final treatment consists of grinding; roasting at 1200 degrees in inclined, revolving, internally heated cylinders; air cleaning; pulverizing; and sizing. The uses of the roasted jefferisite are similar to the uses of micas in the manufacture of fire proof roofing, pigments, lubricants and various other products.

A more extensive article on jefferisite has been published as a Circular of Information by the Colorado School of Mines. Those who contributed to the Circular of Information are Victor C. Alderson, President; Albert H. Low, of the Chemistry Department; H. Power Warren, of the Experimental Plant; and W. A. Waldschmidt of the Geology Department.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of February 13, 1924

A regular monthly meeting of the New York Mineralogical Club was held in the East Assembly Room of the American Museum of Natural History on the evening of Wednesday, February 13, 1924. The president, Dr. George F. Kunz, presided. There was an attendance of 19 members. The minutes of the last meeting were read and approved. The chairman of the committee on membership reported favorably on the following names submitted at the December meeting:—Albert F. Karlsson, 826 Penfield Street, N. Y. City; A. R. Green, 31-63 Tiffany Place, Brooklyn, N. Y.; and J. F. Schairer, 150 Grove Street, New Haven, Conn. It was moved that the recording secretary cast one ballot for these candidates who were thus declared elected.

Captain Miller discussed the "*Fluorescence of Hyalite from Bedford,*" which he found to fluoresce more intensely than the Mexican hyalite. He suggested the presence of autunite as a possible cause. The recording secretary called attention to the proposed meeting of the Section of Geology and Mineralogy of the New York Academy of Sciences in April, and suggested that, inasmuch as Dr. T. A. Jagger Jr. was expected to address this meeting, the Club attend it as a joint session.

Mr. Hoadley moved that Dr. S. G. Gordon of the Philadelphia Academy of Natural Sciences be invited to address the Club at its May meeting. Motion carried. The president read a letter from Madame Curie in reply to a congratulatory telegram sent by the Club on the 35th anniversary of the discovery of radium. Letters were read from Professor Lacroix and Dr. Goldschmidt accepting honorary membership in the Club. The president then introduced Professor J. F. Kemp of Columbia University who delivered an address on "*The Minerals of the Contact Zones.*"

Dr. Kemp described the origin of contact zones and dwelt upon the action between an igneous intrusive and a sedimentary rock as a most prolific source of minerals. He discussed the action of a granitic intrusive on sandstones and shales and mentioned the following minerals: sillimanite, andalusite, tourmaline and biotite. Passing to the minerals resulting from a contact between an intrusive and a limestone he discussed the characteristic lime-alumina and lime-magnesia silicates as formed in the limestone, such as wollastonite, diopside and andradite; and as contributions from the igneous rocks, zoisite, epidote, vesuvianite, wernerite, phlogopite, chondrodite, tourmaline and titanite. Throughout his address the speaker drew freely from his wide experience for interesting and illuminating instances with which he illustrated his points.

At the close of his address a vote of thanks was tendered to Professor Kemp for his highly valuable paper. The meeting adjourned at 10 P. M.

HERBERT P. WHITLOCK, *Recording Secretary*

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, March 13, 1924

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Vaux, in the chair. Twenty members and five visitors were present. Mr. Trudell proposed the following for active membership: Dr. Thomas Stewart, and Messrs. Edmund H. Cienkowski, George Faust, and James Littel.

Dr. Edward Sampson, of the U. S. Geological Survey, addressed the society on "*The study of ores with the microscope.*" The object of such study is the determination of the relation of minerals to each other, and their identification. It is one of the most recent of mineralogic methods, having been first used by Campbell and Knight in 1906 in the investigation of the Cobalt ores. The principal advances, however, have been made during the past decade, with the rapid improvement in the technique and method of polishing sections. The preparation of sections was described in detail, followed by a description of the microscope used. Many minerals can be readily determined by color distinctions, others only after careful examination of the structure, or the effect produced by a few reagents such as HNO_3, HCl, $FeCl_3$, $HgCl_2$ and $KMnO_4$. The reactions can be hastened by the use of a weak electric current from a battery with terminals of platinum wire and a needle. The needle is placed in contact with the mineral, and the platinum terminal in the solution.

