

NEW MINERAL NAMES

M. FLEISCHER

Femolite

K. V. SKVORTSOVA, G. A. SIDORENKO, A. D. DARA, N. I. SILANT'eva, AND M. M. MEDOEVA, Femolite, a new molybdenum sulfide: *Zapiski Vses. Mineralog. Obshch.*, **93**, 436-443 (1964) (in Russian).

The mineral is the principal ore of molybdenum in three deposits of a field (locality not given), which occurs in association with pipe-like bodies of extrusive felsite porphyry. It occurs as reniform deposits with pyrite, pitchblende and sphalerite.

Analyses of two samples (one by A. A. Lipatova and G. P. Sinyushina, one by Yu. S. Nesterova) gave Mo 48.25, 49.94; Fe 5.85, 6.49; S 37.22, 37.47; H₂O 2.37, 2.78; total 93.69, 96.68%, corresponding to Mo₅FeS₁₁. Supplementary determinations gave Se 0.02, Hg 0.004, Re 0.001%. Spectrographic analysis showed 0, n%-Te, Si, Al; 0.0 n% Pb, Sb; 0.00 n% Cu, Sn, Ni, Mn, Mg, Ca. The deficiency of the analyses is assumed to be oxygen, formed by partial oxidation. A DTA curve is similar to that given by molybdenite. Heating tests show that the mineral vaporizes less readily than molybdenite.

X-ray powder data are given for 3 samples and for molybdenite. The strongest lines are, resp., 6.05, 5.97, 6.18 (10); 1.571, 1.564, 1.574 (9-10); 2.69, 2.66, 2.70 (8). The diagrams are calculated to unit cells *a* 3.14, 3.12, 3.13; *c* 12.20, 12.19, 12.35; standard molybdenite gave *a* 3.16, *c* 12.28Å. The data are considered to show, compared to molybdenite, weakening of reflections of type (00l) and strengthening of type (hkO), indicating disordering of the MoS₂ layers.

The mineral is gray with metallic luster, streak black, at times with a brownish tint. H 2-3. Under the microscope opaque, except on thinnest edges where it is translucent with a brownish tint. Reflecting power 18.5-31.05. Clearly anisotropic, but the birefringence is not always distinct and is often slight.

The mineral is readily altered in the supergene zone to molybdates and uranium-containing molybdates.

The name is for the composition.

DISCUSSION.—The data appear to me to be inconclusive. The differences noted in the x-ray patterns of femolite and molybdenite might well be due to orientation effects or to the fine grain size; x-ray data published by various authors for molybdenite show nearly as many differences.

Metaborite

V. V. LOBANOVA AND N. P. AVROVA, The new mineral metaborite—natural metaboric acid: *Zapiski Vses. Mineralog. Obshch.*, **93**, 329-334 (1964) (in Russian).

Analyses by M. M. Vil'ner and A. I. Sokolova gave B₂O₃ 77.60, 76.06, MgO 2.15, 2.11, H₂O 20.0, 20.60, sum 99.75, 98.66%, which after deducting akasite (calculated from the MgO) gives B₂O₃·H₂O or HBO₂. X-ray study by I. V. Brazulis showed the mineral to be cubic with *a* 8.89 ± 0.01Å. An indexed x-ray pattern (29 lines) is given; the strongest lines are 1.938 (10)(421), 4.53 (5)(200), 2.835 (4)(310), 6.60 (3)(100), 3.71 (3)(211), 2.388 (3)(321), 2.102 (3)(411, 330), 1.526 (3)(522, 441).

The mineral occurs in aggregates up to 1 cm in size, showing single faces of the tetrahedron and trigonal tristetrahedron. Colorless to brownish, luster vitreous, H 5, G 2.47. Slowly soluble in water. Isotropic, *n* 1.618 ± 0.002. Brittle with conchoidal fracture. A DTA curve shows an endothermal effect at 250-470°, max. at 360°.

Metabolite corresponds to the stable form of HBO₂ obtained by KRACEK, MOREY AND

MERWIN, *Am. J. Sci.*, **35A**, 143-171 (1938), who report G 2.486, n 1.619, a 8.879 (by W. H. Zachariasen).

