

ABSTRACTS: MINERALOGY

COLLOIDAL COLORING AGENTS IN THE MINERAL KINGDOM.

C. DOELTER. *Kolloid-Z.* 26, 23-7, 1920.

This is a review of D.'s previously published papers on the subject. E. F. H.

THE STATUS OF THE INVESTIGATION ON THE RADIOACTIVITY OF BAVARIAN WATERS AND ROCKS, AND THE FLUORITE FROM WÖLSENBERG. F. HENRICH. *Z. angew. Chem.*, I, 5-8, 13-4, 20-2, 1920.

Analyses are given of torbernite and autunite from the Fuchsbau locality, near Leupoldsdorf; $U/Ra = 3.32 \times 10^{-7}$. Uraninite occurs at Wölsenberg in the Oberpfalz. At the same locality is found a dark violet fluorite, which gives the odor of F on grinding. It is thought that radioactive associates caused the dissociation of some fluorite to colloidal Ca (to which the color would be due), and free F.

E. F. H.

SULFUR IN COAL, GEOLOGICAL ASPECTS. GEO. H. ASHLEY. *Trans. Am. Inst. Mining Eng.*, 63, 732-8, 1920.

A presentation of the various modes of occurrence of sulfur in coal.

A. S. WILKERSON.

EXPERIMENTS IN THE FORMATION OF ALUMINUM PHOSPHATES.

HANS LEITMEIER AND HILDE HELLWIG. *Festschrift C. Doelter*, 41-67, 1920.

Samples of kaolinite, feldspar, and igneous rock were analyzed, and then treated with ammonium phosphate solutions in shaking machines for several months. Phosphate minerals similar to those observed in nature were produced. In some cases evidence was obtained that feldspar can take up P_2O_5 by an absorption process or possibly in solid solution.

E. T. W.

A MICROSCOPIC STUDY OF VEIN QUARTZ. SIDNEY F. ADAMS. *Econ. Geol.*, 15, 623-664, 1920.

A description of the microscopic characteristics of vein quartz and the relation between structure and genesis. The investigation was limited to silica of hydrothermal origin. Part one discusses (a) varieties of silica formed in hydrothermal vein deposits; (b) crystallization of silica from the hydrogel conditions; (c) structures in quartz which has crystallized in free space. Part two includes (a) structures in replacement quartz; (b) effects of strain on quartz; (c) rearrangement of silica. The essential difference in microscopic structure between deep-seated and shallow veins is in the uniformity shown. Anomalous varieties of quartz, feathered and flamboyant quartz have been found only under conditions of low temperature. Strain phenomena such as the distortion of a crystal without rupture, and recrystallization belong to the deep-seated vein types. A generalization is made that "the majority of veins now mined were at their greatest depth below the surface at the time of their formation."

A. S. WILKERSON

DIAMONDS. SYDNEY H. BALL. *Eng. Mining J.*, 109, 1202-8, 1920.

A survey of the localities where diamonds have been found together with a description of the minerals and rocks with which they occur.

A. S. W.

NEW STUDIES ON THE COLOR CHANGES OF MINERALS BY RADIATIONS. C. DOELTER. *Sitzb. Akad. Wiss. Wien, Abt. I*, 129, 399-430; thru *Chem. Abstr.* 16, 2636.

The following minerals were studied with respect to the effect of ultraviolet and radium radiations on their color: fluorite, quartz, topaz, halite, barite, apatite, and others. Minerals of the same species from different localities, and even different samples of the same mineral from the same locality differed in the intensity of the color and the time required to assume the color. E. F. H.

PULVERULENT MINERAL (FLUORITE) FROM DORGALI, SARDINIA. ENRICO CLERICI. *Atti accad. Lincei*, **29**, I, 309-12, 1920; thru *Chem. Abstr.* **15**, 1870.

This mineral exhibits thermoluminescence even under CCl_4 or acetone, and emits radiations capable of influencing photographic plates and of penetrating glass, mica, or gelatin, but not Al or black paper. This may be due to traces of rare earths. E. F. H.

AN EASY METHOD FOR IDENTIFYING TINSTONE. AUGUST ZÖLLER. *Chem.-Ztg.*, **44**, 797-8, 1920. THE DETECTION OF TINSTONE. WILHELM BILTZ. *Chem.-Ztg.*, **45**, 325, 1921.

The mineral to be tested is placed on zinc foil and moistened with HCl. If it is tinstone (cassiterite), a grey lustrous metallic film will be deposited on the mineral. Z. states that the film is Zn, the SnO_2 acting as a cathode and causing the deposition of the Zn dissolved by the acid from the metal, the anode. B. points out that the metal is actually Sn, not Zn. E. F. H.

