

Twenty-ninth list of new mineral names

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THIS list of 150 names includes 97 acceptable names, most of which have been approved by the I.M.A. Commission on New Minerals and Mineral Names, together with 31 names for inadequately defined species, varieties, and other unacceptable names, 9 synonyms for minerals already named, 5 spelling variants, 3 spelling errors, 3 names for mixtures, one for a pseudomorph, and one petrological term.

As in the last two lists, certain contractions for the names of frequently cited periodicals are used: A.M., *Amer. Min.*; C.M., *Canad. Min.*; M.A., *Min. Abstr.*; M.M., *Min. Mag.*; Zap., *Zap. vsesoyuz. min. obshch.*; Bull., *Bull. Soc. franç. Min. Crist.*

Abelsonite. A. Pabst, P. A. Estep, E. J. Dwornik, R. B. Finkelman, and C. Milton, 1975. *Geol. Soc. Amer. Abstr. Program*, 7, 1221. Tiny purple flakes from a drill core from the Green River Formation, Uintah County, Utah, proved to be a nickel porphyrin, $C_{32}H_{36}N_4Ni$. Anorthic, a 8.51, b 11.18, c 7.29 Å, α 90° 53', β 114° 8', γ 79° 59'. Named for Dr. P. H. Abelson. [A.M. 61, 502.]

Acetamide. B. I. Srebrodolskii, 1975. *Zap.* 103, 328 (Ацетамид). Natural acetamide, $CH_3 \cdot CONH_2$, occurs in dry weather on the waste piles of a coal mine in the Lvov-Volynsk basin, identical with the synthetic compound. [M.A. 76-876; A.M. 61, 338.]

Agrellite. J. Gittins, M. G. Bown, and D. Sturman, 1976. C.M. 14, 120. White pseudomonoclinic crystals, a 7.773, b 18.942, c 6.984 Å, α 90.148°, β 116.84°, γ 94.145°, occur in a metamorphosed alkaline rock in Villedieu Township, Temiskaming, Quebec. Sp. gr 2.90. $4[NaCa_2Si_4O_{10}F]$. Named for Dr. S. O. Agrell.

Alazanite. R. V. Ivanitskii, R. A. Akhvlediani, E. I. Kakhadze, and A. L. Tsepin, 1973. *Dokl. akad. nauk. SSSR*, 213, 688 (Алазанит). An abundant mineral in ores of the Kakhetin deposit, U.S.S.R., is intermediate in composition between pyrrhotine and FeS_2 , but the analyses (by microprobe) give very low totals. X-ray powder data are indexed on a cell with a 4.506, b 5.511, c 3.406 Å, very near that of marcasite. Named for the Alazani river, Georgia. [The name should not have been given.—M.F.] [A.M. 60, 161; Zap. 104, 606.]

Althausite. G. Raade and M. Tysseland, 1975. *Lithos*, 8, 215. Cleaveable masses in serpentine-magnesite deposits at Modum, Norway, composition $Mg_2PO_4(OH,F,O)$, have a 8.258, b 14.383, c 6.054 Å, space group Pna 2₁. α 1.588 || [010], β 1.592, γ 1.598 || [001]. Named for Professor, E. Althaus. [M.A. 76-3673.]