Metaborite occurs in rock salt with small amounts of anhydrite, boracite, aksaitic ginorite, hilgardite, strontborite, and halurgite. Metaborite is replaced by boracite and ginorite. The exact locality is not given, but is presumably in Kazakhstan (see *Am. Mineral.* **48**, 209, 1963).

The name is for the composition.

Hungchaoite

CHÜN I-HUA, HSIEH HSIEN-TE, CHIEN TZE-CHIANG AND LIU LAI-PAO, Preliminary report on the occurrence of a new hydrous magnesium borate-hungchaoite, $MgO \cdot 2B_2O_3 \cdot 9H_2O$, in China: *Scientia Sinica*, **13**, (3), 525-557 (1964) (in Russian).

Analysis of the mineral gave MgO 11.86, B_2O_3 39.58, H_2O 49.74, sum 101.18% (given as 100.00 in original), the synthetic salt had MgO 12.51, B_2O_3 40.99, H_2O 47.18, sum 100.68%, corresponding to $MgB_4O_7 \cdot 9H_2O$. The mineral is white, monoclinic, pseudohexagonal. Optically biaxial, (-), α 1.442, β 1.485, γ 1.490, $2V$ 36°. These properties are identical with those of the synthetic salt and the x -ray patterns are identical. The compound was first synthesized by Nikolaev (1947), whose description corresponds except that he described it as uniaxial. The strongest lines of the unindexed x -ray pattern (48 lines) are 4.07 (10), 2.902 (10), 2.734 (9), 6.67 (7) 2.510 (7), 7.18 (6), 5.84 (6), 5.34 (6), 2.182 (6). Hardness and G are not given.

The mineral occurs in ulexite nodules in "one of the borate deposits of lacustrine origin of China."

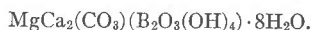
The name is for the Chinese geologist and mineralogist, Professor Chang Hung-chao (1877-1951).

NOTE.—The name is given as transliterated by Dr. E. C. T. Chao. In the original paper the English is given as hungtsaoite.

Carbaborite

HSIEN-TE HSIEH, TZE-CHIANG CHIEN AND LAI-PAO LIU, The new mineral carbaborite, $MgCa_2(CO_3)(B_2O_5) \cdot 10H_2O$: *Scientia Sinica* **13**, 813-821 (1964) (in Russian) (Chinese names kindly transliterated by E. C. T. Chao).

Analysis of the mineral (selected under the binoculars) by Chan Lan-Tsuan and Ting Siao-fei gave B_2O_3 15.70, SO_3 , Cl none, CO_2 10.46, MgO 9.08, CaO 24.21, K_2O trace, Na_2O 0.27, H_2O 39.78, insol. 1.17, sum 100.67%, corresponding closely to the formula above. Thermogravimetric analysis showed that most of the water is lost between 83° and 205°, the remainder lost slowly up to 570°; at higher temperatures CO_2 is lost. The DTA curve shows small endothermal effects at 168°, 692° and 808°, a very large one at 240°, large endothermal effects at 566° and 944°, and an exothermal effect at 642°. The formula is therefore written as



Carbaborite occurs in monoclinic crystals 0.5-3.0 mm long, resembling steep rhombohedrons. Dominant forms are a $\{100\}$ and σ $\{\bar{1}11\}$; less common and small are c $\{011\}$, m $\{110\}$, e $\{111\}$, and t $\{\bar{1}01\}$. Goniometric measurements gave $a:b:c=1.6769:1:2.7820$, β 91° 40'. Cleavage $\{100\}$ perfect, $\{\bar{1}11\}$ distinct, $\{001\}$ imperfect. Laue, oscillation, rotation and Weissenberg diagrams showed the mineral to be monoclinic, a 11.32 ± 0.03 , b 6.68 ± 0.01 , c $18.59 \pm 0.02 \text{ \AA}$, β 91° 41', $a:b:c=1.6946:1:2.7828$, $Z=4$. Indexed x -ray powder data are given (39 lines); the strongest are 5.63 (10)(110), 4.315 (10)(210), 3.136 (8)(022, 214), 2.160 (8)(421), 2.727 (7)(402), 2.437(6)(224).

The mineral is colorless, luster vitreous, H 2, G 2.12 (measured), 2.11 (calc. from x-ray data). Fluoresces white under UV light, with pale green phosphorescence. Optically biaxial, (-), ns (Na)(all ± 0.001), α 1.507, β 1.546, γ 1.569, $2V$ 75°; $Y=b$, $Z \wedge c = 12^\circ$, $X \wedge a = 10^\circ 19'$, elongation positive.

