

## NEW MINERAL NAMES\*

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### Iwakiite\*

Satoshi Matsubara, Akira Kato and Kozo Nagashima (1979) Iwakiite,  $Mn^{+2}(Fe^{+3}, Mn^{+3})_2O_4$ , a new tetragonal spinelloid mineral from the Gozaisho mine, Fukushima Prefecture, Japan. *Mineral. J. (Tokyo)*, 9, 383-391.

Analysis by K. N. gave MnO 30.34, MgO 0.61,  $Fe_2O_3$  44.42,  $Mn_2O_3$  22.70,  $Al_2O_3$  0.32,  $SiO_2$  0.47,  $TiO_2$  0.30, SrO 0.04,  $Na_2O$  0.02,  $K_2O$  0.02, sum 99.24%, corresponding to  $(Mn_{0.983}Mg_{0.035})(Fe_{1.277}Mn_{0.660}Si_{0.018}Al_{0.014}Ti_{0.009})O_4$ .

Precession photographs showed the mineral to be tetragonal, space group  $P4_2/nm$ ,  $a = 8.519$ ,  $c = 8.540\text{\AA}$ . The strongest lines (12 given) are 4.929(30)(111), 3.016(40)(202,220), 2.570(100)(113,311), 1.640(30)(333), 1.509(35)(404), 1.506(40)(440).

The mineral is greenish-black, streak black, luster metallic.  $G = 4.85$  (meas.), 4.89 (calc.). Strongly magnetic. No cleavage. Hardness (load 100 g) 681-772 kg/sq mm, or 6-6½ Mohs. Opaque. In reflected light olive gray. Moderately anisotropic with colors yellowish to brownish gray. Reflectances are given at 14 wavelengths (420-680 nm); max. and min. values are: 460 nm, 20.3, 19.5; 540 nm, 21.4, 20.3; 580 nm, 21.2, 20.1; 660 nm, 20.4, 19.2%.

The mineral occurs in the Mn ores of the Gozaisho mine, Iwaki, Japan, associated with rhodonite, quartz, braunite, hematite, rhodochrosite, and spessartine. The name is for the locality. Type material is at the National Science Museum, Tokyo.

### Discussion

This is the tetragonal dimorph of jacobsite. The authors list several occurrences in the literature of "anisotropic jacobsite," which may be iwakiite. M. F.

### MacFallite\*

P. B. Moore, J. Ito and I. M. Steele (1979) MacFallite and orientite: calcium manganese (III) silicates from upper Michigan. *Mineral. Mag.*, 43, 325-331.

MacFallite occurs in great abundance with manganite, braunite, orientite, and pyrolusite blebs, stringers, and framboidal aggregates which replace calcite in fissures and lenses in Keweenaw basalt near Manganese Lake, Copper Harbor, Keweenaw County, Michigan. Chemical analysis yielded:  $K_2O$  0.12,  $Na_2O$  0.03, CaO 19.75, MgO 0.39, MnO 0.69, CuO 1.13,  $Al_2O_3$  3.95,  $TiO_2$  trace,  $V_2O_5$  0.28,  $Cr_2O_3$  0.03,  $Mn_2O_3$  35.96,  $Fe_2O_3$  0.18,  $SiO_2$  32.04,  $H_2O$  5.39, sum 99.94%; disregarding minor constituents this leads to the formula  $Ca_2(Mn^{3+}, Al)_3(OH)_3[SiO_4][Si_2O_7]$ , comparable to the formula of piemontite but with higher  $Mn^{3+}$  than recorded for the most Mn-rich piemontites. MacFallite is monoclinic, diffraction symbol  $P2_1/*$ ,  $a = 8.929(6)$ ,  $b = 6.045(5)$ ,  $c = 10.905(7)\text{\AA}$ ,  $\beta =$

119.10(3)°;  $Z = 2$ , density (meas.) 3.43(2), (calc.) 3.51 g/cm<sup>3</sup>. It is rich reddish brown to maroon in coarse aggregates; compact massive material is brown to dull pink. The streak and powder are brown with a reddish tint. The luster is silky to subadamantine, hardness 5+, cleavage {001} perfect. Refractive indices are:  $\alpha = 1.773(5)$ ,  $\beta = 1.795(5)$ ,  $\gamma = 1.815(5)$ ,  $Y = b$ , pleochroism: X yellow, Y light brown, Z dark brown. The name is for Mr. Russell P. MacFall, a dedicated amateur mineralogist with a longlasting passion for the minerals of the Keweenaw Peninsula. A. P.

