NEW MINERAL NAMES*

MICHAEL FLEISCHER, ROGER G. BURNS, LOUIS J. CABRI, GEORGE Y. CHAO,
D. D. HOGARTH AND ADOLF PABST

Bogdanovite*

E. M. Spiridonov and T. N. Chvileva (1979) Bogdanovite, 
Au₃(Cu₉Fe₉)(Te,Pb)₂, a new mineral of the group of inter-
metallic compounds of gold. Vestnik Moskva Univ., Ser. Geol., 
1979, no. 1, 44-52 (in Russian).

Microprobe analyses are given of 11 samples, 4 iron-rich, 3 copper-
rich, and 4 intermediate. Range of composition Au 57.6-63.6,
Ag 1.67-3.39, Cu 3.32-15.1, Fe 10.28-0.09, Pb 10.7-14.4. Te 9.60-
0.28%, corresponding to the formula above. Cu and Fe 

X-ray data indicate a pseudocubic cell, derived from that of 
gold, with a: 4.087Å. However, the optics show that the mineral 

Bogdanovite is rose-brdwn to bronze-brown with semi-metallic 
luster. It polishes well. Cleavage is absent. In polished section un-
usual color effects (like rickardite and bilibinskite) from purple-
raspberry or grayish-lilac to gold and yellow are seen. Reflect-
anc€ are given (Rg and Rp) at 15 wavelengths from 420 nm to 

Chlormanasseite

G. D. Feokistov, S. I. Ivanov, A. A. Kashkaev, L. N. Klyuchanskii, 
N. G. Taskina and Z. F. Ushchapovskaya (1978) The occur-

The name chlormanasseite was given by Allman and Lohse 

Chromopyroaurite (= chromian pyroaurite)

Zhang Rubo, Liu Kiyin, Yang Benjin, Liu Yunxia, and Liri 
Dehna (1978) Chromopyroaurite, M₉₆(Fe₊₃,Cr)₂(CO₃)₆ • 4H₂O, a new variety on the pyroaurite-
stichtite join. Geochimica (China), 1978, no. 4, 281-290 (Chinese 
with English abstr.).

Two analyses of the mineral, found in serpentinite, SW China, 
gave Fe₂O₃ 13.54, 12.79; Cr₂O₃ 6.94, 7.49; Al₂O₃ 2.21, 1.74; MgO 
36.74, 35.62; FeO 0.1, 0.15; MnO 0.06, 0.01; CO₂ 6.45, 7.78; H₂O + 
32.33, 32.30; H₂O− 2.38, 1.78; sum 100.75, 100.56%. For the sec-
ond analysis, this gives Fe:Cr:Al = 1.05:0.63:0.22. G = 2.12, H 
= 1-1.5; uniaxial neg., ω = 1.556, ε = 1.545. The DTA curve shows 
endothermic peaks at 270° and 460°C. Trigonal, a = 6.165, c = 
46.760Å. Color violet. Pleochroic, O colorless, E pale pink.

Discussion

An unnecessary name for chromian pyroaurite. M.F.

Garavellite*

F. Gregorio, P. Lattanzi, G. Tanelli, and F. Vurro (1979) Garavel-
lite, Fe₅(SbBi₂)₃, a new mineral from the Cu–Fe deposit of Valle 
del Frigido in the Apuane Alps, northern Tuscany, Italy. Min-

Garavellite was recognized in polished sections as small aggre-
gates, up to 200 µm across, of anhedral crystals, usually in contact
with tetrahedrite, Sb-rich bismuthinite, chalcopyrite, and siderite. Microprobe analysis led to the empirical formula Fe_{0.36}Cu_{0.25}Sb_{1.15}Bi_{0.74}As_{0.01}S_2 on the basis of S = 4, or ideally FeSbBiS_2. Garavellite is orthorhombic, \( a = 11.439, b = 14.093, c = 3.754 \text{\AA} \). Strongest lines in the X-ray powder pattern (39 tabulated and indexed) are \( 3.62(\text{vs})(230,011), 3.12(\text{vs})(121), 2.98(\text{s})(240,330), 2.89(\text{s})(221), 2.63(\text{vs})(311,231), 2.51(\text{vs})(250,141) \). In reflected light garavellite is gray with a brown-olive tint similar to tetrahedrite. Birefringence is distinct and anisotropism is strong, from yellowish-green to bluish-gray. Vickers hardness (50 g load) 212–222 kg/mm². The name is for Professor C. L. Garavelli. A.P.

