ABSTRACTS

PRELIMINARY NOTES ON THE ACTION OF SILVER NITRATE SOLUTIONS ON PYRITE AND MARCASITE. KAMEKI KINOSHITA. *J. Geol. Soc. Tokyo*, **28,** 423-31 (1921); through *Japn. J. Geol. Geog.*, **1,** 6-8 (Abstr.).

The dimorphous sulfides, pyrite and marcasite, may be distinguished by the following test: When marcasite is boiled in a 3% $AgNO_3$ solution, its surface tarnishes to tobacco-brown, then red, and finally blue, while pyrite becomes only slightly brownish. In the reaction ferrous sulfate, sulfuric acid, and basic ferric sulfate are formed, but in different proportions for the two minerals. E. F. H.

CORDIERITE FROM JOTSU-RI, SHIMO KISEN-MEN, KANKYO-NANDO, KOREA. IKUO KOMADA. *J. Geol. Soc. Tokyo*, **29,** 120-1 (1922); through *Japn. J. Geol. Geog.*, **1,** 19 (Abstr.).

Good crystals of cordierite occur in granite-gneiss. The color is brown to yellowish-brown, the luster resinous. The prismatic crystals reach a length of 5 cm. The forms *a*, *b*, *c*, *d*, *m* are developed. E. F. H.

HARMOTOME FROM UDO, SHIMANE PREFECTURE. KAMEKI KINOSHITA. *J. Geol. Soc. Tokyo*, **29,** 83-9, (1922); through *Japn. J. Geol. Geog.*, **1,** 19 (Abstr.).

Harmotome occurs as typical penetration twins in fissures in green tuffs, with calcite, laumontite, pyrite, chalcopyrite, sphalerite. Well developed forms are *a*, *b*, *c*, *m*. It is colorless to white. Analysis gave: SiO_2 45.7, Al_2O_3 15.7, BaO 18.3, H_2O 16.3, CaO 1.6, K_2O (diff.) 2.9. E. F. H.

GARNET FROM THE ISLAND OF OUESSANT. DEBEAUPUIS. *Bull. Soc. franc. Minéral.*, **45,** 5-7, (1922).

Grossularite and almandite occur in mica schist. Certain rose and violet, transparent, crystals are of gem quality. E. F. H.

THE ORIGIN OF EPIDOTE IN CERTAIN GRANITIC ROCKS. LOUIS DUPARC. *Bull. Soc. franc. Minéral.*, **45,** 21-7, (1922).

Primary epidote occurs in granitic rocks from Mont Blanc; and either primary or more probably from absorbed epidotic rocks, in a plagioclase granite from Syssertskayadatcha (Oural du Sud). E. F. H.

SUPPLEMENT TO THE DETERMINATION AND STUDY OF OXIDE MINERALS. THEIR TRANSFORMATION TO SULFIDES. AD. BRALY. *Bull. Soc. franc. Minéral.*, **45,** 17-20, (1922).

It is sometimes advantageous to confirm the blowpipe reactions of oxide minerals by transforming them to sulfides and testing further. The transformation is accomplished by fusing the oxide with an excess of S, in a covered capsule. The operation is continued until the excess S is completely volatilized. E. F. H.

THE JADE OF THE TUXTLA STATUETTE. H. S. WASHINGTON. *Proc. U. S. Nat. Mus.*, **60,** no. 2409 (1922).

The Tuxtla statuette, found 100 miles s.w. of Vera Cruz, Mexico, and assigned the date 96 B. C., is described with regard to the composition and optical properties.

It contains equal amounts of the sodic jadeite and the diopside molecules; this composition seems to be characteristic of the Middle American jades, while those of Asia are nearly pure sodic jadeite. E. F. H.

TWINS OF STAUROLITE. G. FRIEDEL. *Bull. Soc. franc. Minéral.*, **45**, 8-15, (1922).

The conclusion from a large number of measurements is that the 60° twinning of staurolite is best considered as being caused by a rotation of 120° about a ternary axis of twinning normal to the form (101). E. F. H.

THE CHEMICAL COMPOSITION OF FASSAITE FROM HODRUSBANJA (*Comitat Hont.*). VICTOR ZSIVNY, *Z. f. Krist*, **57**, 387-393 (1922).

Analysis of this fassaite gave: SiO_2 48.56%, TiO_2 0.57%, Al_2O_3 9.06%, Fe_2O_3 1.68%, FeO 0.36%, MnO traces, MgO 14.89%, CaO 25.16%, Na_2O 0.09%, K_2O 0.04%, H_2O 0.28%. A comparison of the above mineral with that from Fassathal discloses in the former 4.8% more SiO_2, 3.6% more MgO, 1.7% less FeO.