### Magnesiocarpholite

Bruno Goffe, Ghislaine Goffe-Urbano, and Pierre Saliot (1973) Sur la présence d'une variété magnésienne de ferrocapholite en Vanoise (Alpes françaises). *Compt. Rend., Ser D*, 277, 1965-1968.

K. Viswanathan and E. Seidel (1979). Crystal chemistry of Fe-Mg-carpholite. *Contrib. Mineral. Petrol.*, 70, 41-47.

The original paper by Goffe *et al.* referred to the mineral as magnesian ferrocapholite, but the analysis (no. 1 below) has Mg:Fe = 70:30. In 1977, Goffe (*Bull. Soc. fr. Mineral.*, 100, 254-257) referred to the same mineral as magnesiocarpholite.

The paper by Viswanathan and Seidel gives 13 analyses of the series ferrocapholite-magnesiocarpholite, 3 of magnesiocarpholite, including nos. 2 and 3 below. No. 3 corresponds to Mg:Fe = 0.96:0.04, no. 2 to 0.80:0.20.

	1	2	3
SiO <sub>2</sub>	38.66	39.9	40.0
Ti <sub>2</sub> O <sub>2</sub>	1.03	0.15	n.d.
Al <sub>2</sub> O <sub>3</sub>	28.95	33.1	34.1
Fe <sub>2</sub> O <sub>3</sub>	2.88	0.16	n.d.
FeO	6.08	4.70	1.1
MgO	9.10	10.51	12.9
MnO	—	0.05	n.d.
CaO	0.29	—	n.d.
Na <sub>2</sub> O	0.09	—	n.d.
K <sub>2</sub> O	0.08	—	n.d.
H <sub>2</sub> O	11.73	10.5	n.d.
P <sub>2</sub> O <sub>5</sub>	0.30	—	n.d.
	99.19	99.13	
a	—	13.714	13.694
b	—	20.079	20.040
c	—	5.105	5.108
ns	1.59-1.60	—	—

M. F.

### Maslovite\*

V. A. Kovalenker, V. D. Begizov, T. L. Evstigneeva, N. V. Tro-neva and V. A. Ryabikin (1979) Maslovite, PtBiTe: a new min-

\*Minerals marked with asterisks were approved before publication by the Commission on New Minerals and Mineral Names of the International Mineralogical Association.

eral from the October copper-nickel deposit. *Geolog. rud. mes-tor.*, 21, 94-104 (in Russian).

Microprobe analyses of nine grains gave Pt 28.6, 28.1, 26.6, 25.7, 21.3, 21.0, 21.0, 19.75, 20.3; Pd 4.5, 5.0, 5.6, 7.1, 10.3, 10.5, 10.6, 10.25, 11.1; Bi 49.6, 50.3, 53.0, 52.8, 47.8, 47.3, 49.0, 47.77, 49.1; Te 16.9, 16.8, 15.7, 15.8, 18.9, 19.8, 20.1, 19.05, 19.1, 19.1; Sb 0.8, 0.6, 1.6, 1.1, 1.3, 1.5, 1.2, 0.93, 1.4; Pb 1.1, 1.2, 0.0, 0.0, 0.0, 0.0, 1.02, 0.0; sums 101.5, 102.0, 102.5, 102.5, 99.6, 100.1, 101.9, 98.77, 101.3 wt %. The analyses correspond to:  $(\text{Pt}_{0.77}\text{Pd}_{0.22})\text{Bi}_{1.25}\text{Te}_{0.70}\text{Sb}_{0.04}\text{Pb}_{0.03}$ ,  $(\text{Pt}_{0.75}\text{Pd}_{0.25})\text{Bi}_{1.26}\text{Te}_{0.69}\text{Sb}_{0.02}\text{Pb}_{0.03}$ ,  $(\text{Pt}_{0.71}\text{Pd}_{0.27})\text{Bi}_{1.31}\text{Te}_{0.64}\text{Sb}_{0.07}$ ,  $(\text{Pt}_{0.68}\text{Pd}_{0.34})\text{Bi}_{1.30}\text{Te}_{0.64}\text{Sb}_{0.05}$ ,  $(\text{Pt}_{0.55}\text{Pd}_{0.49})\text{Bi}_{1.16}\text{Te}_{0.75}$ ,  $(\text{Pt}_{0.54}\text{Pd}_{0.49})\text{Bi}_{1.13}\text{Te}_{0.78}\text{Sb}_{0.06}$ ,  $(\text{Pt}_{0.53}\text{Pd}_{0.49})\text{Bi}_{1.16}\text{Te}_{0.78}\text{Sb}_{0.05}$ ,  $(\text{Pt}_{0.516}\text{Pd}_{0.491})\text{Bi}_{1.166}\text{Te}_{0.762}\text{Sb}_{0.039}\text{Pb}_{0.025}$ ,  $(\text{Pt}_{0.52}\text{Pd}_{0.51})\text{Bi}_{1.18}\text{Te}_{0.74}\text{Sb}_{0.06}$  or ideally PtBiTe.