- Argentoaikinite, Argentocosalite, Argentocuprocosalite, Argentogoongarrite, Argentolilliantite. A. A. Godovikov, 1972, abstr. *Zap.* **103**, 617 (1974) (Аргентоайкинит, Аргентокозалиит, Аргентокупрокозалиит, Аргентогунгаррит, Аргентолиллианит). Unnecessary, invalid names based solely on literature analyses.
- Aristarainite.** C. S. Hurlbut and R. C. Erd, 1974. *A.M.* **59**, 647. Small monoclinic crystals, a 18·869, b 7·531, c 7·810, β 97° 43', space group $P2_1/a$, in a matrix of borax and kernite from the Tincalayu borax deposit, Salta, Argentina; composition $2[\text{Na}_2\text{MgB}_{12}\text{O}_{20} \cdot 10\text{H}_2\text{O}]$. Named for Dr. L. F. Aristarain. [*M.A.* 75-547; *Bull.* **97**, 497; *Zap.* **104**, 609.]
- Atokite.** P. Mihalik, S. A. Hiemstra, and J. P. R. de Villiers, 1975. *C.M.* **13**, 146. $\text{Pd}_3\text{Sn}_{1-x}$; see Rustenbergite (this List) for details.
- Attapulgitite-palygorskite. A. Haji-Vassiliou and J. H. Puffer, 1975. *A.M.* **60**, 328. Syn. of Palygorskite. [*A.M.* **60**, 1132.]
- Balipholite.** Anon., 1975. [*Sci. Geol. Sinica*, 100], abstr. *M.A.* 75-3590. $\text{BaMg}_2\text{LiAl}_3\text{Si}_4\text{O}_{12}(\text{OH})_8$, space group $Ccca$, a 13·00, b 20·24, c 5·16 Å, from an unnamed locality in China. Named from the composition. [*A.M.* **61**, 338.]
- Baratovite.** V. D. Dumatov, E. I. Semenov, A. P. Khomyakov, A. V. Bykova, and N. Kh. Dzhabarov, 1975. *Zap.* **104**, 580 (Баратовит). Plates in quartz-albite-aegirine veins in the Dara-Pioz massif, Tadzhikistan, are monoclinic, a 16·90, b 9·73, c 20·91 Å, β 112° 30'; cleavage {001}; $\alpha \approx \beta$ 1·672, γ 1·673, $2V$, 60°; α 55° to the normal to (001). Composition $4[(\text{K},\text{Na})\text{Ca}_8\text{Li}_2(\text{Ti},\text{Zr})_2\text{Si}_{12}\text{O}_{37}\text{F}]$. Named for R. B. Baratov.
- Barićite.** B. D. Sturman and J. A. Mandarinov, 1976. *Progr. Abstr. Mineral. Assoc. Canada*, 65. A ferroan variety of the magnesium analogue of vivianite occurs in fractures in an ironstone formation in the region of Big Fish River and Blow River, Yukon Territory; a 10·075, b 13·416, c 4·670 Å, β 104° 52'. $2[(\text{Mg},\text{Fe})\text{PO}_4 \cdot 4\text{H}_2\text{O}]$. Named for Dr. L. Barić of Zagreb.
- Barrerite.** E. Passaglia and D. Pongiluppi, 1975. *M.M.* **40**, 208; see also *Lithos*, **7**, 69. An orthorhombic zeolite from Capo Pula, Sardinia, originally described as a sodian stellerite, has $\text{Na} > \text{Ca}$ and space group $Amma$ (stellerite has $Fmmm$). Named for Dr. R. M. Barrer. [*M.A.* 75-3591.]
- Baumite.** C. Frondel and J. Ito, 1975. *Neues Jahrb. Min., Abh.* **123**, 111. A septechlorite, $(\text{Mg}_{9.0}\text{Al}_{1.3}\text{Mn}_{0.9}\text{Zn}_{0.7}\text{Fe}_{0.1})(\text{Si}_{6.3}\text{Al}_{1.7})\text{O}_{20}(\text{OH})_{16}$, from Franklin, New Jersey. [*M.A.* 75-3592; *A.M.* **61**, 174.]
- Bazirite.** J. R. Hawkes, R. J. Merriman, R. R. Harding and D. P. F. Darbyshire, 1975. In R. K. Harrison, *Expeditions to Rockall*, 1971-2, *Rept. Inst. Geol. Sci. no.* 75/1. A colourless mineral forming about 0·1 % of the Rockall aegirine-granite gives data matching artificial $\text{BaZrSi}_3\text{O}_9$. Named for the composition. [Isostructural with benitoite and pabstite.—*M.F.* *M.A.* 75-2520; *A.M.* **61**, 175.]
- Bellidoite.** L. A. de Montreuil, 1975. *Econ. Geol.* **70**, 384. Anhedronal grains in calcite at Habri, Moravia, are tetragonal, a 11·52, c 11·74 Å, composition $\text{Cu}_{2.01}\text{Se}$; identical with synthetic $\beta\text{-Cu}_2\text{Se}$. Named for E. Bellido Bravo. [*A.M.* **60**, 736; *Bull.* **98**, 318.]
- Bismutodiaphorite. A. A. Godovikov, 1972. Abstr. in *Zap.* **103**, 617 (1974) (Бисмутодиафорит). Unnecessary, invalid name based on an old analysis near $(\text{Ag},\text{Cu})_6\text{Pb}_4\text{Bi}_8\text{S}_{16}$.

