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New mineral names*

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Chrombismite*

Xinchun Zhou, Jincai Yan, Guanxin Wang, Shizhong Wang, Liang Liu, Guiming Shu (1997) Chrombismite, $Bi_{16}CrO_{27}$, a new mineral species from the Jialu gold mine, Shaanxi Province, China. Can. Mineral., 35, 35–38.

Electron microprobe analysis (average of 15) gave Bi 87.23, Cr 1.35, O 11.27, sum 99.85 wt%, corresponding to $Bi^{3+}_{16.006}Cr^{6+}_{0.997}O_{27}$. Valences of Bi and Cr were determined by XPS. The mineral occurs as columnar to acicular crystals up to 25 × 50 μm, and as irregular to spherical aggregates up to 1.5 mm across. Orange to yellowish-brown color, brownish-yellow streak, adamantine luster, translucent, VHN_{100} = 113.3 (95.8–128.0), brittle, no cleavage, D_{meas} = 9.80(3), D_{calc} = 9.85 g/cm³ for Z = 2. Optically uniaxial positive, ϵ = 2.55(2), ω = 2.50(2), weakly pleochroic. Gray to light orange in reflected light, orange internal reflection, weak bireflectance and anisotropy. Tetragonal symmetry, space group $I4$, $I\bar{4}$, or $I\bar{4}/m$, a = 8.649(3), c = 17.24(1) Å. Strongest lines of the powder pattern (57 mm Debye–Scherrer, Fe$K\alpha$) are 3.19(100,123), 2.730(40,310), 1.980(40,316), 1.715(30,219), and 1.655(55,503,433), in good agreement with data for the synthetic analog.

The mineral occurs as a primary phase associated with pyrite, chalcopyrite, and gold in mesothermal quartz veins at the Jialu gold mine in Luonan County. The new name refers to the main elements present in the mineral. Type material is in the Geological Museum of China, Beijing. **J.L.J.**

Jentschite*

S. Graeser, A. Edenharter (1997) Jentschite ($TlPbAs_2SbS_6$)—a new sulphosalt mineral from Lengenbach, Binntal (Switzerland). Mineral. Mag., 61, 131–137.

Electron microprobe analyses (mean of 15) gave Tl 23.92, Pb 21.44, As 19.16, Sb 12.53, S 22.42, sum 99.47 wt%, corresponding to $Tl_{1.00}Pb_{0.87}As_{2.22}Sb_{0.87}S_{6.03}$. Occurs as prismatic, platy to acicular, polysynthetically twinned crystals, up to 2 mm long, showing major {010} and {130}, and minor {001}, {041}, $\{\bar{1}01\}$, $\{\bar{1}21\}$, and $\{1\bar{5}1\}$. Brilliant black color, black metallic to submetallic luster, dark red streak, translucent red in thin fragments, uneven to conchoidal fracture, extremely brittle, perfect $\{\bar{1}01\}$ cleavage, H = 2–2½, VHN_{10} = 38–51, red internal reflection, twinned on (010) and (100), D_{calc} = 5.24 g/cm³ for Z = 4. Clearly visible anisotropy in reflected light; reflectance percentages in air (WTiC standard) at 470, 543, 587, and 657 nm are 29.7–35.4, 28.8–33.1, 26.7–30.3, and 26.6–29.9, respectively. Single-crystal X-ray study indicated monoclinic symmetry, space group $P2_1/n$; a = 8.121(3), b = 23.969(9), c = 5.847(3) Å, β = 107.68(3)° as refined from a powder pattern (114 mm Debye–Scherrer, Fe$K\alpha$ radiation) with strongest lines of 3.998(74,060), 3.816(54,210, 3.587(86,$\bar{2}$21), 2.823(100,116), 2.778(84,260), and 2.670(58,$\bar{3}$01).