**Jixianite**


Chemical analysis gave WO₃ 50.39, Fe₂O₃ 6.53, MgO 0.20, PbO 38.72, FeO 0.71, CuO 0.27, MoO₃ 0.01, H₂O 3.68, sum 100.51 wt%. After deduction of wulframite, the analysis was recalculated, on the basis of (O,OH) per formula, to (Pb₁.0₃,Mo₀.0₉₂Cu₀.0₂₃)W₁.0₃(Fe²⁺,Mg₀.₀₂₉)O₁.0₃. The strongest lines (16 given) are: 8.97(4)(217,217), 7.97(5)(211,211), 7.89(5)(211,211), 7.42(5)(211,211), 6.49(5)(211,211), 5.97(5)(111), 5.28(6)(622), 3.58(4)(440), 3.56(4)(440), 3.53(4)(440), 3.52(4)(440), 3.38(4)(440), 3.36(4)(440), 3.33(4)(440), 3.28(4)(440), 3.26(4)(440), 3.23(4)(440), 3.20(4)(440). The X-ray structure of jixianite has a similar structure to that of jahnsite. The formula of jixianite can therefore be given as: (Pb₁.0₃,Mo₀.0₉₂Cu₀.0₂₃)W₁.0₃(Fe²⁺,Mg₀.₀₂₉)O₁.0₃. The name is for George Herbert Payne, past Chief of the Mineral Division, Western Australian Government Chemical Laboratories. A.P.

**Keckite**


Microprobe analysis (standards Mg, Mn, Fe, and Zn metals andapatite) gave CaO 35.75, Fe₂O₃ 30.02, MnO 14.85, ZnO 2.24, CaO 5.88, MgO 0.66, H₂O (by differ.) 10.60%, corresponding to (Ca₀.₁₄,Mg₀.₃₈,Mn₀.₅₆,Zn₀.₆₀)Fe₁.₅ₐ(OH)₃·2.₇₅H₂O. Infrared study showed the presence of hydroxyl. X-ray study showed keckite to be monoclinic, space group P2₁/a, \( a = 15.0₂, b = 7.₁₉, c = 19.₇₄Å, \beta = 110°₃₀' \). The strongest lines (16 given) are 9.₃₈(6)(002), 4.₉₈(5)(2₁₂), 3.₅₁(5)(4₀₀), 2.₈₆(1₀)(4₀₂,₁₁₁,₁₁₁,₁₁₁), 2.₅₉(4)(2₂₂,₁₁₇). The structure is related to that of jahnite.

Color brown, yellow-brown, dirty grayish-brown; luster dull. Cleavages (001), (100). H = 4½. Optically biaxial, neg., \( b = 1.₆₉₂, a = 1.₆₉₂, n = 2.₆₈₂ \). Under the polarizing microscope the mineral is yellowish brown or greenish yellow, isotropic with \( n = 2.₂₆₂–2.₃₁₅ \). Some grains show weak birefringence.

**Jixianite** was found as a secondary mineral, closely associated with bismuthite and stolzite in the oxidized zone of hypothermal to mesothermal tungsten-bearing quartz veins located near the southern boundary of the inner contact zone of the Pan-shan porphyritic quartz monzonite stock, in Jixian (Ji County), Hebei, China. The primary minerals in the oxidized zone are quartz, wolframite, cassiterite, pyrite, chalcopyrite, and minor scheelite, wulfenite, native silver, and native copper. Other secondary minerals are sericit, goethite, and malachite. The name is for the locality. The type specimen is preserved in the Geological Museum, State Bureau of Geology.