PAUL BOONE

CONTRIBUTION TO THE STUDY OF ISOMORPHISM. E. WIDMER. *Bull. suisse Minéral. Pétr.*, **2**, 283-9 (1922); through *Rev. Géol.*, **4**, 484.

W. discusses the indices of refraction, double refraction, specific and molecular refractivity of several isomorphous substances. E. F. H.

SEVERAL SWISS ZEOLITE PARAGENESISES. ROBERT L. PARKER. *Bull. suisse Minéral. Pétr*, **2**, 290-8 (1922); through *Rev. Géol.*, 4, 484.

The occurrences of zeolites are discussed in relation to the regional circumstances. Several views are expounded with the purpose of affording a better comprehension of the paragenesis of Alpine minerals. E. F. H.

NEW MINERALS FROM THE DOLOMITE OF CAMPO-LUNGO. F. MÜHLENTHAL. *Bull. suisse Minéral. Pétr.*, **2**, 299-306 (1922); through *Rev. Géol.*, **4**, 484.

Besides the minerals already known to occur in the dolomite of Campo-Lungo (tourmaline, tremolite, phlogopite, diaspore, quartz, pyrite, rutile, zircon, talc and cyanite) M. notes two new species, scapolite and beryl; these with tourmaline indicate a pneumatolytic origin for the minerals. E. F. H.

THE PIEZO-ELECTRIC RESONATOR. W. G. CADY. *Proc. Inst Radio Eng.*, **10**, 83-114, 1922.

A discussion of the theory of piezo-electricity with special reference to quartz. For piezo-electric experiments, rectangular rod-like plates are usually cut from the crystals so that the longest dimension is perpendicular to a pair of prism faces, the intermediate one is parallel to the axis *c*, and the shortest is parallel to a lateral crystal axis emerging at prism edges. Such bars are capable of vibrating both mechanically and piezo-electrically and may be employed as resonators. When clamped to steel bars, the latter may be made to vibrate, with different frequencies. The radio wave length in meters is roughly 100 times the length of the resonator in

millimeters. Such resonators may be used as wave-length standards, as stabilizers of the frequency of electron tube generating circuits, and in other practical ways.
E. T. W.

THE COLORINGS OF SOME TYPES OF QUARTZ, AND THEIR INSTABILITY GEORGE O. WILD AND R. E. LIESEGANG. *Centr. Mineral.*, 481-3, (1922).

The idea that color changes in allochromatic minerals, brought about by heat or radiations, is due to changes in the degree of dispersion of coloring particles does not seem possible. The solid structure of crystals would hinder or entirely prevent the aggregation of such particles. Ultra-microscopic examination of heat decolorized and natural amethyst afforded no confirmation of the theory of a change in dispersity. E. F. H.

COLLOID CHEMISTRY AND MINERALOGY. F. RINNE. *Kolloid-Z.*, **31**, 269-71, (1922).

In a general way the author discusses colloid chemistry and the formation of minerals, and colloid chemistry in its relation to the process of crystallization.
E. F. H.

REMARKABLE SPECIMENS OF COPPER AND TIN MINERALS FROM KATANGA. MAX LOHEST. *Ann. Soc. géol. Belg.*, (*Bull.*) **45**, 76-7, (1922); thru *Rev. Géol.*, **4**, 22, (1923).

A large specimen of native copper, and several specimens of cassiterite penetrated by tourmaline needles are described. E. F. H.

GALENA, ANKERITE, BARITE, AND BLENDE FROM PUERTOLLANO. JOSEPH MELON. *Ann. Soc. géol. Belg.*, **45**, 151-5, 1922; thru *Rev. Géol.*, **4**, 22, (1923).

Galena crystals with 11 forms support large rhombohedrons of ankerite. Small barite xls, associated with pyrite and ferruginous blende, have a larger *c*:*a* ratio than is usual. E. F. H.

CELESTITE FROM THE MADREPORE LIMESTONE OF THE PROVINCE OF MESSINA. FRANCESCO RANFALDI. *Rendi. Accad. Lincei, Cl. Sc. fis. mat. natur.*, **31**, 430-3, 468-72, 506-8, (1922); thru *Rev. Géol.*, **4**, 22-3, (1923).

Celestite xls. occur in limestone at the hill of Tremoli and in the Marre valley.
E. F. H.

RADIUM BEARING PEGMATITES OF ONTARIO. H. V. ELLSWORTH. *Geol. Survey Canada*, **Summary Rept. part D**, 51-70, **1922**.

Pegmatites at Parry Sound, Butts Township, Craigmont-Burgess, Opeongo-Aylen Lake, and Maberley contain radioactive minerals (uraninite, euxenite-polycrase, and allanite). These minerals are closely associated with deep red feldspar and smoky quartz. A very complete analysis of uraninite from Parry Sound is u ed to calculate the age of the pegmatite mass in which it occurs (1,272,000,000 years). E. F. H.