The mineral is associated with orpiment, realgar, and other Tl-As sulfosalts in cavities in Triassic dolomite at the Lengenbach quarry. The new name is for Franz Jentsch (1868–1908), head of a syndicate that was in the forefront of the exploitation of mineral specimens from the quarry. Type material is in the Natural History Museum of Basel, and in the Mineralogical Institute, University of Basel, Switzerland.

Discussion. An incomplete description that focused on the structural differences between jentschite and edenharterite was abstracted in *Am. Mineral.*, 82, 431–432 (1997). **J.L.J.**

Jørgensenite*

H. Pauly, F.C. Hawthorne, P.C. Burns, G. Della Ventura (1997) Jørgensenite, $Na_2(Sr,Ba)_{14}Na_2Al_{12}F_{64}(OH,F)_4$, a new aluminofluoride mineral from Ivigtut, Greenland. Can. Mineral., 35, 175–179.

Electron microprobe analysis gave Al 10.97, Mg 0.38, Ca 0.28, Sr 32.76, Ba 8.63, Na 3.25, K 0.30, F 42.50, H_2O (calc.) 1.22, sum 100.29 wt%, which for Al = 12 corresponds to $(Na_{1.54}Mg_{0.46})_{\Sigma 2.00}$ $(Sr_{11.03}Ba_{1.85}Na_{0.63}K_{0.23}Ca_{0.21})_{\Sigma 13.95}Na_{2.00}Al_{12}F_{66.00}(OH)_{2.00}$. The mineral occurs as fan-shaped aggregates up to 2 mm across, and as grains up to 10 mm across, elongate [010], white color and streak, vitreous luster, brittle, H = 3½–4, no cleavage or parting, uneven fracture, nonfluorescent, D_{meas} = 3.89(1), D_{calc} = 3.94 g/cm³ for Z = 1. Colorless in transmitted light, biaxial negative, α = 1.436(1), β = 1.442(1), γ = 1.442(1), $2V_{meas}$ = 0–5(5)°, $2V_{calc}$ = 0°, Y = β, no dispersion. Single-crystal X-ray structure study indicated monoclinic symmetry, space group $C2/m$; a = 16.046(1), b = 10.971(1), c = 7.281(1) Å, β = 101.734(6)° as refined from a Guinier powder pattern (Cu$K\alpha$) with strongest lines of 7.844(80,200), 3.643

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* Before publication, minerals marked with an asterisk were approved by the Commission on New Minerals and Mineral Names, International Mineralogical Association.

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(90,311), 3.453(100,11$\bar{2}$), 3.193(100,420), 3.112(90,42$\bar{1}$), 2.998 (50,330), 2.989(90,022), 2.220(80,44$\bar{1}$), 2.173 (90,150), and 2.001(80,80$\bar{1}$).

The mineral is associated with jarlite and stenonite in fissures in the main cryolite mass at Ivigtut. The new name is for Vilhelm Jørgensen (1844–1925), co-founder of the cryolite factory at Ivigtut. Type material is in the Geological Museum, University of Copenhagen, Denmark. **J.L.J.**

Juabite*

A.C. Roberts, R.A. Gault, M.C. Jensen, A.J. Criddle, E.A. Moffatt (1997) Juabite, $Cu_5(Te^{6+}O_4)_2(As^{5+}O_4)_2·3H_2O$, a new mineral species from the Centennial Eureka mine, Juab County, Utah. Mineral. Mag., 61, 139–144.