The mineral occurs in a deposit in Chima of lacustrine origin, in a layer of hydroboracite containing seams of ulexite, and gypsum, and apparently replacing ulexite.

The name is for the composition.

Poitevinite

J. L. JAMBOR, G. R. LACHANCE AND S. COURVILLE, Poitevinite, a new mineral: *Can. Mineral.*, 8, part 1, 109-110 (1964).

The unnamed hydrated copper-iron sulfate from the Bonaparte River, Lillooet district, British Columbia, which was described by Jambor (see *Am. Mineral.* 47, 1219-1220, 1962) has been restudied and the name poitevinite applied to it. A new chemical analysis (G. R. Lachance and S. Courville, analysts) was performed and yielded: CuO 21.6, FeO 18.0, ZnO 3.7, SO₃ 43.85, H₂O 11.94, insol. 1.09, total 100.18. The insoluble material consisted mainly of minute quartz crystals. The cations were determined from 20 mg (by x-ray spectrography); SO₃ was determined from 80 mg; and H₂O from 100 mg. The chemical formula calculated from the analysis is (Cu₅₀Fe₄₆Zn₀₈)(SO₄)(H₂O)_{1.2}. Poitevinite is defined as the Cu-rich half of the series CuSO₄·H₂O—FeSO₄·H₂O. The Fe-rich end is the mineral szomolniskite. (Strictly speaking, the Lillooet mineral is ferroan poitevinite, J.A.M.).

The mineral is named for Dr. E. Poitevin, formerly mineralogist of the Geological Survey of Canada.

The name was approved by the I.M.A. Commission on New Minerals and Mineral Names.

J. A. MANDARINO

Niobophyllite

E. H. NICKEL, J. F. ROWLAND AND D. J. CHARETTE, Niobophyllite—the niobium analogue of astrophyllite; a new mineral from Seal Lake, Labrador: *Can. Mineral.* 8, part 1, 40-52 (1964).

Analysis of 600 mg. by D. J. Charette (alkali determinations by E. M. Penner) gave: Na₂O 2.49, K₂O 5.51, CaO 0.72, RE oxides (mainly Ce₂O₃ and La₂O₃) 1.50, FeO+Fe₂O₃ 23.74, MgO 0.16, MnO 9.83, TiO₂ 2.94, Nb₂O₅ 14.76, Ta₂O₅ 0.52, Al₂O₃ 0.89, SiO₂ 33.40, H₂O⁺ 3.64, H₂O⁻ 0.08, F 0.46, sum 100.64, (-O=F) 0.19, total 100.45%. These data indicate the following chemical formula: (K, Na)_{2.95} (Fe, Mn)_{6.35} (Nb, Ti)_{2.02} (Si, Al)_{7.70} (O, OH, F)₃₁.

Niobophyllite is triclinic, with space group $P1$ or $P\bar{1}$. The unit cell parameters are a 5.391 Å, b 11.88 Å, c 11.66 Å, $a:b:c=0.454:1:0.981$, α 113.1°, β 94.5°, γ 103.1°. The strongest lines (in Å) of the indexed x-ray powder pattern (CoK α) are: 3.506 (10), 10.52 (9), 2.778 (8), 2.574 (7), 3.019 (6), and 3.258 (5). Twenty-two additional lines are given. There is one formula unit in the unit cell.

Optically, the mineral is biaxial (-), $\alpha=1.724$, $\beta=1.760$, $\gamma=1.772$ (calc.), $2V=60^\circ$, $X \wedge b = +13^\circ$, $Y=a$, $Z \perp (001)$, elongation negative, strongly pleochroic with X and Y = brownish-yellow, and Z = orange-red. It should be noted that the optical orientation of niobophyllite is different from that of astrophyllite.

Niobophyllite occurs as polycrystalline aggregates of small flakes. The mineral has a perfect {001} cleavage and an ill-defined secondary cleavage parallel to a (0kl) plane.

Some flakes are twinned by reflection on the (001) plane. The specific gravity is 3.42 (by suspension) and 3.406 (calculated).

