

## THE MINERALOGICAL SOCIETY (ENGLAND)

*Mineralogical Society*, January 10.—Dr. G. T. Prior, F.R.S., President, in the chair.

DR. L. J. SPENCER: *Potarite*, a new mineral discovered by the late Sir John Harrison in British Guiana. Small nuggets and grains of a brittle white metal have been found very sparingly by diamond-washers in the neighborhood of the Kaieteur Falls on the Potaro River. This mineral, previously erroneously described as "allopalladium," was proved by Harrison to be a compound of palladium and mercury, Pd Hg, with a density (15.0–16.1) considerably higher than that of either of the component metals. There is a crystalline structure which on the surface of one nugget is shown as indistinct cubic octahedra. The original "allopalladium" from the Harz Mts., supposed to be a hexagonal modification of palladium, could not be procured for a re-examination; it is probably the ordinary cubic palladium.

DR. H. V. ELLSWORTH: *A simple and accurate constant-volume pycnometer for specific gravity determination*. The pycnometer of 10c.c. capacity is made of silica-glass, thus possessing several advantages over one made of ordinary glass. The stopper is perforated by a capillary and is continued into a graduated side-tube, which dips under water while the apparatus is cooling. The volume of the contained water to the graduations on the side-tube can be readily and accurately determined to 0.0002c. c.

MR. W. CAMPBELL SMITH: *The optical orientation of labradorite from County Down (Ireland), determined by the Fedorov method*. The labradorite from basaltic dikes at St. John's Point, Ardglass, Co. Down, of which the chemical composition and refractive indices were published in 1912 has been studied by the Fedorov method and the optical orientation determined.

DR. C. E. TILLEY demonstrated the inversion of  $\text{Ca}_2\text{SiO}_4$  in a metamorphic limestone from Larne, Co. Antrim, (Ireland) and MR. A. F. HALLIMOND exhibited an electro-magnetic separator for mineral powders.

## NEW MINERAL NAMES

## Genevite

L. DUPARC AND M. GYPSIN: Sur la genevite, un Nouveau Mineral. (Genevite, a new mineral). *Bull. Soc. Fran. Mineral.*, 50, 41–46, 1927.

NAME: (Derivation not given, perhaps from *Geneva*, Switzerland, residence of L. DUPARC).

CHEMICAL PROPERTIES: Essentially a silicate of calcium and aluminum. Analysis:  $\text{SiO}_2$  37.11,  $\text{Al}_2\text{O}_3$  16.19,  $\text{Fe}_2\text{O}_3$  3.05, FeO 2.53, MnO trace, CaO 33.67, MgO 2.17,  $\text{K}_2\text{O}$  0.66,  $\text{Na}_2\text{O}$  0.46,  $\text{H}_2\text{O}$  2.70, Ign. loss 1.01; Sum 99.55. Easily attacked by hot HCl. Fuses at 3 to a gray enamel.

CRYSTALLOGRAPHIC PROPERTIES: Tetragonal. Prismatic. Faces  $m(110)$ . Cleavage (100) poor. The basal section shows two cleavages.

PHYSICAL AND OPTICAL PROPERTIES: Transparent, colorless. Uniaxial. Elongation negative.  $n_o = 1.707$ ,  $n_p = 1.698$ .

OCCURRENCE: Found as embedded crystals in a gray limestone interbedded in carbonaceous schists of Paleozoic Age.

DISCUSSION: The mineral shows numerous minute inclusions sometimes arranged along the diagonals of the crystals. (If one considers these inclusions as magnetite and recalculates the analysis upon this basis the mineral falls in a very satisfactory manner into the melilite group with the following mineral composition:<sup>1</sup>

Magnetite 2.7, Soda sarcolite 2.3, Velardenite<sup>2</sup> 20.1, Sarcolite 74.9.

The mineral is then satisfactorily referred to sarcolite. (Abstr.).

W. F. FOSHAG

#### Thorotungstite

J. B. SCRIVENOR AND J. C. SHENTON: Thorotungstite, a mineral containing tungsten and thorium from the Federated Malay States. *Am. Jour. Sci.*, **13**, 487-490 (1927).