**Discussion (D.D.H.)**

The data suggest that jixianite belongs to the pyrochlore structural type, although it is not a member of the pyrochlore group as defined by Hogarth (*Am. Mineral.*, 62, 403–410, 1977). All X-ray lines with the exception of the weak line at 1.722A are pyrochlore-type lines. This exception, said to represent the planes 600 and 442, does not belong to the pyrochlore structure and may be incorrectly indexed or belong to an impurity. All spacings appear to have been calculated using FeKα wavelengths, regardless of whether they belong to \( a \) or \( b \) spectra. The number of significant figures in the formula, unit cell, and specific gravity (Gladstone–Dale) calculations is, in each case, unjustified. The pyrochlore structure implies complete disorder amongst the A ions and vacant A positions; the formulae are conventionally calculated with respect to B ions. The formula of jixianite can therefore be given as: 

\[
\text{Pb}(\text{W},\text{Fe}^{3+})_7(\text{O},\text{OH})_7\cdot 0.98\text{H}_2\text{O}
\]

The data suggest the mineral to be a new species. Further single-crystal work is necessary to confirm the structural type. The density calculated from the empirical formula in the above discussion is 7.89 g/cm³, much greater than the measured density of 6.04 g/cm³. Assuming the analysis and the cell dimension to be accurate, a pore space of 30% in the mineral specimen used for density measurement would be required to account for the unusually large discrepancy. G.Y.C.
γ = 1.699, 2V not determinable because the crystals were inhomogeneous and showed undulatory extinction. Pleochroic, with X reddish-brown, Y yellow, Z yellow brighter than Y; absorption X >> Y > Z, Z = b, XΔc = 15–22°.

The mineral occurs in aggregates of crystals up to 2 mm long, formed by the weathering of phosphophyllite or rockbridgeite in the Hagendorf pegmatite, Bavaria, W. Germany. The name is for Erich Keck, collector of Hagendorf minerals. M.F.

Kleemanite*
Kleemanite occurs as an ochre-like coating and thin veins 1–2 mm thick on manganiferous iron ore in one section of the iron ore deposit at Iron Knob, South Australia. Chemical analysis gave ZnO 20.7, Al2O3 24.4, P2O5 35.7, Fe2O3 1.1, MnO2 1.3, H2O 18.2, sum 101.4% (Fe and Mn calculated as Fe2O3 and Mn2O3; total water calculated from weight loss on TGA curve), leading to the ideal formula ZnAl2(PO4)2(OH)2·3H2O. Kleemanite is monoclinic, with a primitive lattice, a = 6.329(6), b = 7.194(6), c = 9.762(9) Å, β = 110.20(4)°, Z = 2; G (calc) = 2.76. Principal lines of the X-ray powder pattern (31 given) are 4.764(8)(020), 3.304(6)(022), 3.09(8)(100), 3.142(26)(220), 2.99(5)(312), 2.82(5)(203, 402), 1.884(5)(511, 203, 314), 1.873(5)(016, 016), 1.635(8)(615), 1.536(5), 1.490(6), 1.486(6). The mineral occurs in the oxidation zone at Tsumeb, associated with lasenite, alamosite, leadhillite, willemite, melanotekite, and quartz. It occurs in crystals up to 10 × 3 × 0.5 mm, tabular to b, elongated on b. Cleavages [010] and [001] observed in traces. Colorless to pale yellow, luster greasy, streak white. Optically biaxial, probably positive, 2V near 90°, a = 1.899, β = (1.901), γ = 1.903, X = b; Z: α varies with wavelength; at 405 nm = 40°, at 493 nm = 15°, at 592 nm = 0°, at 671 nm = ~4°; H = 4.

The name is for Clive S. Queit of Tsumeb, who collected the mineral. M.F.

Montdorite

Analysis by electron microprobe (Li by ion microprobe) (av. of 25 grains) gave SiO2 47.31, TiO2 2.44, Al2O3 4.96, MgO 4.30, FeO 17.13, MnO 9.89, K2O 8.89, Na2O 1.02, F 4.40, H2O (by difference) 1.53, sum 101.87 % (Fe and Mn calculated as Fe2O3 and Mn2O3; total water calculated from weight loss on TGA curve), leading to the ideal formula K3(Fe,Mn,Mg)2Al2Si7O20(OH,F)6. Montdorite is monoclinic, with a (010) plane, a = 6.290(6), b = 7.194(6), c = 10.362(9) Å, β = 110.20(4)°, Z = 2; G (calc) = 2.76. Principal lines of the X-ray powder pattern (32 tabulated, 15 indexed) are 4.654(8)(020), 3.348(6)(100), 3.182(6)(101), 2.99(5)(002), 2.82(5)(203, 402), 2.744(4)(300), 2.669(3)(013, 013), 2.312(4)(301, 200), 1.916(3)(400), 1.635(7)(004), 1.356(6), 1.265(5), 1.187(4), 1.142(4), 1.093(4) Å. The mineral occurs as small grains with mackayite in rhyolite at Lone Pine, New Mexico, and may be a pseudomorph after teiteine. Analysis gave CuO 18.05, CaO 1.06, TeO2 50.96, sum 100.07%, average on 3 samples with total weight 3051 µg, after correction for rems. This gives Cu2TeO5, identical with the artificial compound prepared by Moret et al. (1969). Rajite is easily soluble in dilute acids and fuses readily.


