

is  $P2_1/c$ . For future reference we will term the reflexions with  $h+k$  even, given by both phases, class (a) reflexions, and those with  $h+k$  odd, given only by the pigeonite, class (b) reflexions.

Before learning of Morimoto's work we had examined pigeonites from several localities, and had also established the primitive lattice, and the orientation of the two phases in lamellar intergrowths: we have subsequently confirmed the space group. Further, for some of the specimens the class (b) reflexions from pigeonite were observed to be slightly, but definitely, diffuse compared with those of class (a). The reason for this is not yet known; there is no obvious correlation of the diffuseness either with the composition or with the probable thermal state separately. For a given rock both the pigeonite in the 'augite' crystals and that in the 'pigeonite' crystals are consistent in respect of this diffuseness. One volcanic pyroxene, a pigeonite described by Hallimond (1914) occurring as small rounded crystals in an andesitic pitchstone from Mull, has been examined. This rock has been cooled so quickly that no augite has precipitated from the pigeonite. The space group is again  $P2_1/c$ , and the class (b) spots are slightly diffuse, but no more so than for several of the slowly cooled pigeonites. It seems, therefore, that the primitive lattice is not a property of a low-temperature form of pigeonite only. Preliminary heating

experiments have confirmed this; a single crystal showed no obvious change in intensity of the class (b) reflexions after being heated at 1000° C. for 2 days, followed by rapid cooling in air.

It was further noticed that the class (a) spots from the pigeonite and augite were joined by a streak on the photographs for some lamellar specimens, but not for others. This streak is presumably caused by a gradual change in cell dimensions at the junction of the lamellae and the host crystal. There is no correlation between the intensity of the streak and the diffuseness of the class (b) reflexions. For the limited number of specimens examined it appears that the streak is strong if the lamellae are relatively coarse, and absent if they are very fine.

Further work is in progress. We would like to thank Dr N. Morimoto for making his results available to us before publication.

### References

- HALLIMOND, A. F. (1914). *Miner. Mag.* **17**, 97.  
 MORIMOTO, N. (1956). *Proc. Jap. Acad.* **32**, 750.  
 WARREN, B. E. & BRAGG, W. L. (1929). *Z. Kristallogr.* **69**, 168.  
 WARREN, B. E. & BISCOE, J. (1931). *Z. Kristallogr.* **80**, 391.

## Notes and News

*Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. Copy should be sent direct to the British Co-editor (R. C. Evans, Crystallographic Laboratory, Cavendish Laboratory, Cambridge, England).*

### *Acta Crystallographica*

For the convenience of subscribers who prefer to bind the annual volume in two sections a title page for the period January–June 1957 is enclosed with this issue. A corresponding title page for the period July–December 1957 and also a title page for the whole year will be distributed with the December issue.

### Crystallographic studies of perovskite-like compounds. IV: correction

In the above article by S. Geller (*Acta Cryst.* (1957), **10**, 243) the author requests that on p. 247 the three sentences 'Yakel has also examined . . . compound by solid–solid reaction' be deleted.

### Conference on Scientific Information

An international conference on Scientific Information will be held in Washington, D.C., U.S.A., in November 1958. This Conference is being sponsored by the National Academy of Sciences–National Research Council of the U.S.A., the National Science Foundation and the American Documentation Institute. The areas covered by the agenda of the conference are the following:

(1) Requirements of scientists for scientific literature

and reference services: knowledge now available and methods of ascertaining their requirements.

- (2) The function and effectiveness of abstracting and indexing services for storage and retrieval of scientific information.
- (3) Effectiveness of scientific monographs, compendia, and specialized information centres in meeting the needs of scientists: present trends and new and proposed techniques and types of services.
- (4) Organization of information for storage and search: comparative characteristics of existing systems.
- (5) Organization of knowledge for storage and retrospective search: intellectual problems and equipment considerations in the design of new systems.
- (6) Organization of information for storage and retrospective search: possibility for a general theory of storage and search.
- (7) Responsibilities of governmental bodies, professional societies, universities, and research and industrial organizations to provide improved information services and to promote research in documentation.

Persons who wish further information concerning the conference are requested to write to the Executive Secretary, Dr Alberto F. Thompson, National Academy of Sciences, 2101 Constitution Avenue, Washington 25, D.C., U.S.A.