OCCURRENCE AND ORIGIN OF FINELY DISSEMINATED SULFUR COMPOUNDS IN COAL. REINHARDT THIESSEN. *Trans. Am. Inst. Mining Eng.*, **63**, 913-31, 1920.

Sulfur in coal is largely pyrite, occurring in lenses, sheets, or globules which may be of secondary origin. The largest number of pyrite globules are found in the anthraxylon of the coal. The author concludes that the submicroscopic sulfur in coal is derived from plants. On decomposition the sulfur in the plants is set free, mainly as H_2S . This can be oxidized under strongly reducing conditions by bacteria. A. S. W.

THE GROWTH OF AN EFFLORESCENCE OF CERIUM SULFATE ON TRAVANCORE GRAPHITE. MURRAY STUART. *Rec. Geol. Survey India*, **51**, 156-8, 1920; thru *Chem. Abstr.*, **15**, 1271.

Ce sulfate efflorescence developed on a specimen of graphite, from Velland, Travancore, while it was in the Geological Museum. Altho the mineral contained monazite grains, they were unaltered, and it is thought that the Ce was present in some other form. E. F. H.

HISINGERITE. EDWARD S. SIMPSON. *J. Proc. Roy. Soc. West. Aust.*, **5**, 95-7, (1920); thru *Chem. Abstr.*, **14**, 2319.

Hisingerite occurs as a weathering product in the Edna May Deep Gold Mine, Westonia. Analysis: Fe_2O_3 36.8, SiO_2 31.6, $\text{H}_2\text{O} + 6.0, \text{H}_2\text{O} - 21.8\%$. The formula is considered to be $\text{Fe}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O} + \text{adsorbed } \text{H}_2\text{O}$. E. F. H.

MINERALOGICAL NOTES. 12, 13. GEO. W. CARD. *Rec. Geol. Survey N. S. W.*, **9**, 105-7, 175-88, 1920; thru *Chem. Abstr.*, **15**, 1272.

Occurrences of a large number of minerals and rocks in New South Wales are

listed alphabetically, with notes. Analyses of anorthoclase, augite, ekmanite, emery, polybasite, amphibole asbestos, beryl, rutile, breunnerite, almandite, spessartite, joseite and orthoclase are given. E. F. H.

MINERALOGICAL NOTES. X. C. ANDERSON. *Rec. Australian Mus.*, **13**, 1-31, 1920.

The crystallography and etch figures of beryl from the Torrington district are described. It possessed low indices, and contained about 0.4% $\text{Na}_2\text{O} + \text{K}_2\text{O}$. The crystallography of the following minerals is given: calcite, chabazite, vesuvianite, hematite, quartz, stibnite, wolframite, monazite, cassiterite, cuprite, and mimetite. E. T. W.

SO-CALLED HYDRÖCASTORITE FROM ELBA. PROBO COMUCCI. *Atti accad. Lincei*, **29**, I, 264-7, 1920; thru *Chem. Abstr.* **15**, 2401.

Doubts have previously been expressed on the view that hydrocastorite is a distinct species. C. draws the conclusion from a new analysis and the physical properties that it is either a mixture of certain secondary minerals of uncertain composition, or sometimes, simply impure stilbite. E. F. H.

COBALTIFEROUS EPSOMITE AT PARKERVILLE. EDWARD S. SIMPSON. *J. Proc. Roy. Soc. W. Australia*, **6** (pt. 2), 88-92, 1920.

This mineral was found as an efflorescence on a chloritic rock. It contained only 5.7 mols. water (theory is 7). While largely a magnesium sulfate (91.78% $\text{MgSO}_4 \cdot x\text{H}_2\text{O}$) it contained also Co, Ni, and Cu in the order named, and $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$. The low water content is due to partial loss on exposure to warm dry air. E. T. W.

SCOLECITE AND METASCOLECITE FROM HEGERBERGE, EULAU, BODENBACH. H. MICHEL. *Festschrift C. Doelter*, 1920, 28-40.

An analysis of a mineral from this locality, previously called okenite, agreed closely with the theory for scolecite, from which it differs in physical characters, tho having the same optical properties. It is a natural occurrence of metascolecite (obtained by Rinne in 1890, by heating scolecite). Scolecite occurs here also. It is believed that the scolecite was formed at the end of one stage of paragenesis, and was then changed into metascolecite by an increase of temperature. E. T. W.

THE DETERMINATION OF PLAGIOCLASE BY MEANS OF FOUQUÉ'S METHOD. R. SOKOL. *Rozpravy České Akad.*, cl. 2, **25**, no. 3, 10 pp., 1916; *Tscher. Min. Petr. Mitt.*, **34**, 61-8, 1917; thru *Mineralog. Abstr.* **1**, 390.