Three electron microprobe analyses gave CuO 38.25 (38.11–38.48), PbO 0.57 (0.41–0.74), TeO_3 32.58 (32.44–32.75), As_2O_5 22.81(22.48–23.04), H_2O (calc. for $3H_2O$) 5.19, sum 99.40 wt%, corresponding to $(Cu_{5.01}Pb_{0.03})_{\Sigma 5.04}(Te^{6+}O_4)_{1.93}(As^{5+}O_4)_{2.07}·3H_2O$. The infrared spectrum has a strong band for H_2O at 3283 cm^{-1} and a weaker band at 1642 cm^{-1}. The mineral occurs as emerald green, platy masses ($<$1 mm across) in which the crystals average 125 × 100 × 1–2 μm, showing {010} and minor {100}, {$\bar{1}$01}, and {101}. Translucent to transparent, vitreous luster (adamantine on crystal faces), pale green streak, brittle, uneven to subconchoidal fracture, perfect {010} cleavage, H = 3–4, nonfluorescent, D_{calc} = 4.59 g/cm³ for Z = 2. White in reflected light, with ubiquitous turquoise-blue internal reflections. Single-crystal X-ray study indicated triclinic symmetry, space group $P1$ or $P\bar{1}$; a = 8.984(5), b = 10.079(7), c = 8.975(5) Å, α = 102.68(7), β = 92.45(6), γ = 70.45(5)° as refined from the powder pattern (114 mm Debye–Scherrer, Cu$K\alpha$ radiation) with strongest lines of 9.28(70,010), 4.65 (70,020), 3.097(100,030,$\bar{2}$11), 3.018(60,212), 2,658 (50,$\bar{3}$01), 2.468(50,$\bar{2}\bar{2}$2), and 1.740(50,115,521,151).

The mineral occurs on drusy quartz in vugs in a single specimen from the dumps of the Centennial Eureka mine, Juab County, Utah. The new name refers to the type locality. Associated minerals are enargite, beudantite, and the possible Pb analog of arsenobismite. Type material is in the Systematic Reference Series of the National Mineral Collection housed at the Geological Survey of Canada, Ottawa, and in The Natural History Museum, London, UK. **J.L.J.**

Mahnertite*

H. Sarp (1996) Mahnertite, $(Na,Ca)Cu_3(AsO_4)_2Cl·5H_2O$, a new mineral from the Cap Garonne mine, Var, France. Archs Sci. Genéve, 49(2), 119–124 (in French, English abs.).

Nine electron microprobe analyses gave CuO 36.37 (35.04–37.78), As_2O_5 39.07 (38.05–40.58), Na_2O 4.58 (3.95–5.33), CaO 2.14 (1.70–2.73), K_2O 0.40 (0.21–0.54), Cl 4.67 (3.84–5.74), H_2O (loss on heating) 14.5, O ≡ Cl 1.05, sum 100.68 wt%, corresponding to $Na_{0.90}K_{0.05}Ca_{0.23}Cu_{2.79}(AsO_4)_{2.07}Cl_{0.81}·4.91H_2O$. Occurs as blue to emerald green aggregates of thin (~0.1 mm) square crystals, and as spherules to 0.2 mm in diameter. Crystals are tabular on {001}, showing also {100}. Vitreous luster, translucent, pale blue streak, irregular fracture, perfect {001} cleavage, H = 2–3, nonfluorescent, D_{meas} = 3.33(2), D_{calc} = 3.36(1) g/cm³ for Z = 8. Optically uniaxial negative, ω = 1.686(2), ϵ = 1.635(2); intensely pleochroic, O = blue to intense green-blue, E = clear blue to clear green. Single-crystal X-ray study indicated tetragonal symmetry, space group $P4_22_12$; a = 10.085(2), c = 23.836(8) Å by refinement of the powder pattern (114 mm Gandolfi, Cu$K\alpha$ radiation), with strongest lines at 11.90(100,326), 9.29(60,228), 7.132(50,219), 5.043 (60,424), 3.098(80,523), and 3.061(70,506).

The mineral is an oxidation product associated with tennantite, covellite, geminite, and pushcharovskite on quartz gangue. The new name is for V. Mahnert, director of the Natural History Museum of Geneva, which is the repository for the type material. **J.L.J.**

Sheldrickite*

J.D. Grice, R.A. Gault, J. Van Velthuizen (1997) Sheldrickite, a new sodium-calcium-fluorocarbonate mineral species from Mont Saint-Hilaire, Quebec. Can. Mineral., 35, 181–187.