- Biteplatinitite and Bitepalladite. Huang Van-Kang, Yeh Hsien-Hsien, Chang Yuen-Ming, Chuang Tsan-Fu, and Fang Chun-Ming, 1974. [*Geochimica*, **4**, 258], abstr. A.M. **61**, 174. Unnecessary names for Pt-rich moncheite and Pd-rich merenskyite respectively, from an unnamed locality.
- Bonaccordite**. S. A. Dewaal, E. A. Viljoen, and L. C. Calk, 1974. *Trans. Geol. Soc. S. Africa*, **77**, 373. The nickel analogue of ludwigite occurs as clusters of reddish-brown tiny prisms with other nickel minerals in the Bon Accord area, Barberton Mountain Land, Transvaal. a 9.213, b 12.229, c 3.001 Å, space group assumed to be *Pbam*. Composition Ni_2FeBO_5 . Named for the locality. [A.M. **61**, 502.]
- Borishanskite**. L. V. Razin, L. S. Dubakina, V. I. Meshchankina, and V. D. Begizov, 1975. *Zap.* **104**, 57 (Боришанскит). Small (40 to 150 μm) grains in the Talnakh ore deposit, U.S.S.R., are orthorhombic, *Ccm*₂₁, a 7.18, b 8.62, c 10.66 Å; 16[PdPbAs]. Named for S. I. Borishanskii. [A.M. **61**, 502.]
- Bornemanite**. Yu. P. Menshikov, I. V. Bussem, E. A. Goiko, N. I. Zabavnikova, A. N. Merkov, and A. P. Khomyakov, 1975. *Zap.* **104**, 322 (Борнеманит). Yellowish platy coatings on lomonosovite, or rarely in natrolite, occur in the Jubilee (Юбилей) pegmatite of the Lovozero massif. Orthorhombic, a 5.48, b 7.10, c 48.2 Å, *Ibmm* or *Ibm*₂; composition near $4[\text{Na}_7\text{BaTi}_2\text{NbSi}_4\text{O}_{17}\text{FPO}_4]$. Named for I. D. Borneman-Starynkevich. [M.A. 76-878; A.M. **61**, 338.]
- Brocenite and β -Brocenite. Kuo Chi-Ti, Wang I-Hsien, Wang Hsien-Chueh, Wang Chung-Kang, and Hou Hung-Chuan, 1973. [*Geochimica*, **2**, 86], abstr. in A.M. **60**, 485 (1975). Unnecessary names for the cerium analogue of fergusonite, from an unnamed locality in northern China. The names should be Fergusonite-(Ce) and β -Fergusonite-(Ce).
- Bunsite, error for Bunsenite. (*Contr. Min. Petr.* 1976, **56**, 1.)
- Calciuranoite and Caltsuranoite, *Zap.* **103**, 103 (1974), variant transliterations of кальцураноит Calciouranoite (28th List).
- Carbin**. S. A. Vishnevskii and N. A. Palchik, 1975. [*Geol. Geofiz.* 65], abstr. M.A. 75-3450. 'The third allotrope of carbon', occurring in rocks of the Popigai impact structure, U.S.S.R.: distinct from diamond, graphite, and lonsdaleite.
- Carlfriesite**. S. A. Williams and R. V. Gaines, 1975. M.M. **40**, 127. Primrose yellow crusts lining cavities at the Bambollita (= La Oriental) mine, Sierra La Huerta, Moctezuma, Sonora, Mexico, have space group *Cc* or *C2/c*, a 12.585, b 5.658, c 9.985 Å, β 115° 35'; composition $4[\text{H}_4\text{Ca}(\text{TeO}_3)_3]$. Named for Carl Fries, Jr. [M.A. 75-3593.]
- Carlinite**. A. S. Radtke and F. W. Dickson, 1975. A.M. **60**, 559. Small grains with quartz and hydrocarbons in limestone at the Carlin mine, Eureka County, Nevada, have space group *R*₃, a 12.12, c 18.175 Å, composition 27[Tl₂S]. Named for the locality. [M.A. 76-879.]
- Carrboydite**. W. W. Barker, M. Bussell, A. B. Fletcher, R. E. T. Hill, D. R. Hudson, E. H. Nickel, A. R. Ramsden, and M. R. Thornber, 1975. [*Ann. Rept. C.S.I.R.O. Min. Res. Lab., Australia*, 1974-5, 12], abstr. A.M. **61**, 366. Felted aggregates about 0.1 mm across from the Carr Boyd mine, Western Australia, have composition

