ABSTRACTS—MINERALOGY

MICROSCOPIC INVESTIGATIONS OF SMALTITE AND CHLOANTHITE. A. BEUTELL. *Centr. Min. Geol.* **1916,** 206-221.

Investigation with the metallographic microscope showed the presence in "smaltite" of three easily distinguished arsenides, $CoAs_3$,Co_2As_5, and $CoAs_2$. The outer shell of smaltite crystals is of $CoAs_2$ which determines its isometric form. The isometric crystals of skutterudite may be pseudomorphs of $CoAs_3$ after $CoAs_2$.

EDW. F. HOLDEN.

A SYNCHRONPHOSPHOROSCOPE. E. L. NICHOLS AND H. L. HOWES. *Phys. Rev.* **7**, 586, 1916. THE PHOSPHORESCENCE OF URANYL SALTS. E. L. NICHOLS. *Proc. Am. Nat. Ac.* **2**, 328-333, 1916. PHOSPHORESCENCE AND ABSORPTION OF CERTAIN URANYL SALTS. E. L. NICHOLS AND H. L. HOWES. *Phys. Rev.* **8**, 364-385, 1916; thru *Neues Jahrb. Min. Geol.* **1919**, Ref. 20.

These papers contain data of interest in connection with luminescent minerals. E. F. H.

TELLURIUM FROM RUDA, IN THE ERZEGEBIRGE. F. BERWERTH, *Mitt. Wiener Min. Ges.* no. **79**, 54-55, 1916; thru *Neues Jahrb. Min. Geol.* **1919**, Ref. 273.

What was formerly thought to be stibnite was found to be tellurium, the occurrence being in calcite, the crystals of tellurium being up to one cm. in length. E. F. H.

CHANGES IN THE ABSORPTION OF PLEOCHROIC CRYSTALS AT THE TEMPERATURE OF LIQUID AIR. H. NAGAOKA. *Proc. Math.-Phys. Soc. Tokyo*, **8**, 551-554, 1916; thru *Neues Jahrb. Min. Geol.*, **1919**, Ref. 19-20.

The changes in the pleochroism of epidote and penninite with decrease in temperature were marked. E. F. H.

THE DETERMINATION OF THE DENSITY OF SOLIDS. H. LE CHATELIER AND F. BOGITCH. *Compt. rend.*, **163**, 459, 1916; thru *Neues Jahrb. Min. Geol.*, **1918**, Ref. 118.

The error in density determinations due to air bubbles adhering to the substance investigated may be avoided by the use of carbon tetrachloride in place of water. E. F. H.

THE TRANSFORMATION OF Na_2SO_4. E. JÄNECKE, *Z. phys. Chem.*, **91**, 548-569, 1916; thru *Neues Jahrb. Min. Geol.* **1918**, Ref. 25.

Besides the recognized transformation at 240°, Na_2SO_4 passes thru a second at 385°. E. F. H.

THE EXCHANGE OF BASES IN SILICATES. I. EXCHANGE OF ALKALIES AND AMMONIA IN THE HYDRATED ALUMINUM-ALKALI SILICATES (PERMUTITES). E. RAMANN AND A. SPENGEL. *Z. anorg. Ch.* **95**, 115-128, 1916; thru *Neues Jahrb. Min. Geol.*, **1918**, Ref. 252.

Sodium, potassium, and ammonium permutites pass over into one another thru the exchange of their bases by the action of chloride, nitrate, or sulfate solutions. E. F. H.