Electron microprobe analysis gave Na_2O 9.16, CaO 48.84, SrO 0.36, F 16.17, CO_2 (calc.) 25.81, H_2O (TGA) 5.61, O ≡ F 6.81, sum 99.14 wt%, corresponding to $Na_{1.01}(Ca_{2.97}Si_{0.01})_{\Sigma 2.98}(CO_3)_2[F_{2.90}(OH)_{0.07}]_{\Sigma 2.97}·H_2O$, ideally $NaCa_3(CO_3)_2F_3·H_2O$. Occurs as a colorless to white aggregate of blocky crystals up to 2 mm wide, with individual crystals up to 0.1 mm, and as aggregates of silky white flakes to 2 mm across. Vitreous luster, white streak, brittle, uneven fracture, H = 3, good {001} parting, nonfluorescent, D_{meas} = 2.86(4), D_{calc} = 2.86 g/cm³ for Z = 3. TGA showed H_2O loss in one continuous step between 160–265 °C. Strong infrared absorption bands for O–H and CO_2 occur at 3376 and 1464 cm^{-1}, respectively. Optically uniaxial positive, ω = 1.538(2), ϵ = 1.563(4). Single-crystal X-ray structure study (R = 0.046) indicated trigonal symmetry, space group $P3_2$; a = 6.718(3), c = 15.050(4) Å from indexing of a Gandolfi powder pattern (114 mm camera, Cu$K\alpha$ radiation) with strongest lines of 2.791(50,113), 2.508(40,006), 2.010(100,116,213), and 1.939(40,300).

The mineral is associated with shortite, pectolite, microcline, polylithionite, arfvedsonite, aegirine, calcite, fluorite, and several other minerals that are thought to be late-stage hydrothermal products in a marble xenolith in nepheline syenite at the Poudrette quarry, Mont Saint-Hilaire, Rouville County, Quebec. The new name is for G.M. Sheldrick (b. 1942) of the University of Göttingen. Type material is in the Canadian Museum of Nature, Ottawa, **J.L.J.**

Ru-Os-Ir, Ru-Ir-Pt, Pt_3Cu, Rh_2As, $(Ru,Rh)(Te,Sb)_2$, RuO_2

S. Trstić, M. Tarkian (1997) Platinum-group minerals in gold-bearing placers associated with the Veluće ophiolite complex, Yugoslavia. Can. Mineral., 35, 1–21.

Platinum-group minerals recovered from stream and terrace sediments along the Srebrenica River and its tributaries were derived from the Veluće ophiolite complex in central Serbia, Yugoslavia. Electron microprobe analyses indicate that the following new or unusual PGM are present.

Ir-Ru-Os alloy

Analysis gave Pt 12.39, Ir 50.08, Os 16.97, Ru 12.91, Rh 6.64, Fe 0.42, Cu 0.44, and Pd, Ni, As, Sb <0.10, sum 99.85 wt%, corresponding to $Ir_{0.42}Ru_{0.21}Os_{0.14}Rh_{0.10}Pt_{0.10}Fe_{0.01}Cu_{0.01}$. In the system Ru-Os-Ir, the composition falls within the purported miscibility gap between iridium and rutheniridosmine. The mineral occurs as a discrete grain, and as exsolution lamellae and blebs in a grain of Pt-Fe alloy.

Ru-Pt-Ir alloy

Analysis of exsolution blebs within a Pt-Fe alloy gave Pt 49.28, Ir 13.25, Os 4.06, Ru 28.70, Rh 3.99, Fe 0.47, Cu 0.32, sum 100.07 wt%, corresponding to $Ru_{0.42}Pt_{0.37}Ir_{0.10}Rh_{0.06}Os_{0.03}Fe_{0.01}Cu_{0.01}$. The composition is within the unnamed, Ru-rich part of the system Ru-Pt-Ir.