- near $\text{Ni}_4\text{Al}_2\text{SO}_4(\text{OH})_{12} \cdot 3\text{H}_2\text{O}$ and are related to woodwardite. Named from the locality. [M.A. 76-1985.]
- Challantite.** C. C. Ramusino and G. Giuseppetti, 1973. [*Soc. Ital. Sci. Nat. Mus. Civito Milano*, **64**, 451], abstr. A.M. **60**, 736. A yellow powder in samples of quartzite from an abandoned gold mine at Challant St. Anselme, Valle d'Ayas, Aosta, Italy, matches synthetic $6\text{Fe}_2(\text{SO}_4)_3 \cdot \text{Fe}_2\text{O}_3 \cdot 63\text{H}_2\text{O}$. Named for the locality.
- Chrome phlogopite. Chang Pao-Kwei and Lin Kuo-Cheng, 1974. [*Geochimica*, **1**, 71], abstr. A.M. **60**, 161 (1975). An unnecessary name for a chromian phlogopite from Honan, China.
- Corderoite.** E. E. Foord, P. Berendsen, and L. O. Storey, 1974. A.M. **59**, 652. A massive orange-pink mineral, darkening in light, replacing cinnabar, occurs in playa sediments near the Cordero mine, Humboldt County, Nevada, and is identical with synthetic $4[\text{Hg}_3\text{S}_2\text{Cl}_2]$; space group $I2_13$, a 8.94 Å. Named for the locality. [M.A. 75-551; Bull. **97**, 501; Zap. **104**, 608.]
- Cowlesite.** W. S. Wise and R. W. Tschernich, 1975. A.M. **60**, 951. Clusters of thin colourless blades in basalt from Goble, Columbia County, Oregon, are orthorhombic, a 11.27, b 15.25, c 12.61 Å; α 1.512 || [010], β 1.515, γ 1.517 \perp [001], cleavage {010}, elongation [001]. Subsequently identified from several other localities. Zeolite group. $6[\text{CaAl}_2\text{Si}_3\text{O}_{10} \cdot 6\text{H}_2\text{O}]$; ρ 2.14 g. cm⁻³. Named for John Cowles.
- Creaseyite.** S. A. Williams and R. A. Bideaux, 1975. M.M. **40**, 227. Small green spherules from Tiger, Arizona, from Wickenburg, Arizona, and from Caborca, Sonora, Mexico, are orthorhombic, a 12.483, b 21.395, c 7.283 Å; composition $4[\text{Cu}_2\text{Pb}_2(\text{Fe},\text{Al})_2\text{Si}_5\text{O}_{17} \cdot 6\text{H}_2\text{O}]$. Named for S. C. Creasey. [M.A. 75-3595; A.M. **61**, 503.]
- Cuprocosalite, Cuprolillianite, Cuprocannizzarite, Cuproselencannizzarite. A. A. Godovikov, 1972. Abstr. in Zap. **103**, 617 (1974) (Купрокозалит, Купроллианиит, Купроканниццарит, Купроселенканниццарит). Unnecessary, invalid names based solely on literature analyses.
- Daomanite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. CuPtAsS_2 , orthorhombic, a 8.085, b 5.905, c 7.314 Å, from an undisclosed locality in China. [A.M. **61**, 184.]
- Darapiozite.** E. I. Semenov, V. D. Dusmatov, A. D. Khomyakov, A. A. Boronkov, and M. E. Kazakova, 1975. Zap. **104**, 583 (Дарапиозит). Grains up to 5 mm in the pegmatites of the Dara-Pioz massif, Tadzhikistan, are hexagonal, a 10.32, c 14.39 Å; ω 1.585, ϵ 1.575. Composition $2[\text{KNa}_2\text{LiMnZnZrSi}_{12}\text{O}_{30}]$. Named for the locality.
- Dayingite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. Dodecahedral crystals from an undisclosed locality in China, a 9.697 Å, space group $Fm\bar{3}m$; composition CuCoPtS_4 . [A.M. **61**, 184.]
- Delolomite. M. Warrak, 1974. *Journ. Geol. Soc.* **130**, 229. Calcite formed by replacement of dolomite. A superfluous term. [M.A. 74-3600.]
- Disth-sillimanite. A. Leyreloup, 1974. *Contr. Min. Petr.* **46**, 17. A supposed polymorph of Al_2SiO_5 intermediate between kyanite and sillimanite. [M.A. 75-659.]

