ABSTRACTS—MINERALOGY

ARTIFICIAL PRODUCTION OF A VARIETY OF COTUNNITE. STANISLAS MEUNIER. *Compt. rend. somm. Soc. géol. France*, **1918**, 32–34; thru *Rev. géol.*, **2** (4), 132, 1921.

Crystals of potassium-bearing cotunnite formed on a specimen of impure fluorite left in HCl for 27 years. E. T. W.

THE DETERMINATION OF THE URANIUM AND THORIUM CONTENT OF MINERALS BY MEASURING THEIR RADIOACTIVITY. L. H. BORGSTRÖM. *Finska Kemistsamf. Medd.*, **1917**, 14 pp. (Swedish with English summary).

The mineral is finely ground in an agate mortar, mixed into a paint with chloroform, and brushed on a surface several centimeters square. Th compounds show 10–15 per cent. less discharge time in a film containing 10 mg. than in one with 7 mg. per sq. cm., while U compounds show no difference. On this basis and also the formula R (discharge time in minutes) = 0.07 U + 0.02 Th, the percentages of each element can be calculated. Agreement with analytical results is sufficiently close to indicate that this method will be of value for identifying minerals. E. T. W.

THE RELATIONS BETWEEN TRIDYMITE AND CRISTOBALITE. CLARENCE N. FENNER. *J. Soc. Glass Techn.*, **3**, 116–125, 1919.

Former work has been confirmed, and criticisms answered. At the highest temperatures all the other forms of silica go definitely to cristobalite; at lower temps. tridymite and still lower quartz have been produced from other forms. The melting point of cristobalite is about 1710° C., while that of tridymite is lower. E. T. W.

FLUORESCENCE. J. PERRIN. *Ann. phys.* [9], **10**, 133–159, 1918.

A THEORY OF TRIBOLUMINESCENCE. A. IMHOF. *Physik. Z.*, **20**, 131–132, 1919.

For full abstracts of these papers, in which data of interest in the study of luminescent minerals are given, see *Chem. Abstr.* **13** (23), 3078–3079, 1919.

THE BIREFRINGENCE OF LUDLAMITE. H. BUTTGENBACH. *Ann. Soc. Géol. Belgique*, **42**, (Bull.) 69, 1919; thru *Min. Abstr.*, **1**, 14, 1920.

A mean value of 0.0142 was obtained on a basal cleavage plane of a crystal from Cornwall, from which was computed $\gamma - \alpha = 0.0269$. W. F. H.

BLUE JOHN AND OTHER FORMS OF FLUORITE. BERTRAM BLOUNT AND J. H. SEQUEIRA. *J. Chem. Soc.*, **115**, 705–709, 1919.

The fluorite studied occurred in limestone in the Castleton District, Derbyshire, lining the walls of fissures, etc., associated with barite. The different colored varieties (blue, violet, green, and colorless) appeared to be identical in composition, except that the blue contains "organic matter" which is driven off at 350°, and is thought to be the source of the color. The action of radium and X-rays on these fluorites is similar to that on glass, so it is concluded that the colors are not due to radioactive processes, as has been supposed. S. G. G.