

## OPTICAL PROPERTIES

Under the microscope, yellow, non-pleochroic, with the refractive indices:  $\alpha=1.62$ ,  $\beta=1.625$ ,  $\gamma=1.63$ , approx.

## CHEMICAL PROPERTIES

Soluble in acids, leaving white silica residue.

Analysis by Nauma Sahlbom on 0.6 grams fairly pure material:  $H_2O=8.89$ ,  $SiO_2=35.02$ ,  $Al_2O_3=0.75$ ,  $FeO=5.80$ ,  $MnO=37.20$ ,  $CaO=3.59$ ,  $MgO=7.20$ ,  $Na_2O=0.12$ ,  $K_2O=1.13$ , other metals 0.19, sum 99.89%. Formula:  $Mn_{12}Si_4O_{28}7H_2O$ ; or,  $12Mn0.8Si_0.7H_2O$ . Most nearly related to caryophyllite.

## OCCURRENCE

Occurs on garnet associated with barite and calcite in the Norbotten iron mine. Probably to be classed as a contact metamorphic mineral.

E. T. W.

## Catoptrite

GUSTAV FLINK: *Katoptril, a new mineral from Nordmarken, loc.cit.*

NAME: from Greek *katoptron*, a mirror, in reference to the brilliance of the cleavage faces.

## PHYSICAL PROPERTIES

Color: black, but in thin splinters, red; Luster, metallic, especially brilliant on the cleavage faces.  $H=5.5$ . Sp.Gr.=4.5.

## CRYSTALLOGRAPHIC PROPERTIES

Monoclinic.  $a : b : c = 0.7922 : 1 : 0.4899$ ;  $\beta = 78^\circ 57'$ .

Cleavage, very perfect parallel to  $a$  (100).

## OPTICAL PROPERTIES

Under the microscope, pleochroic, red-brown to red-yellow. Dispersion inclined, strong. Axial angle small. Sign +.

## CHEMICAL PROPERTIES

Not attacked by acids.

Analysis by R. Mauzelius gave:  $SiO_2=7.75$ ,  $Sb_2O_3=20.76$ ,  $Al_2O_3=9.50$ ,  $Fe_2O_3=3.58$ ,  $FeO=2.44$ ,  $MnO=52.61$ ,  $MgO=3.06$ ,  $CaO=0.58$ ,  $H_2O=0.11$ , sum 100.39%.

Formula:  $2SiO_2.Sb_2O_3.2(Al,Fe)_2O_3.14(Mn,Fe,Ca)O$ . Related to manganostibiite and hematostibiite, yet distinct from either.

## OCCURRENCE

Occurs in granular limestone with magnetite and other minerals, and is best obtained by dissolving the rock away with hydrochloric acid. Formed by contact metamorphism.

E. T. W.

## ABSTRACTS OF MINERALOGICAL LITERATURE

SOME NOVELTIES IN THE MINERALOGY OF SWEDEN. GUSTAV FLINK. *Geol. Fören. Förh.*, 39, 426-452, 1917.

Includes descriptions of two new minerals, noted under that heading, and the following:

*Margarosanite* from Longbanshyttan. This mineral had been found here before described by Ford and Bradley from Franklin Furnace (see *Am. Min.*, 1, (5) 87-88, 1916). It occurs associated with nasonite, schefferite, apophyllite and thaumasite in the Lukas Ort and Bjelkes shaft. It is mostly columnar, but a few good crystals have been obtained, which are triclinic (as suggested by Ford and Bradley) with:  $a : b : c = 0.7500 : 1 : 1.2849$ ;  $\alpha = 74^\circ 37'$ ,  $\beta = 50^\circ 28'$ ,  $\gamma = 78^\circ 53'$ . Analysis gave essentially identical results to those of Ford and Bradley. It represents an isolated member of the pyroxene group.

*Thaumasite from Longbanshyttan.* This, the fourth Swedish occurrence of the mineral, is associated with garnet, apophyllite, barite, calcite, and ferruginous quartz. It varies from compact massive to friable-crystalline; two measurable crystals were obtained, on which the axial ratio  $c=0.9479$  was determined. The description of the material shows it to bear a striking resemblance to that from New Jersey, even to the abundance of minute doubly-terminated crystals with dull base and striated prism. E. T. W.

AURICHALCITE FROM BIG COTTONWOOD CANYON, SALT LAKE COUNTY, UTAH. A. LEDOUX, Univ. of Brussels; *J. Wash. Acad. Sci.*, 7, (12), 361-365, 1917.

A crystallographic examination of minute fragments.

S. G. G.

THE INDICES OF REFRACTION OF ANALYZED RHODOCHROSITE AND SIDERITE. EDGAR T. WHERRY, U. S. National Museum, and ESPER S. LARSEN, U. S. Geological Survey. *J. Wash. Acad. Sci.* 7, (12), 365-368, 1917.

Analysis of crystallized rhodochrosite from the John Reed Mine, Alicante, Lake Co., Colo., gave E. T. W.  $MnCO_3$  95.72,  $FeCO_3$  1.87,  $CaCO_3$  0.50,  $MgCO_3$  0.68, gangue 0.82, sum 99.59 per cent; Sp. Gr. 3.71. The indices of refraction (E. S. L.) measured by immersion were  $\omega=1.817\pm 0.003$ ,  $\varepsilon=1.595\pm 0.005$ . Since the Fe, which raises the indices, is present in about the same proportion as Ca and Mg, which lower them, these values must be close to those of pure  $MnCO_3$ .

The indices of refraction of analyzed siderite from two localities were also determined; Ivigtut, Greenland:  $\omega=1.871$ ,  $\varepsilon=1.631$ ; Spokane, Wash.:  $\omega=1.858$ ,  $\varepsilon=1.622$ ; all  $\pm 0.005$ . From these and other observations it is concluded that the values for pure siderite are  $\omega=1.875$ ,  $\varepsilon=1.635$ . S.G.G.

A REMARKABLE OCCURRENCE OF CALCITE IN SILICIFIED WOOD. EDGAR T. WHERRY. *Proc. U. S. Nat. Mus.* 53, 227-230, 1917.

Description of minute calcite crystals in silicified wood from Yellowstone National Park. (Copies obtainable from author on request.) S. G. G.

THE DEVITRIFICATION OF LEAD GLASS. HENRY LE CHATELIER. *Bull. soc. franc. min.* 39, 150-153, 1916. Abstract by P. A. v. d. MEULEN, reprinted by permission from *Chem. Abstr.*, 11, (2), 131, 1917.

Owing to peculiar circumstances, a number of crucibles containing molten lead glass at a temperature of  $1350^\circ$  were cooled extremely slowly. These were then broken and the glass found to contain very thin hexagonal plates of tridymite. L. concludes that cristobalite is a metastable phase of  $SiO_2$ .

RELATIONS EXISTING BETWEEN THE HABIT AND THE CONDITIONS OF CRYSTALLIZATION OF TRIDYMITE. A. LACROIX. *Bull. soc. franc. min.* 39, 154, 1916. Abstract by P. A. v. d. MEULEN, reprinted by permission from *Chem. Abstr.*, 11, (2), 131, 1917.

L. formerly held the view that tridymite crystallized in thin plates only when produced under the influence of pneumatolytic agencies. The artificial production of thin plates of tridymite from a lead glass fusion (preceding abstract) indicates that this view is no longer tenable.