Pt_3Cu

Analysis gave Pt 85.98, Ru 0.26, Rh 0.35, Fe 0.21, Cu 11.82, Ni 0.43, sum 99.05 wt%, corresponding to $(Pt_{2.74}Rh_{0.02}Ru_{0.02})_{\Sigma 2.78}(Cu_{1.16}Ni_{0.04}Fe_{0.02})_{\Sigma 1.22}$, possibly Pt_3Cu (*Am. Mineral.*, 78, 1110–1111, 1993). Occurs as an anhedral grain 130 mm across, and as exsolution blebs and rods in Pt-Cu-Sb alloy.

Rh_2As

One of three analyses listed gave Pt 0.49, Rh 60.81, Pd 12.65, As 26.04, sum 99.99 wt%, corresponding to $(Rh_{1.67}Pd_{0.34}Pt_{0.01})_{\Sigma 2.02}As_{0.98}$. In reflected light, pale brownish gray with a green tinge, distinct bireflectance, moderately to strongly anisotropic. Numerous grains of the mineral are present, and size is up to 120 × 150 μm.

$(Ru,Rh)(Te,Sb)_2$

Analyses of a subhedral grain 45 × 75 mm, and of a grain intergrown with Pt-Fe alloy, gave Ru 12.73, 13.41, Rh 9.33, 8.79, Ir 5.90, 6.66, Pt 5.15, 4.15, Cu 0.11, <0.10, Te 50.39, 51.92, Sb 9.60, 9.58, As 2.38, 2.11, Bi 4.64, 3.76, sum 100.23, 100.38 wt%, corresponding to $(Ru_{0.47}Rh_{0.34}Ir_{0.11}Pt_{0.10}Cu_{0.01})_{\Sigma 1.03}(Te_{1.48}Sb_{0.29}As_{0.12}Bi_{0.08})_{\Sigma 1.97}$ and $(Ru_{0.49}Rh_{0.32}Ir_{0.13}Pt_{0.08})_{\Sigma 1.02}(Te_{1.51}Sb_{0.29}As_{0.11}Bi_{0.07})_{\Sigma 1.98}$. In reflected light, gray with a brownish tinge; isotropic, with reflectance slightly higher than that of laurite.

RuO_2(?)

One of two analyses of fine-grained pseudomorphs after laurite gave RuO_2 74.62, FeO 10.39, HgO 10.96, OsO_2 1.81, IrO_2 3.35, sum 101.13 wt%, possibly corresponding to RuO_2, with Hg likely a contaminant from amalgamation. In reflected light, dark gray with a brownish tinge, strongly bireflectant and anisotropic.

Discussion. For another reported occurrence of Ru oxide or hydroxide, see *Am. Mineral.,* 80, 847–848 (1995). **J.L.J.**

$(Ir,Os)Te_2$, $(Ir,Os)(S,As,Te)_2$, $(Ir,Os)(As,Te)$, $(Ir,Os)(Te,As)$, $(Ru,Ir,Os)Te$

N. Tolstyk, A. Krivenko, L. Pospelova (1997) New compounds of Ir, Os and Ru with selenium, arsenic and tellurium. Eur. J. Mineral., 9, 457–465.

A heavy-mineral concentrate from alluvium of the Zolotaya River in western Sayan, Russia, contains magnetite, hematite, ilmenite, chromite, Os-Ir-Ru and Pt-Fe alloys, Se-bearing sperrylite, tetra-auricupride, Se-rich iridarsenite(?), and the following PGM analyzed by electron microprobe. The PGM were derived from serpentinized hyperbasites.

$(Ir,Os)Te_2$

Analysis gave Ir 26.56, Os 15.55, Ru 0.59, Pt 0.17, Rh 0.36, Cu 0.15, As 2.93, Te 50.01, S 0.04, Se 1.84, sum 98.20 wt%, corresponding to $(Ir_{0.60}Os_{0.36}Ru_{0.03}Rh_{0.01}Cu_{0.01})_{\Sigma 1.01}(Te_{1.71}As_{0.17}Se_{0.10}S_{0.01})_{\Sigma 1.99}$. Occurs as a thin rim on a grain of (Ir,Os) alloy. Light gray color, anisotropic.