The mineral was found in the Seal Lake area of Labrador in a band of paragneiss consisting chiefly of albite and arfvedsonite. Accessory minerals are: aegirine-augite, barylite, eudidymite, neptunite, "schizolite" (manganian pectolite), pyrochlore, joaquinite, sphalerite and galena.

The name, which was approved by the I.M.A. Commission on New Minerals and Mineral Names, is from "niobo" for the niobium content and "-phyllite" for the micaceous nature.

J. A. MANDARINO

Castaingite

A. SCHÜLLER AND J. OTTEMANN, Castaingit. Ein neues mit Hilfe der Elektronen-Mikrosonde bestimmtes Mineral aus den Mansfelder "Rücken": *Neues Jahrb. Mineral. Abh.* **100**, 317-321 (1963).

Ramdohr mentioned in 1924 an unusual molybdenite from Zirkelschacht near Eisleben. Investigations now carried out with x-ray fluorescence spectrometry and x-ray micro-analyzer, showed this to be a new mineral, castaingite. x-ray micro-analyses of two samples gave Mo 47.2, 44.2; S 34.0, 40.0; Cu 13.5, 13.1; Pb 2.5, 2.0; Bi 2.0, 1.2; Fe 1.0, 0.8; sum 100.2, 101.3%. This corresponds to (Cu, Fe)(Mo, Pb, Bi)₂S₆, simplified CuMo₂S₆ or CuS·2MoS₂. The x-ray powder pattern is close to that of MoS₂, but shows an enlargement of spacings and broadening of lines.

The name is for Prof. R. Castaing, Paris, inventor of the x-ray micro-analyzer.

DISCUSSION.—Data not sufficient. (Compare **Femolite** p. 261 M.F.)

H. STRUNZ

Giessenite

ST. GRAESER, Giessenit—ein neues Pb-Bi-Sulfosalz aus dem Dolomit des Binnatales: *Schweiz. Mineral. Petrogr. Mitt.* **43**, 471-478 (1963).

X-ray fluorescence-analysis by R. O. Müller gave Pb 48 ± 5, Bi 35 ± 4, Sb < 7, S 16 ± 3%, which corresponds to 8PbS·3Bi₂S₃.—Microprobe analysis by C. Baherze gave Pb 44.4, Bi 28.5, Sb 4, Cu 1.3, S 22.2, sum 100.4%, this is close to Pb₉Cu₁Bi₆Sb_{1.5}S₂₀ (priv. comm. Jan. 31, 1964).

X-ray study showed the mineral to be orthorhombic, space group probably $D_2^4 - P2_12_12_1$. Weissenberg photographs gave a 34.5, b 38.3, c 4.08 Å, $a:b:c=0.9008:1:0.1065$. Indexed x-ray powder data are given, the strongest lines are 3.62(10), 3.32(5), 3.15(5), 2.49(4), 1.75(4).

Color grayish-black, metallic, in polished sections white, reflecting power high, $n_D = 34.0\%$ in air, 26.1% in immersion. H close to that of galena.

The mineral occurs as fine needles, associated with galena, pyrite, rutile and tennantite in the dolomite of Binnatal, Ct. Valais, Switzerland. The name is for a nearby village. The name was approved before publication by the Commission of New Minerals and Mineral Names, I.M.A.

H. STRUNZ

"Iron Cordierite"

J. STANÉK AND J. MIŠKOVSKÝ. Iron-rich cordierite from a pegmatite near Dolní Bory, Western Moravia. *Časopis pro mineralogii a geologii*, **9**, No. 2, 191-192 (1964) (in Czech, with English abstract).

Giant crystals of "cordierite" occur in a zoned pegmatite body near Dolní Bory (Western Moravia, Czechoslovakia). They are imperfectly developed, up to several decimeters large, and usually have a conical form. "Cordierite" is optically biaxial (-), 2V large, α 1.559, β 1.569, γ 1.573 (mean of 3 determinations); pleochroic, colorless on X, pale blue on Y, Z ($Y < Z$); G 2.772. Two chemical analyses by J. M. gave (first numbers—light-blue material; second numbers—bluish-violet material): SiO_2 45.10, 45.02; TiO_2 0.04, 0.03; Al_2O_3 30.63, 30.71; Fe_2O_3 0.91, 0.87 = FeO 17.85, 17.65; MnO 0.92, 0.94; CaO 0.39, 0.50; MgO 1.69, 1.57; Na_2O 0.68, 0.70; K_2O 0.03, 0.04; H_2O^- 0.12, 0.13; H_2O^+ 1.84, 1.72; Total 100.20%, 99.88%. According to the results of both chemical analyses we are dealing with a "cordierite" richest in iron every analyzed. No x-ray data are given. Some "cordierite" crystals are partly altered to chlorite, iron anthophyllite and probably clay minerals.