Crystals Duesbury green (RHS-131D), H = 4, pleochroic in greens, γ > β > α; α = 2.115, β = 2.135; ||b, γ = 2.26, αΔc = 22° in obtuse angle β. 2V near 90°.

The name is for Robert Allen Jenkins, mineralogist/geologist for Phelps Dodge Corporation, who first recognized the new species. A.P.

Rajite*
Rajite occurs as small (1.5 mm) crystals with mackayite in rhyolite at Lone Pine, New Mexico, and may be a pseudomorph after teiteine. Analysis gave CuO 18.05, CaO 1.06, TeO2 50.96, sum 100.07%, average on 3 samples with total weight 3051 µg, after correction for rems. This gives Cu2TeO5, identical with the artificial compound prepared by Moret et al. (1969). Rajite is easily soluble in dilute acids and fuses readily.


Crystals Duesbury green (RHS-131D), H = 4, pleochroic in greens, γ > β > α; α = 2.115, β = 2.135; ||b, γ = 2.26, αΔc = 22° in obtuse angle β. 2V near 90°.

The name is for Robert Allen Jenkins, mineralogist/geologist for Phelps Dodge Corporation, who first recognized the new species. A.P.

Rostite*

The mineral first described by Rost (1937) (Dana’s System of Mineralogy, 7th ed., v. 2, p. 601) as “lapparentite” and later described as khademite is renamed rostite. X-ray data for the new mineral give a = 11.169, b = 13.039, c = 10.871 Å. The infrared absorption spectrum is given. M.F.

Sabatierite*
Five electron microprobe analysis by J. Breton and C. Gille gave Cu 42.33–43.35, Ti 22.25–22.78, Se 34.27–34.75%, corresponding closely to Cu$_2$TiSe$_4$. X-ray powder data are given; the strongest of 17 lines are 3.987(5)(100), 3.089(10)(102), 2.706(7)(021), 2.525(5)(103), 2.445(6)(004), 1.991(7)(200), 1.847(6)(202), 1.673(5)(124,131). The indexing is on an orthorhombic cell with $a = 3.986$, $b = 5.624$, $c = 9.778$ Å, $Z = 1$; $G$ (calc) = 6.78.

In reflected light bluish-gray, strongly anisotropic with color effects from gray-blue to yellow-brown. Reflectivities (max and min.) are given at 15 wavelengths from 420 to 700 nm: 460, 33.8, 30.6; 540, 30.6, 27.9; 580, 28.4, 26.1; 660, 23.8, 23.0.

The mineral, extremely rare, occurs in radiating aggregates replacing crookesite included in berzelianite, in calcite veins in the Bukov deposit, Moravia, Czechoslovakia. The name is for German Sabatier, director of research, C.N.R.S. Type material is at the Ecole Superieure des Mines, Paris. M.F.

Sidorenkite*


The mineral had previously been referred to as "unnamed Na-Mn carbonate" (*Am. Mineral.*, 49, 1154, 1964). Analysis by M.E.K. gave P$_2$O$_5$, 25.77, MnO 22.40, FeO 0.49, MgO none, CaO 22.20, Na$_2$O 32.36, K$_2$O 0.44, CO$_2$ 15.71, sum 99.31%, corresponding to (Na$_2$$_9$K$_0.03$)(Na$_0$$_8$K$_0.97$)Ca$_{0.02}$Fe$_{0.02}$)(PO$_4$)(CO$_3$) or Na$_2$Mn$_2$PO$_4$(CO$_3$), the manganese analogue of bridleyite. The indexing is on an orthorhombic cell with $a = 8.97(20)(100), b = 3.36(100)(201,201,020), c = 2.68(20)(110)$. 101.82’, $Z = 2$; $G$ (calc) = 3.645. The strongest lines (36 given) are 3.97(20)(100), 3.36(100)(201,201,020), 2.99(12)(300), 2.69(15)(121,121,220), 2.243(12)(400), 1.682(20)(040).