**Kristallografiya**

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*Articles*

- Aleksei Vasil'evich Shubnikov (on his 70th birthday).  
 A. M. ZAMORZAEV and E. I. SOKOLOV. The symmetry and various kinds of antisymmetry of finite figures.  
 A. M. ZAMORZAEV. Generalization of the Fedorov groups.  
 N. V. BELOV and E. N. BELOVA. Mosaics for the 46 plane (Shubnikov) groups of antisymmetry and for the 15 (Fedorov) colour groups.  
 V. A. MOKIEVSKII and I. I. SHAFRANOVSKII. The symmetry, antisymmetry and pseudosymmetry of induced surfaces.  
 B. K. VAINSHTEIN. The theory of the method of radial distribution.  
 YU. TASEPULATOV, Z. V. ZVONKOVA and G. S. ZHDANOV. X-ray structural investigation of captax (2-mercaptobenzthiazol).  
 R. N. KUZ'MIN, G. S. ZHDANOV and N. N. ZHURAVLEV. Metallographic and X-ray investigation of alloys in the system antimony-indium.  
 T. L. KHOTSYANOVA. The crystal structures of the halogenides of diphenyliodonium.  
 G. A. KUROY, S. A. SEMILETOV and Z. G. PINSKER. The electrical properties and real structure of single-crystal plates of germanium obtained by vacuum evaporation.  
 B. G. LYASHCHENKO, D. F. DITVIN, I. M. PUZEI and YU. G. ABOV. Neutronographic investigation of iron-nickel alloys of the permalloy class.  
 N. E. VEDENEVA and L. I. TSUKERMAN. The state of fixation of cations of methylene blue on crystallites of montmorillonite and the capability of the latter for forming textured layers.  
 N. M. MELANKHOLIN. Anomalous dispersion of the bisectrix in crystals of organic dyes.  
 V. L. INDENBOM. On the possibility of finding Dauphiné twinning in quartz by optical methods.  
 I. S. ZHELUDEV. Symmetry and the piezo-electric properties of crystals and textures.  
 V. A. KOPTSIK. On the superposition of symmetry groups in crystal physics.  
 V. A. BAZHENOV. Wood as a piezo-electric texture.  
 S. V. BOGDANOV, B. M. VUL and R. YA. RAZBASH. The shear piezo-electric modulus of polarized barium titanate.  
 L. A. SHUVALOV. The dielectric and piezo-electric properties of polarized ceramic BaTiO<sub>3</sub> in various ferro-electric phases.  
 V. M. FRIDKIN. Electrophotography on photoelectrets.  
 M. V. KLASSEN-NEKLYUDOVA and A. A. URUSOVSKAYA. Plastic deformation of crystals caused by rotation of the lattice without the formation of slip lines.  
 K. S. ALEKSANDROV. The propagation of elastic shear waves in a crystal rotated about a special direction.  
 V. K. SEMENCHENKO. Phase transitions and critical phenomena in anisotropic phases.  
 M. I. KOZLOVSKII. Observation of the layer-spiral growth of crystals from solution.  
 G. B. BOKII and O. G. KOZLOVA. Crystallographic criteria for selecting fluorspar for obtaining synthetic crystals of optical fluorite from it.  
 V. I. MIKHEEV and I. I. SHAFRANOVSKII. Edge forms and striations on crystals.  
 V. A. SHAMBUROV. Dividing mechanisms based on the crystallographic principle of the close packing of geometrically identical bodies.

*Short communications*

- Z. G. PINSKER, S. V. KAVERIN and N. V. TROITSKAYA. Electronographic investigation of molybdenum nitrides.  
 B. B. ZVYAGIN and R. A. SHAKHOVA. Electronographic investigation by reflexion of powder specimens of celadonite.  
 S. S. BATSANOV and V. I. PAKHOMOV. On the changes in the character of chemical bonds on change of coordination number.  
 S. V. GRUM-GRZHIMAILO and M. G. ENIKEEVA. On the oscillatory 'structure' of the absorption spectra of crystals the colour of which is due to isomorphous impurities.  
 V. L. INDENBOM and G. E. TOMILOVSKII. Macroscopic edge dislocations in crystals of corundum.  
 N. V. ALYAVDIN, N. N. SHEFTAL' and Z. I. FROLOVA. The growth of uniform crystals of Rochelle salt from strongly supersaturated solutions.  
 I. N. ANIKIN. The hydrothermal synthesis of scheelite.  
 E. M. AKYLENOK, KH. S. BAGDASAROV and V. YA. KHAIMOV-MAL'KOV. The question of the influence of mechanical mixing and ultrasonic oscillations on the process of the entrapment of impurities by single crystals.  
 S. S. BOKSHA. A new method of producing super-high gas pressures.

**Books Received**

*The undermentioned works have been received by the Editors. Mention here does not preclude review at a later date.*

**Teoría de los Métodos Roentgenográficos del Cristal Giratorio.** By FERNANDO HUERTA. Pp. 135. Madrid: Instituto de Física 'Alonso de Santa Cruz'. 1955. Price 50 pesetas.

**Laboratory Manual of Crystallography for Students of Mineralogy and Geology.** By G. TUNELL and J. MURDOCH. Pp. 54. Dubuque, Iowa: Brown. Price \$2.75.