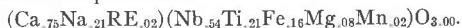
DISCUSSION.—This is evidently a new mineral with $\text{Fe} > \text{Mg}$! According to oral communication of the authors this mineral will be named in the next detailed study.

FRANTIŠEK ČECH

Latrappite

E. H. NICKEL, Latrappite—a proposed new name for the perovskite-type calcium niobate mineral from the Oka area of Quebec: *Can. Mineral.* **8**, part 1, 121–122 (1964).

Nickel and McAdam (see *Am. Mineral.* **49**, 819, 1964) described a perovskite mineral from Oka, Quebec, with a composition of



Because of a new classification of the perovskite group which they were proposing, they termed the material "niobian perovskite." The terminology has been reconsidered, however, and latrappite is applied to the mineral.

The name (approved by the I.M.A. Commission on New Minerals and Mineral Names) is for the small community of La Trappe, Quebec, which is about one-half mile from the deposit in which the mineral was found.

J. A. MANDARINO

Unnamed (barium titanosilicate ?)

A. F. EFIMOV, S. M. KRAVCHENKO AND E. V. VLASOVA, Mineralogy of alkalic pegmatites of the Inagli massiff: *Trudy Inst. Mineral., Geokhim., Kristalloghim Redkikh Elementov* **16**, 141–175 (1963) (in Russian).

The mineral was found in small amount in batisite-natrolite pegmatites as fine-platy yellowish-white aggregates. Spectrographic analysis showed main components to be Si, Ti, Na, Mg, Al, Ca Ba; also present Be, P, V; Mn, Fe, Ni, Cu, Ga, Sr, Zr, Nb, Pb, Th $< 0.1\%$. The x-ray pattern (21 lines) does not match that of any known mineral. Strongest lines 2.88 (10), 3.27 (8), 2.78 (8), 2.58 (8), 1.902 (8), 1.527 (6). Indices of refraction: Ng 1.754, Np 1.742.

Unnamed Phosphate Analogue of Troegerite

L. N. BELOVA, V. I. LITENKOVA AND L. E. NOVOROSOVA, Phosphorus analogue of troegerite: *Voprosy Priklad. Radiogeol., Sbornik* 1963, p. 174–177; from *Chem. Abstracts* **61**, 10457 (1964).

The mineral occurs as individual tabular crystals up to 3.3 mm or as aggregates. The color varies from amber-yellow, pale yellow, to greenish or dark greenish. Luster pearly to vitreous, H 3, G 3.72–3.8. Uniaxial, (-), n_s range from ω 1.570–1.578 and ϵ 1.550–1.555 to ω 1.6000–1.602 and ϵ 1.578–1.580, the n_s increasing as water is lost. Synthetic material had composition $(\text{UO}_2)_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$, and n_s ω 1.605, ϵ 1.578–1.580, G 3.96–4.03. Part of the

water is lost readily. The strongest lines of the *x*-ray powder pattern are 9.25, 8.53, 5.41, 4.96, 2.62, 2.15, 2.10, 1.952, 1.603, 1.530, 1.350. The mineral does not luminesce.

Unnamed Nickel Selenides and Tellurides

YRJÖ VUORELAINEN AND AULIS HÄKLI, Some new nickel minerals: *Geologi* (Helsinki) 1964, No. 5, 53-56 (English summary).

Veinlets cutting diabases and albitites contain clausenthalite, altaite, penroseite, ferroselite, paraganajuatite, pyrite, marcasite, galena, chalcopyrite, tennantite, millerite, rammelsbergite, gold, and several new selenides and tellurides.

The commonest of these in NiTeSe. Chemical analysis gave Ni 22.2, Co 0.4, Cu 0.07, Pb 0.7-1.0 (from clausenthalite), Se 30.2, Te 47.0%. Hexagonal, space group D_{3d}^3 , a 3.70 ± 0.02, c 5.14 ± 0.02 Å. Pale yellow, high reflectivity, polishes easily. Pleochroic with strong anisotropy from pale gray to pink.