- Fedorovskite.** S. V. Malinko, D. P. Shashkin, and K. V. Yurkina, 1976. *Zap.* **105**, 71 (Федоровскит). Brown grains or layers of fibres in kurchatovite-sakhaite masses in the Solongo ore deposit, Buryat S.S.R., have a 8.96, b 13.15, c 8.15 Å, space group *Pbam*, ρ 2.60 g. cm⁻³. Composition 4[Ca₂(Mg,Mn)₂B₄O₇(OH)₆]. [M.A. 76-3675.]
- Fengluanite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. Orthorhombic, a 11.03, b 3.37, c 6.13 Å, composition Pd₃(As,Sb), from an unnamed locality in China. Apparently an antimonian variety of guanglinite (this List). [A.M. **61**, 184.]
- Foggite.** P. B. Moore, A. J. Irving, and A. R. Kampf, 1975. A.M. **60**, 957 and 965. White plates from the Palermo no. 1 pegmatite, North Groton, New Hampshire; a 9.270, b 21.324, c 5.190 Å, space group *A*₂2₂; α 1.610, β 1.610, γ 1.611 || [100], 2V_γ 40 to 45°; cleavage {010} perfect, {100} good. ρ 2.78 g. cm⁻³. Composition 8[CaAl(OH)₂PO₄·H₂O]. Named for Mr. F. F. Fogg.
- Frankdicksonite.** A. S. Radtke and G. E. Brown, 1974. A.M. **59**, 885. Cubes up to 4 mm in quartz veinlets in the Carlin gold deposit, Eureka County, Nevada, consist of BaF₂; fluorite structure, a 6.1964 Å. Named for Dr. Frank W. Dickson. [*Zap.* **104**, 608; *Bull.* **98**, 264.]
- Glauconie.** G. Millot, 1964. *Géol. des Argiles* (Paris, Masson), 238. A variable green mixture, which may contain illite, montmorillonite, chlorite, or various mixed-layer minerals.
- Goedkenite.** P. B. Moore, A. J. Irving, and A. R. Kampf, 1975. A.M. **60**, 957. Pale yellow crystals, tabular to {001}, from the Palermo no. 1 pegmatite, North Groton, New Hampshire, have a 8.45, b 5.74, c 7.26 Å, β 113.7°, space group *P*₂*1*/*m*; α 1.669 || [010], β 1.673, γ 1.692, 2V_γ 45 to 50°; ρ calc. 3.83 g. cm⁻³. Composition 2[(Sr,Ca)₂Al(PO₄)₂OH]; probably isostructural with brackebuschite. Named for Dr. V. L. Goedken.
- Graemite.** S. A. Williams and P. Matter, 1975. *Min. Record*, **6**, 32. Blue-green pleochroic crystals up to 8 mm long from the Cole shaft, Bisbee, Arizona, have space group *Pcmm*, a 6.805, b 25.613, c 5.780 Å, composition 10[CuTeO₃·H₂O]. Named for R. Graeme. [A.M. **60**, 486; *Bull.* **98**, 264.]
- Guanglinite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202] abstr. M.A. 75-2522. Orthorhombic, a 10.83, b 3.33, c 6.07 Å, composition Pd₃As, from an unnamed locality in China. [Cf. C.M. **13**, 332 (1975); A.M. **61**, 184; the X-ray powder data are very similar to those of tetragonal Pd₃As.]
- Hafnon.** J. M. Correia Neves, J. E. Lopez Nunes, and Th. G. Sahama, 1974. *Contr. Min. Petr.* **48**, 73. Zoned crystals from the Morro, Conca, Moneia, and Muiane mines, Zambezia district, Mozambique, range from hafnian zircon to (Hf,Zr)SiO₄ with only 1.2 % ZrO₂. Named by analogy with zircon. [M.A. 75-2521; A.M. **61**, 175.]
- Hexastibiopalladite.** Anon., 1974. [*Geochimica*, **3**, 169], abstr. A.M. **61**, 182. Syn. of Sudburyite (28th List). [M.A. 75-2529.]
- Hexatestibiopanickeelite.** Anon. 1974. [*Geochimica*, **3**, 169], abstr. A.M. **61**, 183. (Ni,Pd)₂SbTe, hexagonal, a 3.98, c 5.35 Å; occurs in copper-nickel deposits of S.W. China. Named from the symmetry and composition. [M.A. 75-2529.]