X-ray powder data (15, 16 lines) are given for two grains (anal. 3 and 7); strongest lines are 3.01, 2.98(10)(012), 2.71(8, 9)(112), 202, 201(6)(311), 1.788, 1.783(3, 5)(123). These are similar to michenerite (*Can. Mineral.*, 11, 903-912, 1973) and insizwaite (*Am. Mineral.*, 58, 805, 1973). The powder patterns were indexed on a cubic cell with  $a = 6.689(7)\text{\AA}$  (No. 3) and  $a = 6.671(7)\text{\AA}$  (No. 7);  $Z = 4$ ,  $D(\text{calc.}) 11.51-11.74\text{ g/cm}^3$ . Space group  $P2_13$  on the basis of  $2.09\text{\AA}(310)$  reflection in pattern of grain No. 5.

Maslovite occurs in galena-rich portions of massive cubanite-chalcopyrite and mooihoeite ores or host rocks of the October deposit (Noril'sk region) near the contact. The mineral occurs as elongated, sometimes rounded grains with maximum dimensions 100-120  $\mu\text{m}$  in diameter. Maslovite is usually present in the center of complex polymineralic intergrowths of altaite, tellurian sobolevskite, moncheite, michenerite, platinumian michenerite, hessite, froodite, and sperryllite. Under reflected light maslovite is light gray with a lilac-colored hue and is isotropic. Reflectances are: 55.9(440), 55.2(460), 55.0(480), 55.5(500), 56.0(520), 56.1(540), 55.9(560), 55.9(580), 56.1(600), 56.3(620), 56.8(640), 57.1(660), 57.5(680), 58.4%(700). Microindentation hardness is inversely proportional to Pd content and varies from 262-388 with a 20 g load.

The mineral is named for G. D. Maslov (1915-1968) and, though this information was not published, the authors indicated to the IMA that type material is deposited in the Mineralogical Museum, Academy of Sciences and I.G.E.M., Moscow. L. J. C.

#### Nukundamite\*

C. M. Rice, D. Atkin, J. F. W. Bowles and A. J. Criddle (1979) Nukundamite, a new mineral, and idaite. *Mineral. Mag.*, 43, 193-200.

A new mineral, nukundamite, from the Undu mine, Nukundamu, Fiji, is described. It has been referred to as idaite,  $\text{Cu}_3\text{FeS}_6$ , or  $\text{Cu}_{5.52}\text{Fe}_{x}\text{S}_{6.5x}$ . Electron microprobe analyses gave Cu 56.51, Fe 9.64, and S 33.51, total with traces of Ag and As 99.79%. The analysis agrees closely with those reported by Frenzel and Ottemann (1967), by Clark (1970) for a comparable phase from Chile, and by Merwin and Lombard (1937) and Sugaki (1975) for the corresponding synthetic material. Dimensions of the hexagonal cell, obtained from powder data, are  $a = 3.782$ ,  $c = 11.187\text{ \AA}$ ,  $Z = 1$ , empirical formula  $\text{Cu}_{3.37}\text{Fe}_{0.66}\text{S}_{3.97}$  on the basis of eight atoms; density ( $\text{g/cm}^3$ ) 4.53 (calc.), 4.30 (meas.). Copper-colored, metallic luster, {0001} cleavage perfect. Strongly pleochroic from reddish orange ( $R_c$ ) to pale grey ( $R_e$ ). Parallel extinction. Reflectance values and quantitative color values in air and oil are given. At the Undu mine nukundamite coexists with sphalerite in black ore, occurs as fine lamellae in sphalerite, as cavity fillings in brecciated

pyrite ore, and as an alteration product of primary chalcopyrite. The largest crystals, occurring in the pyrite ore, may reach 2 mm in length. Examination of a specimen of "idaite" from the Ida mine, SW Africa failed to yield observations adequate for a full description. The interpretation of the powder pattern of the material originally named idaite had been called into question and the description of the type material remains inadequate. A. P.

