

for those interested in compiling such data. But best of all is the way in which optical data are presented, not merely as a matter of record, but to throw light upon the compositions and natures of the more complex minerals of the region.

W.

## NEW MINERALS—NEW SPECIES

FAMILY: PHOSPHATES, ETC. DIVISION: COLLOIDAL  $X(A_1_2O_3+A_1F_3)+y P_2O_5+z H_2O$ .

### Unnamed.

OSKAR GROSSPIETSCH: Ein Tonerdephosphat von Arsita bei Jakubeny, Bukowina. (An aluminium phosphate from Arsita near Jakubeny, Bukowina.) *Verh. geol. Reichsanst. Wien*, 1919, (6), 149-155.

CHEMICAL PROPERTIES: Analysis (judging from the summation not very accurate, and definitely stated to be "apparently inexact" as to fluorine) gave:  $A_1_2O_3$  35.06,  $Fe_2O_3$  0.91, MnO trace,  $SiO_2$  4.23,  $P_2O_5$  28.18, F 4.40,  $H_2O$  28.70, absorbed moisture 6.44, sum 107.92%. From this a highly complex constitutional formula is derived. It approximates  $3A_1_2O_3.A_1F_3.2P_2O_5.15H_2O$ , the theory for which is  $A_1_2O_3$  32.4,  $A_1F_3$  8.9,  $P_2O_5$  30.1,  $H_2O$  28.6, sum 100.0%; or  $A_1_2O_3$  37.8, F 6.0,  $P_2O_5$  30.1,  $H_2O$  28.6, less O=F 2.5, sum 100.0%.

PHYSICAL PROPERTIES: Color almost pure white; colloidal, dense; sp. gr. 1.998.

OCCURRENCE: A decomposition product of manganese silicate ores, associated with wad and limonite. Found at Oberarsita, near Jakubeny, Bukowina.

DISCUSSION: Has been described as planerite (Leitmeier, *Z. Kryst. Min.* 55, 353, 1916; abstd. in *Am. Min.* 1, 34, 1916) but is thought to differ in composition and properties. However, too much reliance should not be placed on analytical data obtained from colloid minerals.

E. T. W.

FAMILY: SULFIDES, ETC. SUBFAMILY: HYDROCARBONS.

DIVISION:  $R' : R''' = 4:3$ .

### Simonellite.

R. CIUSA AND A. GALIZZI: Ricerche su alcuni costituenti delle ligniti. [An investigation of certain constituents of lignites]. *Gazetta Chimica Italiana*, 51, (1), 55-60, 1921; thru *Min. Abstr.* 1, 202, 1921.

CHEMICAL PROPERTIES: *Formula*, probably  $C_{15}H_{20}$ . Analysis gave: C 89.84%, H 10.15%; mol. wt. 202-213. The mineral is soluble in benzene or ethyl acetate, but only slightly in alcohol. M. p. =  $61-2^\circ$ , b. p.  $314-6^\circ$ .

CRYSTALLOGRAPHIC PROPERTIES: Orthorhombic;  $a:b:c = 0.9908:1:1.9694$  (G. Boeris). Forms: (001), (111), and (221).

PHYSICAL PROPERTIES: A white crystalline encrustation.

OCCURRENCE: On lignite from Fognano, Montepulciano, Tuscany. This lignite yields liquids with the composition  $C_{15}H_{23}$  and  $C_{15}H_{26}$ . Lignite from Terni contains feathery masses of crystalline plates,  $C_{20}H_{31}$ , m. p.  $74-5^\circ$ , which may be *hartite*.

DISCUSSION: Probably a valid species, altho optical data are lacking.

E. F. H.

FAMILY: OXIDES. SUBFAMILY: HYDROXIDES. DIVISION:  
R'''' : O:H<sub>2</sub>O=1:3:X

#### Becquerelite.

ALFRED SCHOEP: Sur la becquerélite, nouveau minéral radioactif. (Becquerelite, a new radioactive mineral.) *Compt. rend.*, 174, (19), 1240-1242, 1922.

NAME: In honor of A.-Henri Becquerel.

CHEMICAL PROPERTIES: *Formula*, UO<sub>3</sub>.XH<sub>2</sub>O. Material was dried at 100°, losing 4.21% H<sub>2</sub>O, and then analyzed, the average of two closely agreeing trials giving: UO<sub>3</sub> 86.51, H<sub>2</sub>O 5.82; Fe<sub>2</sub>O<sub>3</sub> 0.54, PbO 5.25, SiO<sub>2</sub> 0.83, SO<sub>3</sub> 1.01, sum 99.96%. The PbO and SO<sub>3</sub> come from admixed anglesite, the Fe<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> are evidently impurities; the total H<sub>2</sub>O value (both +and -100°) represents approximately 2 H<sub>2</sub>O, (theory 11.2%), but the rôle of this constituent needs further study. The radioactivity is about the same as that of pitchblende.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES: System orthorhombic. Prism zone angles within 1-2° of 60°, and twins of aragonite type are common. Crystals minute. Cleavage perfect on 001 and 110. A biaxial interference figure is shown on basal cleavage flakes.  $\alpha = 1.75$ ,  $\gamma = 1.77$ , sign -. Pleochroic from nearly colorless to deep yellow.

PHYSICAL PROPERTIES: Color brownish yellow; luster resinous.

OCCURRENCE: Associated with curite, soddite, and anglesite in cavities in pitchblende at Kasolo, Belgian Congo.