$(Ir,Os)(S,As,Te)_2$

Analysis gave Ir 38.65, Os 21.30, Ru 0.25, Pt 1.16, Rh 0.15, Cu 0.90, Fe 0.11, As 12.53, Te 6.74, S 15.00, Se 0.26, sum 97.05 wt%, corresponding to $(Ir_{0.59}Os_{0.33}Cu_{0.04}Ru_{0.01}Pt_{0.01}Rh_{0.01}Fe_{0.01})_{\Sigma 1.00}(S_{1.36}As_{0.49}Te_{0.15})_{\Sigma 2.00}$. Occurs as an inclusion in (Ir,Os) alloy.

(Ir,Os)(As,Te)

One of four analyses gave Ir 45.35, Os 19.49, Ru 1.78, Pt 0.39, Pd 0.37, Cu 0.52, As 11.87, Te 17.48, S 1.29, Se 1.06, sum 99.60 wt%, corresponding to $(Ir_{0.65}Os_{0.28}Ru_{0.05}Cu_{0.02}Pd_{0.01}Pt_{0.01})_{\Sigma 1.02}(As_{0.45}Te_{0.38}S_{0.11}Se_{0.04})_{\Sigma 0.98}$. Occurs as a veinlet 10 mm wide in a grain of (Ir,Os) alloy. Gray color in reflected light, weakly anisotropic.

(Ir,Os)(Te,As)

Analysis gave Ir 39.55, Os 23.35, Ru 0.25, Pt 0.22, Rh 0.16, Cu 0.23, As 8.90, Te 19.49, S 0.41, Se 4.45, sum 97.01 wt%, corresponding to $(Ir_{0.60}Os_{0.36}Ru_{0.01}Cu_{0.01}Pt_{0.01})_{\Sigma 0.99}(Te_{0.45}As_{0.35}Se_{0.17}S_{0.04})_{\Sigma 1.01}$. Occurs as a rim on (Ir,Os) alloy.

(Ru,Ir,Os)Te

Two analyses gave Ir 19.66, 12.66, Os 15.46, 12.60, Ru 15.01, 24.21, Pt 0.74, 0.78, Rh 1.10 , –, Cu 0.17, 0.31, Fe –, 0.26, As 0.32, –, Te 46.47, 42.33, S –, 0.07, Se 0.19, 2.61, sum 99.12, 95.83 wt%, corresponding to $(Ru_{0.41}Ir_{0.28}Os_{0.23}Rh_{0.03}Pt_{0.01}Cu_{0.01})_{\Sigma 0.97}(Te_{1.01}Se_{0.01}As_{0.01})_{\Sigma 1.03}$ and $(Ru_{0.64}Os_{0.18}Ir_{0.18}Pt_{0.01}Fe_{0.01})_{\Sigma 1.02}(Te_{0.89}Se_{0.09}S_{0.02})_{\Sigma 0.98}$. Occurs as a rim on ruthenium, and as veinlets in Os-Ir-Ru alloy. Grayish white in reflected light, reflectance similar to that of the host alloy, isotropic.

Discussion. See also *Am. Mineral.*, 78, p. 673 (1993) for an abstract on $(Ir,Pt,Rh)S_2$ from another locality. **J.L.J.**

$Ag_{0.66}Pb_{0.88}Bi_{0.1}Sb_{1.33}S_4$

J. Martínez-Frías (1996) The Congostrina mine: A unique case of Bi- and Sb-rich silver sulphosalt association in the Hiendelaencina mining district (Spain). Neues Jahrb. Mineral. Mon., 377–383.