#### Queitite\*

Paul Keller, P. J. Dunn, and Heinz Hess (1979) Queitite,  $\text{Pb}_4\text{Zn}_2(\text{SO}_4)(\text{SiO}_4)(\text{Si}_2\text{O}_7)$ , a new mineral from Tsumeb, South West Africa. *Neues Jahrb. Mineral. Monatsh.*, 203-209 (in German).

Microprobe analyses, using as standards PbO (Pb), ZnO (Zn), celestite ( $\text{SO}_3$ ), and hornblende (remaining constituents) gave  $\text{SiO}_2$  14.33, 14.52; ZnO 12.37, 12.97; PbO 67.10, 66.71;  $\text{SO}_3$  6.06, 6.04, Ca, Mg, Fe traces, sum 99.86, 100.24%; the average gives  $\text{Pb}_{3.87}\text{Zn}_{2.01}\text{Si}_{3.10}\text{S}_{0.98}\text{O}_{15}$ , or the formula above. Soluble with difficulty in hot  $\text{HNO}_3$ .

Weissenberg photographs showed the mineral to be monoclinic,  $P2_1$ ,  $a = 11.362$ ,  $b = 5.266$ ,  $c = 12.652\text{\AA}$ ,  $\beta = 108.16^\circ$ ,  $Z = 2$ ,  $G = 6.07(\text{calc.})$ . The strongest X-ray lines (69 given) are 3.77(5)(301, 210), 3.59(5)(300), 3.18(10)(013, 013, 301), 2.99(5)(312), 2.82(5)(401, 203, 402), 1.884(5)(511, 420, 314), 1.872(016, 016), 1.635(8)(615), 1.536(5), 1.490(6), 1.486(6).

The mineral is pale yellow to colorless, luster greasy. Euhedral crystals up to  $10 \times 3 \times 0.5\text{ mm}$  show forms {001} (dominant), {112}, {110}, {101}. Crystals are tabular  $c$ , elongated  $b$ , twinning on (100) and (001). Cleavages {010} and {001}, in traces. Optically biaxial, probably positive,  $2V$  near  $90^\circ$ ,  $\alpha = 1.899$ ,  $\beta = (1.901)$ ,  $\gamma = 1.903$ ,  $X = b$ ,  $Z = a$  for Na light,  $Z:a$  varies with wave length, extinction undulose. Dispersion strong,  $r < v$ , distinct anomalous interference colors.

The mineral occurs on corroded galena, sphalerite, and tennantite at Tsumeb, associated with willemite, alamosite, melanotekite, leadhillite, larsenite, and quartz. The name is for Clive S. Queit of Tsumeb. Location of type material is not stated. M. F.

#### Ranunculite\*

M. Deliens and P. Piret (1979) Ranunculite,  $\text{AlH}(\text{UO}_2)(\text{PO}_4)(\text{OH})_3 \cdot 4\text{H}_2\text{O}$ , a new mineral. *Mineral. Mag.*, 43, 321-323.

The mineral now named ranunculite was designated "mineral E" in a preliminary report on aluminum uranyl phosphates found in the uranium-rich portions of a pegmatite at Kobokobo, Kivu, Zaire (Deliens and Piret, *Bull. Soc. belge Geol.*, 86, 183-190, 1977). Ranunculite occurs as gold-yellow nodules, mean diameter 0.3 mm, with meta-autunite, phosphuranylite and with several other new aluminum uranyl phosphates. Microprobe analysis yielded  $\text{Al}_2\text{O}_3$  9.9,  $\text{UO}_3$  54.5,  $\text{P}_2\text{O}_5$  13.2%, and  $\text{H}_2\text{O}$  by thermogravimetry 20.3%, sum 97.9%, leading to the formula in the title. Ranunculite is monoclinic, pseudo-orthorhombic, with  $a = 11.1$ ,  $b = 17.7$ ,  $c = 18.0\text{\AA}$ ,  $\beta$  ca.  $90^\circ$ ;  $Z = 14$ , density (meas.) 3.4, (calc.)  $3.39\text{ g/cm}^3$ . The strongest lines of the X-ray powder pattern are: 9.00(002,020)(100), 3.133(330)(80), 4.70(202,220)(50), 2.978(006,060)(40), and 1.850(600)(40). The mineral is biaxial negative,  $2V$  (calc.)  $56^\circ$ ,  $\alpha = 1.643$ ,  $\beta = 1.664$ ,  $\gamma = 1.670$ . The name is for the color (ranunculus = buttercup). A. P.

