large deep brown stones the color masking by green was not complete.

5. Recutting the crystal after coloring removes the green color. This is possibly a heat effect during cutting, and does not prove that the coloring is merely a surface effect.

6. The depth of penetration of the color zone could not be determined. If it is an alpha-ray effect, it would be limited by the range of alpha rays in diamond, about 0.001 inch. But reflection of green light from the highly polished surface interferes with optical observations.

7. Radiation by emanation is more effective than by salts, owing to the greater absorption of alpha rays by the salt itself.

8. In some cases in emanation, but never in salt, the radiation resulted in the production of "carbon spots" in the interior of the crystal. The black spots are probably a form of carbon, the nature of which was not definitely determined. They can be removed by prolonged heating in a blast flame.

9. The "carbon spots" are undoubtedly beyond the range of alpha rays in the crystals, which suggests that the color may be penetrating also and that both are produced by some form of secondary radiation more penetrating than alpha rays.

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## NOTES AND NEWS

MINERAGRAPHIC NOTES ON MANGANESE MINERALS. ERNEST E. FAIRBANKS. *Somerville, Mass.*

**Coronadite** from the Coronado vein, Clifton, Graham County, Arizona, was examined in polished section and found to consist of a mixture of hollandite (psilomelane) and an unidentified lead mineral. Lindgren,[1] who first described coronadite, shows that it consists chiefly of lead and manganese oxides.

A polished section gave the following results: galena white, very brittle mineral with a hardness of about 5.5 and with a brown streak. Throughout this mineral there is a finely disseminated substance which shows polarization with crossed nicols.

Following are the microchemical tests made on the surface containing the two minerals:

$HNO_3$—Fumes tarnish slightly, otherwise negative.

HCl—Fumes tarnish slightly, also faint tarnish produced which is not persistent.

KCN—Negative.

$FeCl_3$—Tarnishes brown, rubs lighter, and is fairly persistent.

[1] Lindgren, Waldemar; Copper deposits of the Clifton-Morenci district, Arizona, *U. S. G. S. Prof. Paper* **43**, (1904) pp. 103-6.

KOH—Negative.

$HgCl_2$—Negative.

Aqua Regia—Tarnishes faintly, not persistent.

The disseminated constituent remained negative to all reagents.

**Romanechite** from the mines of Romaneche, Saone et Loire, France, was also examined in polished section and found to be a mixture. Lacroix[2] in describing romanechite showed that barium is present in notable amount in addition to manganese.

The polished section gave similar results to that of coronadite; it too consists of hollandite with an unidentified disseminated mineral.

**Hollandite** from Ihabua State, Central India, was found to be similar to the two minerals described in a polished section with the exception of the test with $FeCl_3$ which in this case gave a negative reaction. Remembering the lead content of coronadite, a drop of $FeCl_3$ containing lead was added and a tarnish was developed. This action may well be the "secondary electrolytic effect" of Schneiderhöhn.[3]

Hollandite is identical with psilomelane in composition, but crystallizes in the pyramidal group of the tetragonal system.

CELEBRATION OF THE 70TH BIRTHDAY OF PROFESSOR VICTOR GOLDSCHMIDT.[1] On the morning of Saturday, February 10, 1923, a group of close friends proceeded to Professor Goldschmidt's residence in Heidelberg. Geheimrat Salomon extended to him birthday greetings and good wishes, presented a volume containing the signatures of numerous friends, and expressed the hope that he would have many more enjoyable and fruitful years.

Professor Goldschmidt thanked him warmly, and expressed himself as especially pleased by the friendship and good will shown by the gift. It might be a misfortune, he said, for anyone to celebrate his 70th birthday, but he still felt young, and had never thought of bringing his work to a close; on the contrary, what had been done thus far was only preliminary, and the really fruitful years were yet to come. The Rector of the University and the Dean of the Faculty then appeared, and added their congratulations.

