(34 pages) gives a good account of the 230 space groups and the 14 Bravais lattices, but the author omits almost entirely the point groups and their relationship to the lattices and space groups. Chapters III and IV contain very short discussions on the theory and production of X-rays and X-ray diffraction. The methods of crystal analysis are described in a few pages. This brevity is rather serious as whole paragraphs become unintelligible to the reader unless he has become familiar with the methods elsewhere. In Chapter V we read of the properties of the elements and the structures of atoms. The next two chapters occupy 50 pages and deal with the various crystal structure types thus far discovered. They follow very closely V. M. Goldschmidt's classification and discussion of structure types and atomic and ionic radii. Even the structure of olivine is included, but no account is given of any organic crystals. The last chapter takes up isomorphism, morphotropism, polymorphism, etc. A bibliography for the years 1924 to 1927 concludes the book. Unfortunately an alphabetical index was omitted which detracts from the value of the volume. Several typographical errors were noticed in the last third of the book.

JOHN W. GRUNER

NEUE MIKROSKOPISCHE BEOBACHTUNGEN AM CUBANIT (CHALMERSIT) UND ÜBERLEGUNGEN ÜBER SEINE LAGERSTÄTTENKUNDLICHE STELLUNG. PAUL RAMDOHR. *Zeitsh. f. praktische Geol.*, vol. **36,** 1928, pp. 169–178.

A great deal of information including a complete bibliography on cubanite may be found in this paper. The author himself studied 32 occurrences of cubanite and finds that the mineral once considered as rare is very common in pyrrhotite-chalcopyrite ores, though he cannot explain its absence in many ores of apparently the same type. The crystallographic orientation of cubanite lamellae in chalcopyrite is carefully described. Its optical properties including pleochroism and behavior in reflected polarized light are given. The name cubanite (chalmersite) seems to include two minerals which the author calls cubanite 1 and cubanite 2. The latter seems to be a decomposition product of cubanite 1, which appears to be the true cubanite. Cubanite 2 can be distinguished from cubanite 1 by optical tests and then only by very careful study since they appear almost identical. In polarized light cubanite 2 is darker brown ("lederbraun") than cubanite 1 and remains this color on rotation of the stage, while cubanite 1 shows considerable anisotropism.

Cubanite seems to be confined to deposits formed at high temperatures, an observation in complete agreement with G. M. Schwartz's experiments (*Econ. Geol.*, vol. **22,** 1927, p. 44). The occurrence of peculiar little stars (skeleton crystals) of sphalerite in chalcopyrite and cubanite is described.

JOHN W. GRUNER

NOTES AND NEWS

Dr. E. L. Bruce, professor of Mineralogy at Queen's University since 1920, has been appointed first Miller Memorial Professor of Research at Queen's University. The new chair has been founded by friends and students of the late Dr. Miller and by mining companies in northern Canada.

Professor J. E. Hawley, of the University of Wisconsin, has been appointed head of the department of Mineralogy at Queen's University. He is a graduate of Queen's University and succeeds Professor E. L. Bruce.

At the annual meeting of the Boston Society of Natural History the announcement was made that the "Walker Prize in Natural History," which was offered this year for the best paper submitted on any subject in the field of geology or mineralogy, was awarded to Dr. M. W. Senstius, of the department of geology of Rutgers University, for a memoir entitled "Studies in Weathering and Soil Formation in Tropical High Altitudes."

Amherst College has announced plans for its fifteenth geological and mineralogical expedition to the western area of the United States, under the direction of Professor Frederic B. Loomis.

Dr. H. von Philipsborn has been called to the Bergakademie at Freiberg in Saxony as successor to Dr. Kolbeck and Dr. K. Spangenberg succeeds Professor L. Milch at the University of Breslau.

Dr. Joseph L. Gillson, associate professor in the department of geology of the Massachusetts Institute of Technology, has been granted a leave of absence for the year 1929–1930, and will serve as associate professor of economic geology at Northwestern University.

Of the present officers of the Mineralogical Society of America both the secretary and treasurer will attend the International Geological Congress which will meet at Pretoria, South Africa, July 29–August 7, 1929.

Dr. F. J. Becke, emeritus professor at the University of Vienna, has been awarded the Wollaston medal of the Geological Society of London for his investigations on the crystalline schists.

Dr. J. Beckenkamp, professor of Mineralogy and Crystallography, has retired from active teaching at the University of Würzburg.

Dr. A. Bevan, assistant professor of Geology at the University of Illinois, has been appointed State geologist of Virginia.

Dr. H. A. Brouwer of the Techn. Hochschule at Delft has been appointed Director of the newly established Geological-Mineralogical Institute at the University of Amsterdam. He will also have charge of general Geology and Petrography.

Dr. Tom Barth of the University of Leipzig is spending a year at Harvard University, having received an appointment of Fellow of the International Educa- Board.