

ABSTRACTS OF MINERALOGIC LITERATURE

ON THE OCCURRENCE OF ILVAITE IN THE SOUTH MOUNTAIN MINING DISTRICT, OWYHEE COUNTY, IDAHO. EARL V. SHANNON. *Am. J. Sci.*, [4], 45, (2), 118-125, 1918.

Ilvaite occurs in a contact-metamorphic deposit, associated with actinolite, garnet, epidote, pyrrhotite, chalcopyrite, sphalerite and argentiferous galena. A list of the forms observed, and a description of the properties of the mineral are given. S. G. G.

ON THE ETCHING FIGURES OF THE DIHEXAGONAL ALTER-NATING TYPE. A. P. HONESS. *Am. J. Sci.*, [4], 45, (3), 201-221, 1918.

A study of the etch-figures of calcite, magnesite, siderite, rhodochrosite, and smithsonite. S. G. G.

THE OCCURRENCE OF CRISTOBALITE IN CALIFORNIA. A. F. ROGERS. *Am. J. Sci.*, [4], 45, (3), 222-226, 1918.

Cristobalite is described from two localities in California: near Tuscan Springs, Tehama Co., in distinct octahedral crystals in an auganite; and at Jamestown, Tuolumne Co., in an augite andesite, paramorphous after tridymite. S. G. G.

THE REPLACEMENT OF WOOD BY CALCITE. C. W. GREENLAND. *Econ. Geol.*, 13, (2), 116-119, 1918.

Description of a complete calcification of a gymnosperm found at a point 6 miles north and 2 miles east of Russell, Kansas. S. G. G.

TESTS FOR FLUORINE AND TIN IN METEORITES WITH NOTES ON MASKELYNITE AND THE EFFECT OF DRY HEAT ON METEORIC STONES. GEORGE P. MERRILL. *Proc. Nat. Acad. Sci.*, 4, (6), 176-180, 1918.

Refined methods for the determination of fluorine were applied to the Bluff, Texas; Allegan, Mich.; and Waconda, Texas; meteorites. Altho 10 to 20 grams of material were used in the tests, the results were negative. Analyses of schreibersite and cohenite from the Canon Diablo iron failed to show the presence of tin.

Maskelynite was found in various meteorites in all stages, from an oligoclase glass essentially isotropic, $n = 1.51$, to one plainly biaxial, but with no crystal-line outlines, cleavage or other recognizable properties, with indices ranging from 1.543 to 1.56. In the isotropic form the mineral retains, in places, traces of plagioclase twinning, believed to indicate the mineral to be a re-fused feldspar, rather than a residual or original glass.

The effect of dry heat on the Estacado and Homestead stones at various temperatures is also described. S. G. G.

CONTRIBUCIONES A LA MINERALOGIA MEXICANA. ERNESTO WITTICHEN. *Memorias Y Revista Sociedad Científica Antonio Alizate*, 37, (1), 23-42, 1918.

Includes descriptions and analyses of zoisite, Sierra Juarez, Lower California; rubellite, Lower California; wernerite, Ayoquesco, Oaxaca; hematite, Zacatecas; beryl, Lower California; and celestite, Amajac, Pachuca.

S. G. G.

THE GROWTH OF MINERALOGY FROM 1818 TO 1918. WILLIAM E. FORD. *Am. J. Sci.*, [4], 46, 240-254, 1918.

This special number (of 416 pages) of the *American Journal of Science* commemorates the one-hundredth anniversary of the founding of the journal by Benjamin Silliman in July, 1818; and is devoted to a history of the various sciences during the century of its existence. On Professor Ford has devolved the writing of the history of mineralogy during this period. Mineralogy, since its beginning in America, has been inseparably bound with the Sillimans, the Danas, the *American Journal of Science* and its contributors, and Dr. Ford has presented an excellent review of the history of the science and its workers.

S. G. G.

THE MELTING POINTS OF CRISTOBALITE AND TRIDYMITTE. J. B. FERGUSON and H. E. MERWIN, *Am. J. Sci.*, [4], 46, (8), 417-426, 1918.

A new type of furnace is described in which the following melting points were determined: cristobalite, $1710^{\circ} \pm 10^{\circ}$ C.; and tridymite, $1670^{\circ} \pm 10^{\circ}$. Quartz was directly inverted into tridymite by dry heat alone.

