

PROCEEDINGS OF SOCIETIES

A joint meeting of the American Association for the Advancement of Science, Section C, and the American Society for X-Ray and Electron Diffraction will be held at Gibson Island, Maryland, July 27-31, 1942. Registration and reservations are made only through the Director of the Gibson Island Conferences, Prof. Neil E. Gordon, Central College Fayette, Missouri. The present program is as follows:

X-RAY AND ELECTRON DIFFRACTION

B. E. Warren, *Chairman*

A. L. Patterson, *Vice-Chairman*

July 27

I. Fankuchen X-Ray Patterns of Imperfect Crystals

J. T. Norton X-Ray Diffraction Methods for Measuring Stresses in Metals

July 28

J. C. M. Brentano Intensities in X-Ray Diffraction

K. Lark-Horovitz Intensity Problem in Electron Diffraction Patterns

July 29

S. B. Hendricks Types and Extent of Isomorphous Replacements in Silicate Structures

P. Debye Temperature Diffuse Scattering

July 30

L. K. Frevel Chemical Analysis by Diffraction Methods

W. O. Milligan X-Ray and Electron Diffraction Examination of Inorganic Colloidal Materials

July 31

D. Harker Metallographic Results with the Electron Microscope

A business meeting of the American Society for X-Ray and Electron Diffraction will be held at the Gibson Island Conference Room, Wednesday afternoon, July 29, 1942.

NEW MINERAL NAMES

Royite

N. L. SHARMA: Royite, a new variety of quartz, from the Jharia coal-field. *Proc. Indian Acad. Sciences*, **12B**, 215-220 (1940).

NAME: For Professor S. K. Roy, Indian School of Mines.

CHEMICAL PROPERTIES: Analysis by S. C. Niyogy gave SiO₂ 95.78, MgO 2.04, Al₂O₃ 1.80, Fe₂O₃ 0.14, CaO 0.37, MnO 0.03, TiO₂ trace; sum 100.16. The sample contained limonite and biotite along cracks.

PHYSICAL AND CHEMICAL PROPERTIES: Color, brownish-black to black. Streak, colorless. $G=2.65$. $H=7$. Optically uniaxial, positive; the refractive indices are stated to agree with those of quartz. Shows undulatory extinction with $Z \wedge c$ variable, 0 to 5°. Differs from ordinary quartz in having a good prismatic cleavage and also a transverse cleavage which makes the crystals break into rhomb-like forms. Cleavage surfaces show a characteristic schiller luster.

OCCURRENCE: Found at various localities in the Jharia coal-field, usually along joint planes of sandstones and shales.

DISCUSSION: The custom of adding to the mineralogical literature new names based on trifling variations in habit or physical properties has tended to die out in recent years. Unfortunately, as the present example shows, it has not yet become extinct.

M. F.

DISCREDITED MINERALS

Stibiomicrolite

OLOF H. ÖDMAN: On "stibiomicrolite" and its decomposition products. *Geol. Fören. Förhandl.* (Stockholm) **63**, 289 (1941). Material from the Varuträsk pegmatite was described by Quensel and Berggren, abstract in *Am. Mineral.*, **23**, 542 (1938), as being a mixture of stibiotantalite and microlite, plus minor amounts of native antimony and senarmontite. It was then supposed that the mixture was the result of exsolution from a homogeneous phase, and the name stibiomicrolite was proposed for the original mineral. Ödman now shows by optical study that the stibiotantalite was the primary mineral, the others being hydrothermal alteration products of it. The name stibiomicrolite should be dropped.

M. F.

Ainalite, Ixiolite

KARIN ÅMARK: An x -ray study of stanniferous columbite from Varuträsk and of the related Finnish minerals ainalite and ixiolite. *Geol. Fören. Förhandl.* (Stockholm) **63**, 295 (1941).

PERCY QUENSEL: Cassiterite and stanniferous columbite. *Ibid.*, **63**, 300 (1941).

Ainalite was described in 1863 as a cassiterite containing 8.78% Ta_2O_5 . Ixiolite was described in 1857 as an orthorhombic tantalite containing up to 12.8% SnO_2 . From x -ray and optical studies of the natural minerals and of some synthetic mixtures, it is concluded that the mutual miscibility of SnO_2 and either the orthorhombic or tetragonal tantalate-columbates (tantalite, tapiolite) is, at most, very slight. The minerals are mechanical mixtures. Both names should be dropped. The name ixiolite has also been used (Simpson, 1909) for tetragonal $MnTa_2O_6$ (tapiolite group). This usage should also be dropped, since it does not conform to the original definition.

DISCUSSION: A. B. Edwards, *Australasian Inst. Mining and Metallurgy*, no. 120, p. 731 (1940), has examined optically a number of Australian samples similar to those from Sweden and Finland. A sample of tantalite containing 0.4% SnO_2 and one of mossite containing 4.5% SnO_2 , both contained visible cassiterite, but another sample of tantalite with 1.5% SnO_2 showed no cassiterite. Two samples of cassiterite contained 3.86 and 17.5%, respectively, of $Ta_2O_5 + Cb_2O_5$. A second phase (tantalite or tapiolite) was present in both samples, but there was about the same amount of tapiolite (?) present in the two samples. Edwards believes that cassiterite and tapiolite form solid solutions at high temperatures, which unmix completely, or nearly completely, on cooling.

M. F.