Color pale rose, luster vitreous to pearly on cleavages. Cleavages {100} and {010} perfect, {001} imperfect; fracture stepped; H U+, $G$ (calc) : 3.62, (meas) : 3.75. Br. brittle. Strongly electromagnetic. Optically biaxial neg., $a : 1.672, e : 1.52', 

Sidorenkite is cut by aegirine.

It is associated with K-feldspar, nepheline, sodalite, cancrinite, and is cut by aegirine. The Mt. Alluaud region, Lovozero massif, Kola Peninsula, USSR. The name is for the Soviet geologist Alexander V. Sidorenko, M.F.

Unnarned CaZrSi$_2$O$_7$


An unnamed mineral of this composition was mentioned by Gittins et al., *Can. Mineral.*, 12, 211–214, 1974. Microprobe analysis gave CaO 18.4, ZrO$_2$ 40.3, SiO$_2$ 40.8, sum 99.5%. X-ray data, indexed by analogy with thortveitite, gave a monoclinic cell, space group probably $P2_1/m$, $a = 8.699$, $b = 8.667$, $c = 4.681$ Å, $\beta = 101.82^\circ$, $Z = 2$; $G$ (calc) = 3.645. The strongest lines (36 given) are 5.31(6)(110), 3.225(8)(111), 3.151(10)(201), 3.023(7)(201), 2.655(7)(220,130), 2.221(5)(136). M.F.

Unnamed tellurides


Veins contain scheelite, wolframite, tetradymite, tellurobismuthite, cisklovaite, rucklidgeite, hessite, and the following new minerals:

1. Bi$_2$Te$_4$. Probe analysis from Ryczowa gave Bi 50.6, Cu 0.1, Fe 0.1, Te 43.0, sum 93.8%. Strongly anisotropic. Reflectance 438 nm, 51; 487, 60; 535, 62; 591, 63; 658, 63%. $H = 24–28$ kg/sq mm (20 g load). The X-ray lines are 3.15(10), 2.35(9), 2.16(7), 2.10(6), 1.79(6), 1.59(6), 1.48(7), 1.41(6), 1.38(6), 1.07(6).

2. Bi$_2$Te$_3$. Probe analysis gave Bi 50.0, Te 51.0, sum 101.0%. Isotropic. Reflectance 438–686 nm, 60–63%. H 25–30 kg/sq mm (20 g load).

3. Bi$_2$Te$_2$S$_2$. Probe analysis gave Bi 68.8, Te 22.0, S 6.0, sum 96.8%. Anisotropic. Reflectance at 591 nm 55%. H 34 kg/sq mm (20 g load).

4. Bi$_2$Te$_2$S$_3$. Probe analysis gave Bi 63.1, Cu 0.2, Te 27.5, S 7.9, sum 98.7%. Anisotropic. Reflectance at 591 nm = 53%. H 32 kg/sq mm.

5. Ag$_7$Te. Probe analyses gave Ag 75.3, Te 25.0, sum 100.3%. Ag 69, Cu 0.2, Fe 0.1, Bi 2.4, Te 25.8, S 0.1, sum 97.6%. Reflect-
an 438 nm, 24; 487, 26; 535, 29; 591, 32; 658, 32%. Anisotropic.
(6) (Ag,Cu,Bi),Te,S. Probe analysis gave Ag 52.7, Cu 5.3, Bi 8.5, Te 28.5, S 3.9, sum 98.9%. Anisotropic. Reflectance at 591 nm 40%. H 18 kg/sq mm.
(7) Ag,CuBiTe,S. Probe analysis gave Ag 39.0, Cu 5.8, Bi 19.1, Te 28.4, S 6.6, sum 99.0%. Anisotropic. Reflectance at 591 nm 43%. H = 20-23 kg/sq mm. M.F.