- Hongquuite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. A.M. **61**, 184. Cubo-octahedra of TiO occur in platinum ores from an undisclosed locality in China; a 4.293 Å, $Fm\bar{3}m$. In M.A. 75-2522 the name is spelt Honquillite.
- Hongshiite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. Hexagonal PtCuAs, a 10.51, c 4.59 Å, from an undisclosed locality in China. [A.M. **61**, 185.] Honquillite, see Hongquuite
- Hydroastrophyllite.** Hupei Geologic College, 1974. [*Sci. Geol. Sin.*, **1**, 18], abstr. A.M. **60**, 736. A weathering product in a pegmatite from Szechuan is dark brown, pleochroic, anorthic with a 11.86, b 11.98, c 5.42 Å, α 103° 25', β 95° 9', γ 112° 12'; composition near $(\text{H}_2\text{O}^+, \text{K})(\text{Ca}, \text{H}_3\text{O}^+, \text{Na})(\text{Fe}^{3+}, \text{Mn}^{4+}, \text{Mn}^{2+}, \text{Mg})_{5.36}(\text{Ti}, \text{Nb}, \text{Ta})_{1.85}(\text{Si}_{4.92}\text{Al}_{0.88})(\text{O}, \text{OH})_{24}(\text{OH}, \text{O}, \text{F})_7$. Named from its relation to astrophyllite. [M.A. 75-555.]
- Hydrozunyite.** A. Baumer, H. Gimenez, R. Caruba, and G. Turco, 1974. Bull. **97**, 271. A synthetic zunyite with $(\text{OH})_4$ replacing SiO_4 .
- Ilminite, error for Ilmenite (*Nature, Phys. Sci.*, **237**, 105 (1972).)
- Incaite.** E. Mackovicky, 1974. *Neues Jahrb. Min., Monatsh.* 235. Fine lamellae replacing cylindrite from Poopo, Bolivia, are composed of alternating layers, one pseudotetragonal, a 86.23, b 5.79, c 34.98 Å, α 90°, β 90.28°, γ 90°, the other pseudo-hexagonal, a 258.7, b 3.66, c 69.85 Å, α 90°, β 90.28°, γ 90°. Composition near $96[(\text{Pb}, \text{Ag})_4\text{Sn}_4\text{Sb}_2\text{FeS}_{14}]$, Named for the Incas. [A.M. **60**, 486; M.A. 75-1391; Zap. **104**, 607.]
- Iraqite.** A. Livingstone, D. Atkin, D. Hutchison, and H. M. Al-Hermezi, 1976. M.M. **40**, 441. Pale greenish-yellow massive material from Shakhi-Rash Mtn., Qaladiza, Iraq, is a member of the ekanite group; space group $P4/mcc$, a 7.61, c 14.72 Å. Composition $(\text{Ln}_{1.23}\text{Th}_{0.66}\text{X}_{0.15})\text{K}_{1.07}(\text{Ca}_{3.49}\text{Ln}_{0.35}\text{Na}_{0.16})(\text{Si}_{15.69}\text{Al}_{0.27})(\text{O}_{39.93}\text{F}_{0.07})$, where X includes U, Pb, Zr, etc. Named for the country of origin. [M.A. 76-1986.]