The numerical values and signs of the extinction angles in sections perpendicular to γ and α are re-examined by a graphic method. The results give corrections for the values as stated by Fouqué, Rosenbusch, and Weinschenk. E. F. H.

THE OPTICAL PROPERTIES OF TWO ANDESINES. F. BECKE AND M. GOLDSCHLAG. *Sitzungsber. Akad. Wiss. Wien; Math.-naturw. Kl.*, **127**, Abt. 1, 473-504, 1918; thru *Mineralog. Abstr.* **1**, 391.

Optical study of previously analysed andesines from (1) St. Raphael, Esterel, France, and (2) Mayeama, Shinano, Japan, gave:— 1. ($\text{Ab}_{57}\text{An}_{40}\text{Or}_3$) (Na light) α 1.5482, β 1.5518, γ 1.5556, $2V$ 90° , ext. on (010)- 5.8° , on (001)- 1.5° ; 2. ($\text{Ab}_{54}\text{An}_{38}\text{Or}_8$) 1.5461, 1.5498, 1.5531, 98° , -3.5° , and -0.7° . E. F. H.

THE MICAS. ZOLTÁN TOBORFFY. *Prize-essay (Kis. Magyar Termés. Társulat)*, 1916, viii+94 pp.; thru *Mineralog. Abstr.* 1, 392.

Various micas from 56 Hungarian and 63 foreign localities were examined. Etch-figures, optic axial angles, pleochroism, crystal forms, and inclusions are discussed at length. E. F. H.

AGE OF THE AUTUNITES OF PORTUGAL. A. MUGUET AND J. SEROIN. *Compt. Rend.*, 171, 1005-6, 1920.

Two samples from near Guarda had a Ra/U ratio of 1.42 and 1.94×10^{-7} . This indicates an age between 1000 and 2000 years. E. F. H.

MINERALS HITHERTO UNKNOWN IN DERBYSHIRE. C. S. GARNETT. *Nature* 106, 148, 1920.

The minerals mentioned are: zaratite, nephrite, diabantite, cimolite, allophane, uhatite (?), sulfur. E. F. H.

CUPRITE, AZURITE, AND MALACHITE FROM BÉLAVÁR, TORDA-ARANYOSER KOMITAT. ZSIGMOND (Sigmund) SZENTPÉTERY. *Múzeumi Füzetek, az Erdélyi Nemzeti Múzeum Ásványtárának Értesítője*, 3, 1-7, 225-32, 1916; thru *Mineralog. Abstr.*, 1, 386.

These secondary copper minerals occur in crystalline schists with chalcopyrite, magnetite, and limonite. E. F. H.

MINERALS IN THE NIAGARA LIMESTONE OF WESTERN NEW YORK. ALBERT W. GILES. *Proc. Rochester Acad. Sci.*, 6, 57-72, 1920.

Twenty minerals are noted from this formation. E. T. W.

DESCLOIZITE FROM THE PERGUIÇA MINE, SOBRAL DA ADIÇA. ALFREDO BENSUADE. *Bull. Soc. Portugaise Sci. Nat.*, 8, 154-6, 1920.

Small brown crystals occur on limestone. An analysis is given. E. F. H.

A. MINERAL NEW TO NEW ZEALAND—PILOLITE. J. HENDERSON. *N. Z. J. Sci. & Tech.* 3, 79-80, 1920; thru *Chem. Abstr.* 14, 3047.

This mineral occurs in veinlets in yellow clayey sand near Mahoenui, Auckland. It is tough and leathery and splits into thin translucent flexible sheets. It is white with a faint yellowish tinge and has satiny lustre. Two analyses show it to be a hydrous Mg-Al silicate. E. F. H.

PROLONGED ACTION OF CARBONIC ACID ON SILICATES AND QUARTZ. C. MATIGNON AND Mlle. MARCHAL. *Compt. Rend.*, 170, 1184-6, 1920.

After being treated with an aqueous solution of CO₂ at a pressure of ten atmospheres, for ten years, quartz and a number of silicates were found to have been appreciably attacked. E. F. H.

HELIODOR. ALFRED EPLER. *Umschau* 34, 497-500, 1920; thru *Chem. Abstr.*, 14, 3208.

Heliodor is beryl, yellow in color, containing 0.55% Fe₂O₃, and is equivalent to an Fe-beryl, analogous to Cr-beryl. With cathode rays in a vacuum heliodor became luminous. It was first reported in the *Z. Goldschmiedekunst*, June 7, 1913. E. F. H.