Unidentified palladium arsenide


Electron microprobe analysis gave Pd 71.8, Pt 2.5, As 19.9, Sn 5.0, Sb 0.4, sum 99.6 percent, corresponding to (Pd,Ag)S,(Sn,As,Sb), assuming As + Sn + Sb = 1 atom.

Distinctly anisotropic, slightly bireflectant, grayish-yellow under reflected light. Single occurrence from Atok mine in a 50-micron intergrowth with a mineral reported as mertieite, from which it could only be distinguished because of different orientation. Reflectances (percent) for R' max and R' min 436 nm 48.52 and 44.6, 520 nm 53.0 and 49.8, 580 nm 57.38 and 54.61, 658 nm 58.99 and 57.11. VHN20 = 532.7 and VHN23 = 585.

A 16-reflection powder pattern representing the mineral intergrowth is reported and indexed on a pseudo-hexagonal cell (a = 15.038, c = 22.481A) attributed to "mertieite." Nine of these reflections are also re-indexed on another pseudo-hexagonal cell (a = 8.677, c = 17.106A) which is attributed to the unidentified mineral. L.J.C.

Palladium arsenostannide


Electron microprobe analyses of four grains from the Norilsk mining area gave Pd 61.5, 61.8, 57.1, 64.2; Ag 23.2, 2.2, 3.0; Fe 0.2, 0.2, 0.2, 0.2; Au 0.3, 0.3, 0.3; Pt 2.0, 3.1; Sn 24.6, 29.7, 32.0, 19.2; As 7.2, 5.7, 3.1, 6.1; Sb 2.3, 2.0, 2.2, 2.2; Pb 0.3, 0.4, 0.4, 0.4; Bi 0.1, 0.1, 0.1, 0.1; sums 98.4, 99.6, 97.0, 98.9, 99.8 with suggested idealized formulas of (Pd,Ag)S,(Sn,As,Sb), (Pd,Ag)S,(Sn,As,Sb), (Pd,Ag)S,(Sn,As,Sb), and (Pd,Ag)S,(Sn,As). The authors described the first three compositions separately from the fourth in parts of the text, but in other parts these are not distinguished from each other. Both groups are referred to as palladium arsenostannide but the first three are also called antimonium palladium arsenostannide.

The mineral is described as distinctly anisotropic, with colors usually from gray to light yellow-grays. It is light gray with a yellowish tint, with an occasional pinkish hue, and weakly bireflectant under reflected light. The mineral occurs in several size ranges: 1-10, 2-10, 25-60, and 40-200 microns. Reflectances are given for four grains, for analysis No. 2, above for R' max and R' min (in percent) 460 nm 48.6 and 44.6, 520 nm 53.0 and 49.8, 580 nm 56.1 and 52.0, 640 nm 58.4 and 55.3, 700 nm 60.5 and 56.1. 0003-004X/79/1112-1333$0.50.

A 14-reflection powder pattern of the mineral was indexed on a pseudo-hexagonal cell with a = 8.68, c = 17.07A. The PdS,(Sn,As,Sb) mineral is considered to represent "a solid solution of the compounds Pd,S+Pd,Sb (or Pd,Sb) in Pd,Sb."

Discussion

The data presented are not sufficiently unambiguous to characterize any single new mineral. The unfortunate practice of using names derived from elements determined, without regard to the essential nature of all elements, is deplored. This has been a "technique" used to obtain publication in certain journals without seeking approval of the New Minerals and Mineral Names Commission, IMA. L.J.C.

New Data

Bohdanowiczite


Bohdanowiczite, first reported in 1967 (Am. Mineral., 53; 2103; 55, 2135), has been reexamined by microprobe and X-ray powder diffraction and has now been accepted by the IMA Commission on New Minerals and Mineral Names. The average of three microprobe analyses gave Pb 1.34, Bi 44.39, Ag 22.31, Cu 0.25 Co 0.01, Ni 0.02, S 2.47, Se 28.46, sum 99.75%, corresponding to AgBiSe2 with minor substitution of Cu for Ag, Pb for Bi, and Se for S. Cell parameters for the hexagonal lattice are a = 4.183(8) and c = 19.56(16)A, and the most likely space group is considered to be P63m1. Strongest lines of the powder pattern (24 tabulated) are 6.54(20)(0003), 3.40(20)(102T), 3.26(18)(0006), 2.91(10)(014), 2.09(18)(1120), and 2.03(30)(1122, 108T). The calculated G is 7.72, Vickers hardness between 63 and 96 kg/mm². The color is creamy yellow and bireflectance can be observed only along grain margins under oil immersion. The name is for the late Professor Karol Bohdanowicz, from Cracow. A.P.