NAME: From its main constituents, *thoria* and *tungsten* trioxide and from its resemblance to *tungstite*.

CHEMICAL PROPERTIES: A hydrous oxide of tungsten, thorium, cerium and zirconium. Formula  $2\text{WO}_3 \cdot \text{H}_2\text{O} + (\text{ThO}_2, \text{Ce}_2\text{O}_3, \text{ZrO}_2) \cdot \text{H}_2\text{O}$ . Analysis: (on material pure except for a small amount of silica)  $\text{WO}_3$  69.69,  $\text{Fe}_2\text{O}_3$  1.35,  $\text{Al}_2\text{O}_3$  4.31,  $\text{SiO}_2$  0.48,  $\text{ThO}_2$  16.00, rare earths (nearly all cerium) 1.77,  $\text{ZrO}_2$  1.96, CaO 1.02, MgO tr., Ign. loss 4.18. Sum 100.76. Attacked by acids. Hot caustic soda partially dissolves it leaving a heavy white flocculent precipitate containing thorium, iron and rare earths.

CRYSTALLOGRAPHIC PROPERTIES: Orthorhombic? with pinacoid, prism and dome. Transparent acicular crystals up to 0.8 mm. Cleavage transverse.

PHYSICAL AND OPTICAL PROPERTIES: Color honey yellow.  $n$  greater than 1.74. Birefringence high, the interference colors of the crystals lying on the broad face of the fourth order. Optically negative. Sp. Gr. 5.55.

OCCURRENCE: At the Kramat Pulai Ltd. Mine at Pulai Kinta District, Perak, Federated Malay States. It was found as shapeless blocks a few pounds in weight at the base of an alluvial tin bearing deposit overlying granite. Results from the decomposition of scheelite or wolframite (the latter occurs in the granite) and some mineral containing  $\text{ThO}_2$  and  $\text{Ce}_2\text{O}_3$ , perhaps monazite and zircon. W. F. F.

#### Scharizerite

JOSEPH SCHADLER: Scharizerite, ein neues Mineral aus der Drachenhöhle bei Mixnitz in Steiermark. (Scharizerite, a new mineral from the Drachenhöhle near Mixnitz, Steiermark). *Anz. Akad. Wiss. Wien.*, **62**, 180 (1925).

NAME: In honor of Dr. R. Scharizer, Professor of Mineralogy at the University of Graz.

CHEMICAL PROPERTIES: A nitrogenous carbon compound. Analysis (by Hans Lieb): C 35, H 4.5, N 8 (average), P tr., Ash 17. Soluble in sodium hydroxide and reprecipitated by hydrochloric acid.

PHYSICAL PROPERTIES: Massive and black.

OCCURRENCE: Found in fist-size masses and in the brain cavity of fossil bears; also disseminated in the phosphate earth of Drachenhöhle at Mixnitz. Differs from dopplerite and phytokollite in its higher content of nitrogen and in its origin from animal instead of vegetable matter. W. F. F.

<sup>1</sup> W. T. Schaller, *U. S. Geol. Survey, Bull.* **610**, 109-128 (1916).

<sup>2</sup> Velardenite (gehlenite) is taken as  $\text{MgO} \cdot 2\text{CaO} \cdot 2\text{SiO}_2$ . See J. B. Ferguson and A. F. Buddington: *Am. Jour. Sci.*, **50**, 131-140 (1920).

## Shannonite

C. E. TILLEY: Unnamed mineral of the olivine group. *Geol. Mag.*, **64**, 143-144 (1927). Original description: FREDERICK P. PAUL. *Tsch. Min. Pet. Mitt.*, **25**, 309-311 (1906).

NAME: From the locality, *Shannon* Tier, near Hobart, Tasmania.

CHEMICAL PROPERTIES: A silicate of calcium,  $\text{Ca}_2\text{SiO}_4$  (?). Contains lime but apparently no magnesia. Soluble in dilute hydrochloric acid.