$Ni_{1-x}Se$ occurs in two modifications, one hexagonal, one monoclinic. *X*-ray fluorescence analyses gave compositions from $Ni_{0.9}Se$ to $Ni_{0.71}Se$. Color pinkish yellow or grayish yellow, pleochroism weak or moderate, anisotropy rather strong, pale green to pink. The mineral has high reflectivity and polishes easily. Hexagonal β -NiSe has a 3.624, c 5.288 Å, monoclinic Ni_2Se_4 has a 6.22, b 3.65, c 10.52 Å, β 90.53°.

A rare mineral is orthorhombic $NiSe_2$, gray, strongly pleochroic, anisotropy distinct, yellow to dark gray. Soft, polishes with difficulty. Space group $D_{2h}^{12}-Pnnm$, a 4.89, b 5.96, c 3.67 Å.

Also rare is hexagonal gamma-NiSe (millerite type). Yellow to slightly orange under the microscope. Strongly pleochroic and anisotropic, from reddish orange to green. Almost as soft as clausenthalite. Space group probably $R3m$, a 10.01, c 3.28 Å.

Also observed were a selenian melonite, $Ni(Te, Se)_2$; $(Ni, Co)_3Se_4$, yellow, softer than penroseite, containing about 6% Co, a 9.939 Å; and selenio-polydymite, $Ni_3(Se; S)_4$, containing about 40% Se and 2% Co. Olive gray, soft, isotropic, a 9.65 Å.

The minerals will be described in detail later.

Unnamed Nickel Hydroxide

J. L. JAMBOR AND R. W. BOYLE, A nickel hydroxide mineral from Rock Creek, British Columbia: *Can. Mineral.* 8, part 1, 116-119 (1964).

A pulverulent yellow cryptocrystalline mineral which appears to be an alteration of garnierite, has been found to be a nickel hydroxide. The mineral was found in a dolomite-quartz-serpentine rock, whose surfaces and fractures are coated with garnierite and annabergite.

Spectrophotometric analysis (J. G. Sen Gupta, analyst) on 0.162 mg gave 38.7% NiO. Qualitative optical spectrography gave: major, Ni; minor, none; trace to faint trace, Si, Mg, Cu, Fe, Ca.

The mineral is hexagonal with a 3.07 Å, c 22.74 Å. Strongest lines in the indexed *x*-ray powder pattern ($CuK\alpha$) are: 7.59 (10) (003), 3.79 (6) (006), 2.585 (6) (012), 2.296 (5) (015), 1.946 (4) (018), 1.536 (3) (110), and 1.507 (3) (113) (all in Å). Thirteen other lines are listed. The calculated *G* is 2.96.

The authors conclude that the mineral is a non-stoichiometric nickel hydroxide corresponding to the synthetic compound whose ideal formula is $4Ni(OH)_2 \cdot NiOOH$. This compound is hexagonal with a 3.07 Å and c 23.2 Å.

J. A. MANDARINO

Unnamed Basic Zinc Carbonate

J. T. JAMBOR, Studies of basic copper and zinc carbonates: I—synthetic zinc carbonates and their relationship to hydrozincite: *Can. Mineral.* **8**, pt 1, 92–108 (1964).

Small incrustations from the walls and roof of the abandoned Dorchester copper mine, Westmorland County, New Brunswick, have been found to be a basic zinc carbonate similar, but not identical, to hydrozincite. Additional specimens have been identified from the Hector-Calumet mine, Galena Hill, Yukon, and the Lucky Jim mine, Zincton, Slocan area, British Columbia.

Analyses for CO_2 and H_2O (S. Courville, analyst) were made on three 100–200 mg. samples from the type locality. ZnO contents were taken by difference from 100%. Results were: ZnO 72.70, 71.97, 72.27; CO_2 14.50, 14.73, 14.49, H_2O 12.80, 13.30, 13.24. These data compare to $5 \text{ZnO} \cdot 2\text{CO}_2 \cdot 4\text{H}_2\text{O}$ which has ZnO 71.77, CO_2 15.52, H_2O 12.70.