S. G. G.

GEMS AND PRECIOUS STONES IN 1916. WALDEMAR T. SCHALLER U. S. Geol. Survey, *Mineral Resources U. S.*, 1916, II, 887-899, 1918.

Besides giving statistics of production, the writer briefly notes the occurrence of the gem minerals in the various states. An exhibit of tourmaline, beryl, kunzite, and the associated minerals of the pegmatites of Southern California in the U. S. National Museum is described in detail.

S. G. G.

NOTE ON THE STRATHMORE METEORITE OF 1917, DEC. 3. R. A. SAMPSON. *Proc. Roy. Soc. Edinburgh*, 38, I, 70-74, 1918.

Note of a stone that fell in S. E. Scotland, on December 3, 1917. A number of fragments were recovered, the largest weighing 22.5 lbs. Details of the fall are described, with speculative data as to the flight and origin of meteorites.

S. G. G.

NOTES ON THE POSSIBLE ORIGIN OF THE MAGNESITE NEAR VALLEY, WASHINGTON. OLAF P. JENKINS. *Econ. Geol.*, 13, (5), 381-384, 1918.

Large deposits of coarsely crystalline pink to dark gray magnesite occur about 50 miles north of Spokane, interbedded with dolomites and other sedimentary rocks. The magnesite is believed to have been formed from the dolomitic or limestone beds by the replacement of Ca by Mg effected by circulating underground waters.

S. G. G.

RECENT ADVANCES IN MINERALOGY AND CRYSTALLOGRAPHY. A. SCOTT. *Science Progress*, 49, 38-43, July, 1918.

NOTEWORTHY CRYSTALS OF FLUORITE FROM THE BAVENO GRANITE. FAUSTA BALZAC. *Atti accad. sci. Torino*, 52, 1014-1020, 1917; thru *Chem. Abstr.*, 12, 126, 1918.

Five crystals are described, one of them being shown by its deep blue-violet color and high refractive index and specific gravity to be a sort of yttrifluorite.

E. T. W.

A THEORY OF CRYSTAL STRUCTURE WITH APPLICATION TO TWENTY CRYSTALS BELONGING TO THE CUBIC SYSTEM. ALBERT C. CREHORE. *Phys. Rev.*, 10, 432-460, 1917.

A mathematical discussion of the forces acting upon atoms and electrons arranged according to the various cubic space-lattices, as exemplified by the cubic minerals which have been studied by X-rays.

E. T. W.

STUDIES IN THE CALCITE GROUP. WILLIAM E. FORD. Yale Univ. *Trans. Conn. Acad. Arts Sci.*, 22, 211-248, 1917.

The structure, molecular volumes, and refractive indices of the minerals of the calcite group are discussed, and the relations between the several members pointed out. By allowing for volume changes, the specific gravities and indices of the pure carbonates can be calculated from those measured on natural isomorphous mixtures, and conversely the composition of a mixture from its physical properties.

E. T. W.

MIXED CRYSTALS. CARLO VIOLA. *Atti accad. Lincei*, 26, I, 195-207, 1917; thru *Chem. Abstr.*, 12, 329, 1918.

A discussion of mixed crystals from the point of view of the capillary constants of faces, reticular density, etc. It is concluded that there is no essential difference between isomorphous mixtures and solid solutions, the members of a series exerting mutual influence on molecular volumes, etc., in either case.

E. T. W.

THE FORMATION OF TWIN CRYSTALS. CARLO VIOLA. *Atti accad. Lincei*, 26, I, 278-286, 1917; thru *Chem. Abstr.*, 12, 330, 1918.

A mathematical discussion of twinning.

E. T. W.

THE ORIGIN OF CHERT IN THE BURLINGTON LIMESTONE. W. A. TARR. *Am. J. Sci.*, [4], 44, 409-452, 1917.

From an elaborate study of the chert and its occurrence it is concluded that the silica was originally precipitated in colloidal form on the sea bottom, contemporaneously with the limestone, and subsequently consolidated. The theory of origin by replacement of the rock subsequent to its consolidation is believed to be untenable.

E. T. W.