termined; it could hardly be less than what has been indicated by the foregoing," i.e. substantial stability over 9½ months. The presence of this water layer is, however, an extremely important matter.

Recently, the metal box was opened and immediately white fumes of phosphorus pentoxide were observed, with the characteristic garlic odor, and, almost simultaneously, a flash of flame. The metal box was heavily corroded and a yellow deposit—presumably phosphorus and sulfur—had formed around the neck of some of the bottles.

The explanation of these phenomena is that during the year the water had evaporated, notwithstanding the double ground-in seal of the containing bottle. Once the protective water was gone, the phosphorus-sulfur-methylene iodide "crept" up the interior of the bottle, and finally outside, whereupon the solvent iodide evaporated leaving a dangerous deposit of phosphorus-sulfur outside of the bottle. In contact with wood or combustible matter, a dangerous fire could have ensued. The metal box suggested by West is some protection, but has the disadvantage of hiding possible evaporation of the water layer.

Glycerine has been suggested as better than water for preventing evaporation of the phosphorus liquid (Dr. John C. Rabbitt, oral communication). In any case, a layer of protective liquid should always be maintained, with frequent inspections to ensure its presence. Especially, phosphorus liquids should never be put in "dead" storage in wooden cupboards!

CRYSTALS OF PARASCHOEPITE[1]

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Four of our best paraschoepite crystals, although very small, could be measured; their habit is short prismatic (Fig. 1). Results are given below:

	ϕ	ρ	
c (001)	—	0°	Observed on all crystals.
b (010)	0°	90°	Observed on all crystals.
a (100)	90°	90°	Observed on all crystals.
m (110)	66°59′	90°	Observed on all crystals.
d (011)	0°	41°04′	Observed on two crystals.
f (021)	0°	60°27′	Observed on all crystals.
e (041)	0°	72°19′	Observed on one crystal; face of poor quality.
p (111)	67°46′	66°26′	Faces of this form on one of the crystals are of poor quality.
q (124)	49°59′	33°47′	Observed on three crystals.
o (122)	49°47′	53°27′	Observed on two crystals.

[1] *Am. Mineral.*, **32**, 344–350 (1947).

The small differences between the values of ϕ and ρ found for paraschoepite and for schoepite crystals[2] are only due to the fact that, generally speaking, the crystals of paraschoepite are not of the same good quality as those of schoepite. It seems justifiable to conclude that there is no difference whatever between the parameters of both species.

To avoid any mistake we have determined the indices of refraction of each paraschoepite crystal measured. Fig. 1 represents the habit of all crystals of paraschoepite measured by us. Microscopic crystals of the mineral are often elongated parallel to the c-axis (Fig. 2).

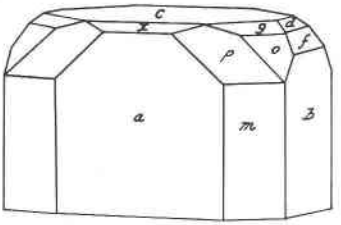

FIG. 1. Crystal of paraschoepite

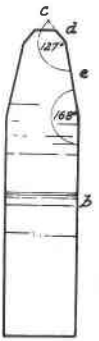

FIG. 2. Crystal of paraschoepite elongated parallel to the c axis.

ACTA CRYSTALLOGRAPHICA, VOL. 1. PART 1

The first issue of *Acta Crystallographica* has been awaited with interest by crystallographers, mineralogists, chemists, physicists, and other scientists the world over. It was published in March of this year for the International Union of Crystallography by the Cambridge University Press, 200 Euston Road, London, N.W. 1, England. The editor is P. P. Ewald, of The Queen's University, Belfast, Northern Ireland, and coeditors include R. C. Evans of the Crystallographic Laboratory, Caven-

[2] Palache, C., Crystallography of the uranium oxides: *Am. Mineral.*, **19**, 309 (1934).

dish Laboratory, Cambridge, England; I. Fankuchen, Polytechnic Institute of Brooklyn, 99 Livingston St., Brooklyn 2, N. Y.; A. V. Shubnikov, Institute of Crystallography, Academy of Sciences of the U.S.S.R., Starometny 35, Moscow 17, U.S.S.R.; and J. Wyart, Laboratoire de Minéralogie à la Sorbonne, 1 rue Victor-Cousin, Paris V, France. Manuscripts will be accepted in English, French, German, and Russian. Those in English should be sent to R. C. Evans or I. Fankuchen for consideration; in French to J. Wyart; in German to P. P. Ewald; and in Russian to A. V. Shubnikov. In addition to this staff of able editors, on the advisory board are listed the following men who are world known for their significant contributions to crystallography: Sir Lawrence Bragg, M. von Laue, C. Maugin, P. Niggli, L. Pauling, and R. W. G. Wyckoff. This is truly an impressive array of godfathers, and their support alone should go far to insure the initial success of the undertaking.