**Warikahnite\***

Paul Keller, Heinz Hess, and P. J. Dunn (1979) Warikahnite, a new mineral from Tsumeb, South West Africa. *Neues Jahrb. Mineral. Monatsh.*, 389-395 (in German).

Microprobe analysis, using as standards ZnO (Zn), manganite (Mn), olivenite (As), and hornblende (Fe), gave As<sub>2</sub>O<sub>5</sub>, 44.33, ZnO 47.85, MnO 0.40, FeO 0.19, H<sub>2</sub>O (by TGA) 6.32, sum 99.09%, corresponding to Zn<sub>3</sub>(AsO<sub>4</sub>)<sub>2</sub> · 2H<sub>2</sub>O. Loss of water occurred in one step at 365°C. The infrared spectrum showed the presence of H<sub>2</sub>O and (AsO<sub>4</sub>)<sup>3-</sup>. Dissolved by hot HCl or HNO<sub>3</sub>.

Weissenberg photographs showed the mineral to be triclinic,  $P\bar{1}$ ,  $a = 6.710$ ,  $b = 8.989$ ,  $c = 14.553\text{\AA}$ ,  $\alpha = 105.59^\circ$ ,  $\beta = 93.44^\circ$ ,  $\gamma = 108.68^\circ$ ,  $Z = 4$ , G calc. 4.29, G measured slightly above that of Clerici solution, 4.24. The strongest X-ray lines (50 given) are 13.80(5)(001), 8.12(6)(010), 6.21(8)(011), 3.45(7)(004, 123); 304(6)(202, 220), 2.87(8)(014, 130, 222), 2.82(10)(032, 031), 2.30(7)(116, 024, 006, 131, 135).

Color pale yellow to colorless. Crystals are bladed, up to  $3 \times 0.5 \times 0.5$  mm, elongated on  $a$ , in radiating masses. Cleavage {001} perfect, {010} and {100} distinct to good. Optically biaxial, positive,  $\alpha = 1.747$ ,  $\beta = 1.753$ ,  $\gamma = 1.768$ ,  $2V = 75^\circ$ , dispersion not observed,  $Z:a = 47^\circ$ .

The mineral occurs in the second oxidation zone of the Tsumeb mine on corroded tennantite, associated with adamite, stranskiite, koritnigite, claudetite, tsumcorite, and ludlockite.

The name is for Walter Richard Kahn. Type material is at the University of Stuttgart and the Smithsonian Institution. M. F.

**NEW DATA****Daomanite, Yixunite**

Yu Zuxiang<sup>1</sup>, Ding Kuishou and Zhou Jianxiong (1978) Daomanite, a new platinum mineral. *Acta Geol. Sinica*, 4, 320-327 (in Chinese with English abstract).

**Daomanite**

New electron microprobe analyses gave: Pt 49.73, 51.11, 50.64; Cu 15.68, 13.36, 15.57; As 18.30, 18.86, 17.74; S 16.31, 16.58, 16.43; sums 100.02, 99.91, 100.38 percent corresponding to Pt<sub>1.02-1.06</sub>Cu<sub>0.85-0.98</sub>As<sub>0.97-1.01</sub>S<sub>2.03-2.08</sub>, which is close to an ideal formula of PtCuAsS<sub>2</sub>.

New X-ray powder and single-crystal data confirm the mineral to be orthorhombic but with  $a = 5.93$ ,  $b = 16.23$ ,  $c = 3.67\text{\AA}$  (all  $\pm 1/2\%$ ). Possible space groups are *Amam*, *Ama2*, or *A2am*. A previously reported strong reflection (FeK $\alpha$ ) at 7.32 $\text{\AA}$  is now considered due to absorption splitting. Strongest lines from a total of 46 are: 8.00(7)(020), 3.30(8)(140), 3.02(10)(031), 2.13(8)(231), and 1.82(8)(022). With  $Z = 4$ , D calc. 7.303 g/cc.

Daomanite occurs in a Pt-bearing copper sulfide (bornite-chalcocopyrite) vein in a garnet amphibole pyroxenite or olivine pyroxenite. Compare with *Am. Mineral.*, 61, 184 (1976). L. J. C.

**Yixunite**

New data by Yu Tsu-hsiang *et al.* reported as an editorial footnote in Yu Zuxiang *et al.* (1978) indicate that the composition is very variable: In 46.74, 12.42, 8.56; Pt 52.08, 85.14, 91.52%, corresponding to In<sub>0.60</sub>Pt<sub>0.40</sub>, Pt<sub>0.80</sub>In<sub>0.20</sub>, Pt<sub>0.87</sub>In<sub>0.13</sub> and with  $a = 3.995$ , 3.963, 3.948 $\text{\AA}$  respectively.