Among the interesting results of this mode of investigation was the following. The well known isometric crystals of cobaltite from Tunaberg showed that they had inverted to an orthorhombic (?) form. From a geologic point of view, much light has been shed on the phenomena of secondary enrichment and the origin of the magmatic sulfide ores. Many mineralogical problems await investigation: the manganese oxides, the amount of rotation of the plane of polarization in anisotropic minerals, and the precise statement of the colors exhibited by minerals in polished section. Much of the technique involved was demonstrated by the speaker, and many beautiful sections were shown illustrating color, structure, pleochroism (covellite), polarization, etc. A rising vote of thanks was extended to Dr. Sampson for his most interesting and instructive communication.

Mr. Trudell described the visit of the following members to Englewood, N. J. to visit the collection of Mr. Charles W. Hoadley, which was followed by a trip to the American Museum: Messrs. Biernbaum, Boyle, Knabe, Gordon, Cienkowski, Oldach, Frankenfield, Arndt, and Trudell. Mr. Boyle described an excursion to

Howellville and Henderson with Messrs. Clay, Cienkowski, Biernbaum, and Oldach. Limonite pseudomorphous after pyrite, and quartz crystals were found.

Samuel G. Gordon, *Secretary*

NEW MINERALS: DOUBTFUL SPECIES

CLASS: CARBONATES AND RELATED COMPOUNDS. DIVISION: ORGANIC COMPOUNDS CONTAINING OXYGEN

"Hoelite"

Ivar Oftedal: Minerals from the burning coal seam at Mt. Pyramide, Spitzbergen. *Res. Norske Statsund. Spitsbergenexped.*, **1**, no. 3, 9-14, (1922); thru *Min. Abstr.*, **2**, 10. [Original not seen.]

Chemical properties: *Formula* $C_{14}H_8O_2$, the compound known in organic chemistry as anthraquinone, $\begin{matrix}\text{CH CH C CO C CH CH.}\\ \text{CH CH C CO C CH CH}\end{matrix}$

Physical and optical properties: Sp. gr. = 1.43. α and β near 1.75, γ near 2.00.

Occurrence: As incrustations around holes from which fumes issue, over the burning coal seam at Mt. Pyramide.

Discussion: More data desired.

E. T. W.

CLASS: PHOSPHATES. DIVISION: Ca : P : F : (CO_3) = 8 : 4 : 2 : 1. (?)

"Kurskite"

V. N. Chirvinskii: The phosphorites of Ukraine. *Matter on natural products of Russia, Russ. Acad. Sci.*, No. **30**, 52 pp., (1919); thru *Min. Abstr.* **2**, 53-54.

Name: After one locality of the material, *Kursk*, Russia.

Chemical properties: Analysis of cryptocrystalline nodules indicates the formula $7CaO.CaF_2.2P_2O_5.CO_2$ or $2Ca_3(PO_4)_2.CaF_2.CaCO_3$, also capable of simplification to $Ca_8(PO_4)_4.(CO_3).F_2$.

Physical properties: Color black; structure nodular to cryptocrystalline, evidently colloidal and metacolloidal.

Occurrence: First observed at Kursk, Russia; now found between Razlety and Vishenki, on the Desna river in the province of Chernigov, Ukraine.

Discussion: Homogeneity and definiteness doubtful. May be an altered spodiosite, $(Ca_4(PO_4)_2F_2)$.

E. T. W.

CLASS: SILICATES. DIVISION: $R' : (R''', R'') : SiO_2 : H_2O = 1 : 4 : 5 : x$

"Soda-glauconite"

A. F. Hallimond: Glauconite from the greensand near Lewes, Sussex; the constitution of glauconite. *Min. Mag.*, **19**, 330-333, (1922); this mineral, p. 333.

Name: From the composition, a *glauconite* in which part of the potash is replaced by *soda*.

Discussion: In the abstractor's opinion, it is better to use names with chemical prefixes for end-members of isomorphous series, and to apply adjectives to variable intermediate members; in the present instance, the high-soda specimens would be classed as "natriferous glauconite."

E. T. W