DISCUSSION: The name "lambertite" has been given to a mineral alleged to be UO<sub>3</sub> found in Wyoming in 1919 (See *Am. Min.*, 5, (1), 17-18, 1920.). Its properties were, however, not described, so that it is impossible to state whether it is identical with the present mineral or not. Should the two, as seems likely, ultimately prove to be the same, an awkward nomenclatorial situation will arise: Shall that name be used which has priority in date, or that which has priority in description? In the biological sciences the latter would be selected, and the abstractor is inclined to favor the same plan here.

E. T. W.

FAMILY: SILICATES. DIVISION: UO<sub>3</sub>:SiO<sub>2</sub>:H<sub>2</sub>O=5:2: 6 (?).

#### Soddite.

ALFRED SCHOEP: La soddite, nouveau minéral radioactif. (Soddite, a new radioactive mineral.) *Compt. rend.*, 174, (16), 1066-1067, 1922.

NAME: Dedicated to Frederick Soddy.

CHEMICAL PROPERTIES: *Formula*, perhaps 5UO<sub>3</sub>:2SiO<sub>2</sub>:6H<sub>2</sub>O, or (UO<sub>2</sub>)<sub>5</sub> [6H<sub>2</sub>O] Si<sub>2</sub>O<sub>9</sub>, for which the theory is UO<sub>3</sub> 86.2, SiO<sub>2</sub> 7.3, H<sub>2</sub>O 6.5%. [The author gives a more complex formula, but too great dependence should not be placed on analyses made on minute amounts of material, separated from intimately admixed impurities.] The average of several partial analyses gave: UO<sub>3</sub> 85.33, SiO<sub>2</sub> 7.83, Fe<sub>2</sub>O<sub>3</sub> 0.40, H<sub>2</sub>O 6.23, sum 99.79%.

Before the blowpipe soddite is infusible; in the closed tube it blackens, losing H<sub>2</sub>O and O. It dissolves in HCl with gelatinization. Its radioactivity corresponds to the high content of U.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES: System orthorhombic; habit prismatic, with a flat prism, striated vertically. Crystals minute. The optic axial plane is (010) and  $\gamma = c$ ,  $\beta = 1.64$ ,  $\gamma = 1.68 \pm 0.025$ .

PHYSICAL PROPERTIES: Color dull yellow; streak pale yellow; translucent to opaque;  $H. = 3-4$ ;  $D. = 4.627$ .

OCCURRENCE: Intimately mixed with curite (see *Am. Min.*, 7, (7), 128, 1922) at Kasolo, Belgian Congo.

DISCUSSION: Evidently a valid new species, but further data on its composition and properties are desirable. E. T. W.

### DOUBTFUL SPECIES

FAMILY: SULFIDES AND RELATED COMPOUNDS. DIVISION:

$R'' : R''' = 3:1$  (?)

#### Unnamed.

O. HACKL: Ein neues Nickel-Arsen-Mineral. (A new nickel-arsenic mineral.) *Verhandlung der Geologischen Staatsanstalt Wien*, 1921, (7-8), 107-108.

CHEMICAL PROPERTIES: *Formula*, approximating  $Ni_3As$ , for which the theory is: Ni 70.1, As 29.9%. The amount of material available was very small, but analysis gave: Ni 67.11, Co 1.29, Fe 0.61, Cu 0.99, Ag 0.02, As 30.64, sum 100.66%.

CRYSTALLOGRAPHIC PROPERTIES: Crystallizes in cubes 5 mm. on a side.

PHYSICAL PROPERTIES: Color grayish white; luster metallic.

OCCURRENCE: Found in the vicinity of Radstadt, Salzburg, by Prof. C. Diener.

DISCUSSION: May well await the finding and investigation of further material before acceptance as a new species. E. T. W.

FAMILY: SILICATES.  $R' + R'' : R''' + R'''' = 1:4$

#### "Oranite"

HAROLD L. ALLING: The mineralogy of the feldspars. *J. Geol.* 29 (3), 237, 1921.

NAME: An abbreviation of *orthoclase-anorthite*, with the mineralogical termination *ite*.

CHEMICAL PROPERTIES: A more or less hypothetical intergrowth of orthoclase (or microcline) and anorthite corresponding to plagioclase, ranging in composition from  $Or_{70}An_{30}$  to  $Or_{20}An_{80}$ . Members with less than 30 An, are to be called "lime orthoclase," with more than 80 Ab, "potash anorthite."

CRYSTALLOGRAPHIC AND PHYSICAL PROPERTIES: Unknown.

OCCURRENCE: Extremely rare in nature, if it exists at all. Alling's tabulations of many hundreds of feldspar analyses show only 2 or 3 which appear to belong here.

DISCUSSION: Whether this should be considered a mineral species or a group is not clear. The name seems unfortunate, as it looks so much like "granite" that it is sure to be set up thus by many compositors. Moreover, if not a species, it should not end in *ite*. E. T. W.

FAMILY: CARBONATES. DIVISION:  $R'' : R'''' : H_2O = 2:1:1$

#### "Paraurichalcite"

F. K. BIEHL: Beiträge zur Kenntnis der Mineralien der Erzlagerstätten von Tsumeb. [Contributions to the knowledge of the ore deposits of Tsumeb.] *Inaug.-Diss. Munster (Westf.)*, 1919, 59 pp.; thru *Min. Abstr.* J, 202-3, 1921.

NAME: From *para* and *aurichalcite*.