laboratory of Stanford University being particularly interesting. Dr. Rogers then spoke for a short time on the California minerals, dwelling on such famous localities as the San Diego County pegmatites and the Riverside limestones.

At the close of his address a vote of thanks was tendered to Dr. Rogers for his highly interesting and valuable presentation of the subject of X-Rays and Crystal Structure as well as his masterly review of the California minerals. Mr. Lee exhibited a specimen of the new mineral germanite from Southwest Africa. The meeting adjourned at 10 P.M.

HERBERT P. WHITLOCK, *Recording Secretary.*

NEWARK MINERALOGICAL SOCIETY

At the sixtieth regular meeting of the Newark Mineralogical Society held on November 4th which was also the Annual Meeting, the following officers were elected: President, P. Walther (re-elected); Vice-President, Geo. F. Black; Secretary, Wm. H. Broadwell (re-elected); Treasurer, H. W. Lehman (re-elected).

The secretary reported a membership of 28, with one resignation and one new member. With a record of 8 meetings held during the year the secretary was the only member with a perfect attendance. The treasurer reported a balance on hand of $38.54.

WM. H. BROADWELL, *Secretary.*

At the December meeting held on December 2nd, 10 members were present and 18 visitors. The topic for discussion was *The Fluorescence and Phosphorescence of Minerals Under the Iron-Arc,* led by T. I. Miller, P. Walther and Wm. H. Broadwell.

Due to the many visitors present routine business was dispensed with and Mr. Miller proceeded with his talk on *Luminescence* and displayed specimens with a specially equipped microscope of his own design. Mr. Broadwell exhibited a number of large specimens subjected to the rays of an iron-arc and Mr. Walther had on display an assortment of fluorescent minerals.

WM. H. BROADWELL, *Secretary.*

NEW MINERALS: NEW SPECIES

CLASS: PHOSPHATES, ETC. DIVISION: $R'' : R''''' : H_2O = 5 : 2 : 2$.

Staszicite

J. MOROZEWICZ: Staszicite, a new mineral from the copper mine at Miedzianka. *Bull. Int. Acad. Sci. Cracovie, Class A, Sci.-Math.*, **1918**, 4-16; *thru Min. Abstr.* **2**, 51; (original not seen).

NAME: Presumably personal.

CHEMICAL PROPERTIES: *Formula,* $5(Ca, Cu, Zn)\ O.As_2O_5.2H_2O$ or $R_5(AsO_4)_2(OH)_4$; theory, for Ca:Cu = 1:1, CaO 23.2, CuO 32.9, As_2O_5 38.0, H_2O 5.9, sum 100.0%. Analysis gave: CaO 20.80, CuO 26.45, ZnO 7.30, FeO 0.63, MnO 0.14, MgO 0.27, As_2O_5 38.77, SiO_2 0.14, H_2O 5.56, sum 100.06%. At 500-600° loses 1.5 H_2O, at 800-880° the balance, and fuses at 880°.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES: *System,* presumably orthorhombic. Fibrous, with parallel extinction and + elongation.

PHYSICAL PROPERTIES: Color, yellowish green. Form, compact masses with radially fibrous structure. H = 5.5-6; d. = 4.227.

OCCURRENCE: An alteration product of tennantite in the presence of lime; found with other secondary copper ores and the sulfides from which they were derived in an old copper mine at Miedzianka, 19 km. west of Kielce, Poland, reopened in 1917.

DISCUSSION: A member of the erinite group, sufficiently distinct in the presence of a large amount of calcium to be classed as a separate species or sub-species. The analysis was apparently made on material of somewhat doubtful purity, and there is a lack of optical data, but may be provisionally accepted as a valid species.

E. T. W.

NEW MINERALS: DOUBTFUL SPECIES

CLASS: OXIDES, ETC. DIVISION: R″ : R‴ : H_2O = 2 : 1 : 2 (?)

"Lubeckite"

J. MOROZEWICZ: Lubeckite, a cobaltiferous mineral from Miedzianka. *Bull. Int. Acad. Sci. Cracovie, Class A, Sci.-Math.*, **1918**, 185-190; through *Min. Abstr.*, **2**, 52; (original not seen).

NAME: Presumably personal.

CHEMICAL PROPERTIES: A formula is assigned by the author, but it is rather complex, and as the material is colloidal and of doubtful homogeneity its validity is questionable. The general formula is $x\mathrm{CuO}.y(\mathrm{Mn,Co})_2\mathrm{O}_3.z\mathrm{H}_2\mathrm{O}$; theory for $x=2$, $y=1$, $z=2$, and all the R‴=Mn: CuO 45.1, Mn_2O_3 44.7, H_2O 10.2, sum 100.0%. Analysis gave, after deducting over 59% malachite, CuO 50.1, Mn_2O_3 24.2, Co_2O_3 14.8, H_2O 10.9, sum 100.0%. Dissolves in HCl with evolution of Cl.

PHYSICAL PROPERTIES: Color black; streak dark gray-brown; opaque. Structure, spherules or botryoidal aggregates, concentric-shelly within; evidently colloidal. H. = 2−3, d. = 4.8.

OCCURRENCE: In malachite with native silver among the secondary minerals at Miedzianka, as described under staszicite, above.

DISCUSSION: One of the group of colloidal mixtures of R″ and R‴ oxides, known collectively as wad. If it is admitted that individual members should receive names, then they may be arranged as follows:

Name	R″	R‴
Ouatite	Mn	Mn
Asbolite	Mn	Mn+Co
Rabdionite	Cu	Fe+Mn
Lampadite	Cu	Mn
Lubeckite	Cu	Mn+Co
Heterogenite	Cu	Co
Heubachite	Ni	Co

In all cases the ratios are widely variable, and definite formulas mean nothing whatever. The abstractor would prefer to call them varieties of one "colloid-species," wad.

E. T. W.

ABSTRACTS

CHEMICAL INVESTIGATION OF JAPANESE MINERALS CONTAINING RARER ELEMENTS. YUKI SHIBATA AND KENJIRO KIMURA. I. ANALYSES OF NAEGITE, FERGUSONITE, AND MONAZITE FROM NAEGI, MINO PROVINCE. *J. Chem. Soc. Japan*, **42**, 1-16, 1921; through *Chem. Abstr.* **15**, 2049. II. ANALYSES OF COLUMBITE AND MONAZITE OF ISHIKAWA, IWAKI PROVINCE. *ibid.* 959-64; through *Chem. Abstr.* **16**, 1722.

Detailed descriptions of the minerals and analytical methods are given. Besides the quantitative analyses, spectroscopic determinations of the rare elements are included.

E. F. H.