electron Microscopy and Analysis Group of The Institute of Physics and The Physical Society is organizing a Conference on Non-Conventional Electron Microscopy, to be held at the University of Cambridge from 31 March to 2 April 1965. The conference is intended to cover all methods that are not catered for by the normal commercially available transmission electron microscopes. Offers of contributions should be sent to the Conference Secretary, Dr W. C. Nixon, Engineering Laboratory, The University, Cambridge, England, before 12 February 1965.

Advance registration for the Conference is necessary, and application forms may be obtained from the Administration Assistant, The Institute of Physics and The Physical Society, 47 Belgrave Square, London, S.W. 1, England.

International Conference on X-ray Optics and Microanalysis

The Fourth International Conference on X-ray Optics and Microanalysis will be held near Paris on 8, 9 and 10 September 1965. The scope of the conference will include applications to metallurgy, mineralogy and biology, as well as basic advances in microscopy, microanalysis, and long-wavelength spectroscopy.

Further information may be obtained from M. P. Deschamps, Département de Physique, Institut de Recherches de la Sidérurgie Française, Saint-Germain-en-Laye (S. et O.), France.