PHYSICAL AND OPTICAL PROPERTIES: Colorless to light gray. Cleavage rectangular, poor. Optically positive. Birefringence = 0.0279,  $\gamma - \beta = 0.0079$ .  $2V = 64^\circ 18'$  (Calculated).  $2E = 125^\circ 14'$ ,  $\alpha = 1.718$ ,  $\beta = 1.738$ ,  $\gamma = 1.746$ . Dispersion  $\rho > \nu$ .

DISCUSSION: From the analysis of the rock the mineral appears to be essentially  $\text{Ca}_2\text{SiO}_4$  and to constitute up to 14% of the rock. Tilley believes it to be identical with  $\beta\text{-Ca}_2\text{SiO}_4$  (Day, Shepard and Wright: The lime-silica series of minerals. *Am. Jour. Sci.*, **22**, 265-302, 1906) and names it shannonite. (According to Day, Shepard and Wright  $\beta\text{-Ca}_2\text{SiO}_4$  is unstable below  $675^\circ$  and rapidly inverts to the monoclinic  $\gamma\text{-Ca}_2\text{SiO}_4$  with dusting. The optic axial angle of  $\beta\text{-Ca}_2\text{SiO}_4$  is given as very large. Abstr.).

W. F. F.

## Rossite

WILLIAM F. FOSHAG AND FRANK L. HESS: Rossite and Metarossite. Two new vanadates from Colorado. *Proc. U. S. Nat. Mus.*, **72**, 1-12 (1927).

NAME: In honor of Dr. C. S. Ross, of the United States Geological Survey.

CHEMICAL PROPERTIES: A hydrous calcium vanadate,  $\text{CaO} \cdot \text{V}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$ . Analysis: CaO 18, MgO 0.14,  $\text{V}_2\text{O}_6$  58,  $\text{H}_2\text{O}$  22.90. Sum 100.64. Soluble in water.

CRYSTALLOGRAPHIC PROPERTIES: Triclinic.  $x_0 = 0.4969$ ,  $y_0 = 0.1624$ ,  $\rho_0 = 0.8295$ ,  $\lambda = 80^\circ 39'$ ,  $\mu = 59^\circ 31'$ ,  $\nu = 85^\circ 38'$ ,  $\alpha = 98^\circ 18'$ ,  $\beta = 97^\circ 24'$ ,  $\gamma = 89^\circ 34'$ . Habit prismatic. Forms:  $c$  (001),  $b$  (010),  $a$  (100),  $m$  (110),  $y$  (101).

PHYSICAL AND OPTICAL PROPERTIES: Color yellow. Luster pearly to vitreous. Biaxial.  $2V$  large. Plane of the optic axes parallel to the axis  $c$  with  $Z = c$ .  $\alpha = 1.710$ ,  $\beta = 1.770$ ,  $\gamma = 1.840$ . Dispersion strong. Hardness: 2-3; specific gravity 2.45

OCCURRENCE: Found as small glassy kernels embedded in flaky metarossite at Bull Pen Canyon, San Miguel County, Colorado.

W. F. F.

## Metarossite

*Ibid.*

NAME: In allusion to its relation to rossite, a partially dehydrated rossite.

CHEMICAL PROPERTIES: A hydrous calcium vanadate,  $\text{CaO} \cdot \text{V}_2\text{O}_6 \cdot 2\text{H}_2\text{O}$ . Analyses CaO 20.04 to 19.60; MgO 0.10 to 0.13;  $\text{V}_2\text{O}_6$  64.08 to 64.20;  $\text{H}_2\text{O}$  13.56 to 14.08; insoluble 2.72 to 2.48. Sums 100.50; 100.49. Soluble in water.

PHYSICAL AND OPTICAL PROPERTIES: Color yellow. Luster pearly to dull. Biaxial.  $2V$  large. Dispersion strong.  $\alpha = 1.840$ ,  $\beta$  and  $\gamma$  higher than 1.85. Soft and friable.

OCCURRENCE: Found as small veinlets in sandstone at Bull Pen Canyon, San Miguel Canyon, Colo., as a dehydration product of rossite.

W. F. F.

## ERRATA

Vol. 12, p. 251, table, line 2 from bottom, for "1.7474" read "1.7974."