Under DTA, the loss of one molecule of water begins at about 70°C . with a small endothermic break which reaches its peak at 130° . Remaining CO_2 and H_2O are lost in a large endothermic break which begins at 190° , peaks at 279° , and ends at 320° . The final decomposition product is ZnO.

The x-ray powder pattern of this mineral is generally similar to, but distinct from, that of hydrozincite. X-ray powder photographs are shown for hydrozincite, the Dorchester mineral, and four synthetic basic zinc carbonates, but no data are given.

On the basis of these data and infra-red curves, it is concluded that the Dorchester type mineral is new and may be dimorphous with hydrozincite. The additional molecule of H_2O is considered to be adsorbed water.

J. A. MANDARINO

CORRECTION

Femaghastingsite was listed and reviewed as a New Mineral Name in *Am. Mineral.* **49**, 817 (1964). Recently it has been called to my attention that this name was proposed by Billings in *Am. Mineral.* **13**, 287–292 (1928). This abstractor completely overlooked the earlier reference in spite of the fact that the name is listed in Hey's "Chemical Index." The name, consequently, should not be considered new but, in my opinion, it should not be considered an acceptable name.

J. A. MANDARINO

NEW DATA

Trolleite

C. B. SCLAR, L. C. CARRISON AND C. M. SCHWARTZ, Synthesis and properties of trolleite (aluminian lazulite?), a high pressure mineral from the Westanå iron deposit, Kristianstad, Sweden: *Geol. Soc. Am., Special Paper* **76**, 145 (1964) (abs.).

Trolleite was described in 1868 by Blomstrand as a basic aluminum phosphate and had not been re-examined since (see *Dana's System*, 7th Ed., v. II, p. 911). A hydrothermal syntheses is reported. The mineral is monoclinic or triclinic. Formula $\text{Al}_{5.33}(\text{PO}_4)_4(\text{OH})_4$ (synthetic), $(\text{Ca}_{0.11}\text{Fe}_{0.21}^{3+}\text{Al}_{5.09})(\text{PO}_4)_{3.86}(\text{OH})_{4.2}$ (natural). Infrared data indicate that the P^{5+} is in tetrahedral, the Al^{3+} is octahedral co-ordination. The strongest x-ray lines are 3.20 (100), 3.09 (80), 2.51 (45), 1.98 (40), 1.96 (35), 1.95 (35). It appears to be structurally related to lazulite with one-ninth of the 6 metal positions vacant. Knoop hardness 1600 (about 8.5 Mohs), G. 3.09 ± 0.01 . Optically biaxial, (–), with n_s (Na) (all ± 0.002), synthetic, α 1.614, β 1.631, γ 1.635, 2V measured 50° ; natural, α 1.619, β 1.639, γ 1.643, 2V measured 49° . When heated above 650° in air, trolleite inverts to the quartz- and cristobalite-like forms of AlPO_4 .

Priazovite

V. S. DZHUN, New data on the characteristics of priazovite: *Dopovidi Akad. Nauk Ukr. RSR*, **10**, 1379-1383 (1963) (in Ukrainian, with Russian summary).

The mineral named priazovite by Yurk in 1941 was re-examined. Two new analyses are given; they correspond to the pyrochlore formula $A_{2-z}B_2O_{7-z} \cdot nH_2O$, but have a large deficit in the A and O positions; the two analyses give $A_{0.73}$ and $A_{1.00}$. The mineral is metamict, but when heated to 900° gives a cubic pattern, a 5.16 ± 0.02 kX. DTA curves are given; they differ from those of most members of the pyrochlore group and justify the retention of a special name.

DISCUSSION.—This seems to be a highly altered member of the pyrochlore-microlite group, many members of which show large deficits in the A position. A separate name seems to be unjustified.

Reyerite and Truscottite

R. A. CHALMERS, V. C. FARMER, R. I. HARKER, S. KELLY AND H. F. W. TAYLOR, *Reyerite: Mineral. Mag.*, **33**, 821-840 (1964).

Strunz and Micheelsen (see *Am. Mineral.* **44**, 470, 1959), on the basis of chemical, optical, and x-ray powder data, stated that truscottite was identical to reyerite. Chalmers *et al.* feel that although there are many similarities between reyerite and truscottite from the type localities, there are also distinct differences, especially in the infrared pattern. It is their opinion that "... it seems necessary to leave the question open as to whether truscottite should be regarded as a distinct mineral species."

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