Electron microprobe analyses (15 listed) gave Ag 10.27–10.88, Pb 24.98–26.20, Sb 21.00–22.32, Bi 24.33–25.10, S 16.98–17.77, sum 99.06–100.98 wt%, corresponding to $Ag_{0.66}Pb_{0.88}Bi_{0.81}Sb_{1.33}S_4$. The mineral occurs as homogeneous cores, up to 50 μm across, rimmed by freibergite. In reflected light, pale green, nonpleochroic, no internal reflection, isotropic. Reflectance and hardness are similar to those of galena. Associated minerals are mainly galena, aramayoite, and friebergite, which occur in a quartz-barite-siderite gangue in epithermal veins. **J.L.J.**

Na-dominant roméite

S. Matsubara, A. Kato, M. Shimizu, K. Sekiuchi, Y. Suzuki (1996) Roméite from the Gozaisho mine, Iwaki, Japan. Mineral. J., 18, 155–160.

Electron microprobe analysis gave Na_2O 7.52 (7.07–7.95), CaO 10.87 (10.51–11.25), MnO 0.24 (0.18–0.29), Sb_2O_5 78.21 (77.96–78.42), F 4.10 (3.88–4.38), O ≡ F 1.73, H_2O (by difference) 0.78, sum 100 wt%, corresponding to $(Na_{1.00}Ca_{0.80}Mn_{0.01})_{\Sigma 1.81}Sb_2[O_{5.69}F_{0.89}(OH)_{0.36}]_{\Sigma 6.94}$. Occurs as honey to brownish yellow octahedral crystals, up to 4 mm, showing {111} and infrequent {311}. Vitreous to subadamantine luster, no cleavage, $D_{meas} = 5.05(2)$, $D_{calc} = 5.096$ g/cm^3 for $Z = 8$. Single-crystal X-ray structure study ($R = 0.013$) indicated cubic symmetry, space group $Fd3m$, $a = 10.265(2)$ Å. Strongest lines of the X-ray diffractometer pattern are 5.933(45,111), 3.097(50,311), 2.964(100,222), 1.814(55,440), and 1.548(50,622). The mineral occurs in braunite-rhodonite bedded Mn ore at the Gozaisho mine, Fukushima Prefecture. The ideal formula of roméite is suggested to be $NaCaSb_2O_6(F,OH)$.

Discussion. The formula of roméite is conventionally written with Ca rather than Na, and OH rather than F predominance. Clarification of the formula of roméite, and of the validity of lewisite vs. roméite, is required. **J.L.J.**

New Data

Afghanite

P. Ballirano, E. Bonaccorsi, A. Marsas, S. Merlino (1997) Crystal structure of afghanite, the eight-layer member of the cancrinite group: Evidence for long-range ordering. Eur. J. Mineral., 9, 21–30.

Single-crystal X-ray structure study ($R = 0.045$) gave $a = 12.8013(7)$, $c = 21.4119(18)$ Å, and the new space group $P31c$. Perfect Si,Al order lowers the symmetry from $P6_3mc$. **J.L.J.**

Mineral ‘‘A’’

S.L. Korzeb, E.E. Foord, F.E. Lichte (1997) The chemical evolution and paragenesis of uranium minerals from the Ruggles and Palermo granitic pegmatites, New Hampshire. Can. Mineral., 35, 135–144.

E.E. Foord, S.L. Korzeb, F.E. Lichte, J.J. Fitzpatrick (1997) Additional studies on mixed uranyl oxide–hydroxide hydrate alteration products of uraninite from the Palermo and Ruggles granitic pegmatites, Grafton County, New Hampshire. Can. Mineral., 35, 145–151.

Chemical analysis, X-ray powder diffraction data, and other results (TGA, IR) indicate that mineral ‘‘A’’, initially described in *Am. Mineral.*, 41, 539–568 (1956) as one of several minerals in ‘‘gummite’’, is an orange to yellow-orange mixture that formed by hydrothermal alteration of uraninite. The mixture consists of at least two uranyl oxide-hydroxide hydrates, one of which is a member or members of the schoepite group, and the other of which is similar to phases known only as synthetic compounds. The X-ray data for mineral ‘‘A’’ are closest to those for synthetic $UO_{2.86}\cdot 1.5H_2O$ and $UO_2(OH)_2$. **J.L.J.**