*Discussion:* Considerable doubt on the nature of yixunite is also expressed by Peng Zhizhong *et al.* (1978) (see following abstracts),

who also report that the X-ray powder data of yixunite are completely identical with those of Pt. L. J. C.

**Xingzhongite, Malanite, Hongshiite, Fengluanite, and Guanglinite**

Peng Zhizhong<sup>2</sup>, Chang Chiehung and Ximen Lovlov (1978) Discussion on published articles in the research of new minerals of the platinum-group discovered in China in recent years. *Acta Geol. Sinica*, No. 4, 326-336 (Chinese with English abstract).

N. Shih, S. Ma, N. Chang and G. Ding (1978) Crystal structure of isomertieite (fengluanite). Reprint (journal unknown), 499-501 (in Chinese).

**Xingzhongite [(Ir,Cu,Rh)S]**

The powder data have been re-indexed on a cubic cell,  $a = 10.10\text{\AA}$ . The strongest X-ray lines (29 given) are 5.99(60)(111), 3.02(80)(113), 1.769(70)(044), 1.506(60)(226), 1.340(60)(246), 1.208(100)(028), 1.034(80)(239), 1.020(80)(448). (Compare *Am. Mineral.*, 61, 185, 1976).

**Malanite [(Cu,Pt,Ir)S<sub>2</sub>]**

The powder data have been re-indexed with  $a = 10.005\text{\AA}$ . The strongest X-ray lines (17 given) are 5.86(80)(111), 3.00(70)(113), 2.833(60)(222), 2.501(100)(004), 1.921(70)(115), 1.761(100)(044), 1.014(50)(448), 0.7854(70)(199). (Compare *Am. Mineral.*, 61, 185, 1976). A new ideal formula Cu(Pt,Ir)<sub>2</sub>S<sub>4</sub> is suggested, apparently confirmed by the original authors in 1976 with  $a = 9.997(10)\text{\AA}$ .

**Hongshiite [PtCu]**

The original authors are reported to have redetermined the composition to be Pt 73.0, Cu 26.0%, or PtCu (Compare PtCuAs in *Am. Mineral.*, 61, 185, 1976).

*Discussion:* If hongshiite is PtCu, then it is also very similar to "isoplatinocopper" (= platinum copper) (See *Am. Mineral.*, 63, 426, 1978).

**Fengluanite [Pd<sub>3</sub>As,Sb] and Guanglinite [Pd<sub>3</sub>As]**

Both minerals are now considered to be isomertieite (*Am. Mineral.*, 59, 1330-1331, 1974) with  $a = 12.23\text{\AA}$  (guanglinite) and  $a = 12.32\text{\AA}$  (fengluanite) The guanglinite is re-indexed on the isomertieite cell and it is reported that fengluanite may also be so indexed, except for one weak line ( $d = 2.26\text{\AA}$ ) considered to be due to contamination. The fengluanite cell was determined to be  $a = 12.28\text{\AA}$  after transformation of cell from Weissenberg data. The structural formula was determined to be Pd<sub>3</sub>AsSb with a total of 112 atoms.

*Discussion:* The re-indexing of guanglinite as isomertieite is not satisfactory and it is also not reasonable to expect the isomertieite structure for Pd<sub>3</sub>As, which is known to be tetragonal in the synthetic system (Saini *et al.*, *Can. J. Chem.*, 42, 620-629, 1974). Guanglinite may be satisfactorily re-indexed on a tetragonal cell with  $a = 9.98(1)$ ,  $c = 4.82(1)\text{\AA}$ ; only the reflections at  $d = 2.08$  and 1.279 $\text{\AA}$  do not index and may be due to contamination. Fengluanite, on the other hand, may be re-indexed as isomertieite with  $a = 12.30\text{\AA}$ , except for the reflections at  $d = 3.33$ , 3.18, 2.11, and 1.652 $\text{\AA}$ .

**General Comments**

Xingzhongite, malanite and hongshiite were approved by IMA Commission on New Minerals and Mineral Names after publication. In the light of the new data presented, it seems likely that hongshiite, at least, should be officially discredited. L. J. C.

<sup>1</sup> Formerly Yu Tsu-hsiang.

<sup>2</sup> Formerly Pen Chih-Zhong.