Griphite


A new analysis of non-metamict griphite from Alberes, east Pyrenees, gives the formula as M24Ca4(Fe3+5Al0.71[Fe0.58]5Al0.13Fe0.17)4 (Al0.96Fe0.04)(PO4)12(F,OH)8, where M = Li0.08Na0.14Mg0.23Ca0.16 Mn0.34Fe3+2Fe2+3Fe0.85. Cubic, space group Pa3, a = 12.205A, G(calc) = 3.65, (meas) = 3.64. M.F.

Todorokite


Electron diffraction patterns of todorokites show that besides the Cuban todorokite from Oriente Province with cell parameters
1334

NEW MINERAL NAMES, ERRATA

**Errata**

**How much crystallography should we teach geologists?** by Gabrielle Donnay and J. D. H. Donnay (Vol. 63, 840–846).

The following corrections should be noted on page 845. In equation 7: instead of \((\sin \theta)/\lambda\) read \((\sin \theta)^2/\lambda^2\). In equation 8 the scattering factor \(f\) should not be factored; it should be placed under each \(\Sigma\) sign.

**Error problems in the two-media method of deriving the optical constants \(n\) and \(k\) from measured reflectances** by Peter G. Embrey and Alan J. Criddle (Vol. 64, 635–645).

Fig. 2, page 855, should have the abscissa labeled “Refractive Index \(n\)”. Equation 7b, page 860, should read

\[
a = \frac{h}{2N^2} (N^2 + 1) + \frac{1}{2N^2} (N^2 - 1) \sqrt{(h^2 - N^2)}
\]

**New Mineral Names**


The suggested formula in the Discussion should read \(\text{Pb}_2(\text{Fe}^{2+},\text{Zn})(\text{AsO}_4)_2 \cdot \text{H}_2\text{O}\).

**The crystal structure of baratovite** by Silvio Menchetti and Cesare Sabelli (Vol. 64, 383–389).

The formula for baratovite in Table 1 (page 384) should read \(\text{KLi}_2\text{Ca}_3(\text{Ti}_{0.87}\text{Zr}_{0.13})[\text{Si}_4\text{O}_{18}]_3\text{F}_2\).

**Chemistry and physical properties of axinites** by Gregory R. Lumpkin and Paul H. Ribbe (Vol. 64, 635–645).

No less than three spelling errors have come to our attention. *Severginite* and *manganoverginit* are the proper renderings of the names given by Kurshakova to *manganaxinite* and *tinzenite* (p. 636). With apologies to the gentlemen in question, we report two misspelled names: *Chaudhry* (for Chaudry—pp. 636, 640, 645) and *Plyusina* (for Plyusina—pp. 637 and 645).

**Discredited Minerals**

*Droogmansite = Kasolite*


Droogmansite was described in 1925 (*Am. Mineral.,* 11, 168, 1926) as a uranium mineral from Kasolo, Belgian Congo (now Zaire). A sample, probably the original, or at least a metatype, has been re-examined by X-ray and found to be kasolite. M.F.

Frigidite = Tetrahedrite and Ni-bearing minerals


Frigidite from the type locality, formerly regarded as a nickelian tetrahedrite [Dana’s System of Mineralogy, 7th ed., vol. I, p. 377 (anal. 27), 379, 1944], has been examined by microprobe and no Ni found. However, this tetrahedrite is associated with the nickel sulfides ulmannite, vaesite and pentlandite, not hitherto reported from this locality. A.P.

**Schuchardtite = nickel-bearing interlayered vermiculite-chlorite**


Analyses (NiO 0.20–24.12%), DTA and X-ray data of samples from the type locality show that they are mixtures of vermiculite-like and chlorite-like materials, mostly irregularly interstratified. The name should be dropped. M.F.