The first issue sets a high standard, both in context and format. It contains 48 pages divided among six main articles, three shorter contributions, notes and news, and book reviews. Leading articles are by J. Garrido (Spain) on the diffuse scattering of x-rays by $NaClO_3$ crystals; by C. J. B. Clews and W. Cochran (England) on the structures of two pyrimidines; by K. Lonsdale (England) on the diffuse scattering of x-rays by single crystals; by B. Jerslev (Sweden) on the structures of two hydroxylammonium halides; by H. G. F. Winkler (Germany) on the synthesis and structure of eucryptite; and by W. L. Roth and D. Harker (U. S. A.) on the structure of octamethylspiro [5.5] pentasiloxane. Brief abstracts in English precede all the articles.

The journal is in imperial quarto size with two columns to the page. The paper is of good quality and the print is easy to read. Line drawings and photographs are uniformly excellent and the binding is stitched. The price for the six yearly issues is $10 or £2.10s. Although it is stated that, "It is hoped that this moderate price will ensure a large number of subscribers," the price seems high in comparison to American journals on related subjects, who offer their subscribers much larger or more numerous issues at a similar standard of quality, generally at a lower price. It is believed that the cost may deter many young crystallographers from subscribing, whereas a more modest price might make it available to the graduate student who is already beset on all sides by the increased costs of education and living.

Certainly the publication of this journal comes at an opportune time, when interest in crystallography is rising rapidly. The growing concern with crystallographic techniques is manifest not only from the vigorous activity of various societies (for example, the Crystallographic Society of America, American Society for X-ray and Electron Diffraction), but also

from the lengthy list of commercial firms whose financial support has helped to bring about the birth of this journal. Undoubtedly the time will come when the science of crystallography will be represented in universities as a single curriculum devoted to the training of students of atomic structure, be it of minerals, or of organic or inorganic chemicals. The journal may be ordered in the United States through The American Institute of Physics, 57 East 55th Street, New York 22, N. Y.

E. Wm. Heinrich, *University of Michigan*

ANATOLII KAPITONOVICH BOLDYREV*

1883–1946

Inna V. Poiré

The outstanding Russian explorer and scientist, Anatolii Kapitonovich Boldyrev, was killed on March 24, 1946, in an automobile accident near Magadan in Eastern Siberia.

A. K. Boldyrev was born in 1883 in the Ukraine. When he graduated from the Mining Institute in St. Petersburg in 1920, he had attained recognition as a scientist and was appointed Professor of crystallography and mineralogy at the Institute. He also organized and directed until 1937 the E. S. Fëdorov Institute of Crystallography and the laboratory for the study of minerals by x-rays, where he introduced new methods of research. He was the force of the Institute and a real friend and mentor of his students. Boldyrev studied minerals in nature, tried to determine substances on the basis of their crystalline structure, and gave mathematical arguments to his research. He applied this study to mineral resources and to their utilization. In 1934, when scientific degrees were restored in the USSR, Boldyrev received a doctorate degree on the basis of his scientific activity and publications. His 85 published papers and unpublished manuscripts cover a variety of subjects—crystallography, mineralogy, petrology, ore deposits, mineral resources, and hydrology.

Boldyrev was simple, friendly, modest, self-possessed and reserved. Although his scientific career was interrupted many times by political upheavals, his accomplishments were numerous, substantial and lasting. With his passing, Russian science has lost a remarkable man, scientist, and teacher.

Dr. Alfred C. Lane, formerly Pearson professor of geology and mineralogy at Tufts College, died April 15 in Cambridge, Massachusetts. At one time Dr. Lane was head of the National Research Council's committee on estimation of geologic time by atomic disintegration and was president of the Geological Society of America in 1931.

Dr. Lewis G. Westgate, emeritus professor of geology at Ohio Wesleyan University, died March 30 at his home in Delaware, Ohio, at the age of seventy-nine. He had been a professor at the University from 1900 until his retirement in 1939 and resumed his duties from 1942 to 1944.

Geologists and mineralogists will be interested in a recent publication of the Colorado School of Mines entitled "Guide to the Geology of Central Colorado" (Vol. 43, No. 2, of the School's *Quarterly*), which was issued as the guidebook for the three field trips of the 33rd annual meeting of the American Association of Petroleum Geologists held

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