That evening over a hundred friends and well-wishers of the family assembled in the great hall of the Schwarzen Schiff Inn at Neuenheim, to pass the evening with Professor and Frau Goldschmidt. Professor Philipp of Greifswald spoke first of the masterly way in which Professor Goldschmidt commanded his Science, fashioning it really into an Art. Doctor Neff, in turn, referred to Professor Goldschmidt's genial and engaging personality. Finally Professor Goldschmidt himself spoke, first bringing to mind all his friends prevented by various circumstances from coming to Heidelberg, including those in foreign lands, especially in America, who were present in thought. He mentioned many friends by name, relating the

[2] Lacroix, A., Mineralogie de la France et de ses colonies, Vol. 4, 1910, pp. 6-12.

[3] Schneiderhöhn, Hans: The microscopic examination of opaque minerals in incident light and its significance toward the science of mineralogy and ore deposits, *Neues Jahrb.*, Supplement, vol. 43, 1920, p. 418.

[1] Abbreviated translation of a mimeographed account of the celebrations prepared by Dr. Oscar Neff, made by F. Bascom and Edgar T. Wherry.

memories which bound them to him. He then recalled old Freiberg days, how teaching was carried on there, and how he himself used that method as a model. Heidelberg and Freiberg are places of related traditions, where one could gather and hold a circle of friends, such as he now saw around him.

On Sunday morning, February 11th, the Portheim Stiftung, under the leadership of Professor Pfeiffer, held a jubilee meeting in the splendidly decorated hall of the Weimar House. It was the first time that this organization had sent out invitations to a wide circle of guests, and the hall was well filled. After a musical prelude, Professor Pfeiffer greeted the assemblage, and especially Professor Goldschmidt. The latter then spoke at length of the history, purposes and aims of the foundation. It possesses a number of buildings, mostly in Heidelberg, where scientific institutes are to be established. Several, including Professor Goldschmidt's own Crystallographic-Mineralogic Institute, are already in operation. He was particularly fond of the Institute for Investigation of Musical Theory, and gave an account of its progress, with musical illustrations, which interested the assembly greatly. A group of seven young girls dressed to represent the fundamental colors then appeared, and after discussing their respective values, finally grouped themselves so as to produce the maximum harmony; this idea had been originated, and the words composed, by Frau Goldschmidt. As a birthday gift the Portheim Stiftung presented a handsome leather bound volume containing an account of its history and a series of works from its new Institutes. Likewise the Winter publishing house made Professor Goldschmidt happy by the issue of a new volume of the Beiträge zur Krystallographie und Mineralogie, announcing, in addition, that the Atlas der Krystallformen is nearly completed.

That afternoon a supplemental celebration was held at Professor Goldschmidt's house; and eight days later many guests came there again, in honor of the birthday of Frau Goldschmidt.

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## ABSTRACTS: MINERALOGY

NOTE ON THE RIEBECKITE OF EVISA, CORSICA, AND ON THE COMPOSITION OF SIMILAR SODIC AMPHIBOLES FROM OTHER LOCALITIES. J. Orcel. *Bull. soc. franc. min.*, **43**, 232-243, 1920.

Analysis of riebeckite from pegmatite in a riebeckite granite from near Evisa shows approx. $8SiO_2.3FeO.Fe_2O_3.2Na_2O.H_2O$. Sp. gr. 3.40. E. F. H.

NOTE ON BRANNERITE. Roger C. Wells. *J. Franklin Inst.*, **189**, 779-80, 1920.

Helium was spectroscopically identified in the gas evolved by fusing brannerite with Na bisulfate. (See *Am. Min.*, **5**, 105.) E. F. H.

SILICEOUS SINTER FROM LUSTLEIGH, DEVON. A. B. Edge. *Mineral. Mag.*, **19**, [88] 10-13, 1920.

The material is hard and compact, either white or banded in various shades of red depending upon the amount of hematite included. In some instances the layers are folded and the material appears to have been deposited as a siliceous jelly which has hardened by loss of water. An analysis showed about 70% $SiO_2$ and 21% of $H_2O$. W. F. H.