- Isoferroplatinum.** L. J. Cabri and C. E. Feather, 1975. C.M. **13**, 117. Grains in the Pt ores from the Tulameen River, British Columbia, are cubic (primitive), a 3.864 Å, composition near Pt_3Fe (ordered). Named from the symmetry and composition.
- Junoite.** W. G. Mumme, 1975. *Econ. Geol.* **70**, 369; A.M. **60**, 548. The Juno ore body, Tennant Creek, Australia, carries a mineral with space group $C2/m$, Cm , or $C2$, a 26.66, b 4.06, c 17.03 Å, β 127.20°; composition near $\text{Cu}_2\text{Pb}_3\text{Bi}_8(\text{S}, \text{Se})_8$ with S:Se::5:1. Named for the locality. [M.A. 76-1987; Bull. **98**, 319.]
- Jurbanite.** J. W. Anthony and W. J. McLean, 1976. A.M. **61**, 1. Clear colourless monoclinic crystals from the San Manuel copper mine, Pinal County, Arizona, have a 8.39, b 12.485, c 8.154 Å, β 101.90°; α 1.459, β 1.473 | [010], γ 1.483, γ : [100] -5°, $2V_\alpha$ 80°. D 1.786 (1.828 calc.). Composition $4[\text{AlSO}_4\text{OH} \cdot 5\text{H}_2\text{O}]$; identical with synthetic material. Named for Joseph E. Urban. A dimorph of khademite (this List).
- Kazakhovite, error for Kazakovite (M.A. 75-1392).
- Kegelite.** O. Medenbach and K. Schmetzer, 1975. *Naturwiss.* **62**, 137. Pseudo-hexagonal plates (30 μm) with hematite and mimetite from Tsumeb, S.-W. Africa, are formulated $\text{Pb}_{12}(\text{Zn}, \text{Fe})_2\text{Al}_4(\text{SO}_4)_4\text{Si}_{11}\text{O}_{38}$. Named for F. W. Kegel. [A.M. **61**, 175.]

- Kellyite.** D. R. Peacor, E. J. Essene, W. B. Simmons, and W. C. Bigelow, 1974. *A.M.* **59**, 1153. Yellow plates and laths, up to 1 mm in diameter, in kutnahorite at the Bald Knob manganese deposit, Sparta, North Carolina, have a 5.438, c 14.04 Å space group $P6_3$, but besides this two-layer polytype there is a six-layer rhombohedral polytype. Composition near $Mn_4Al_4Si_2O_{10}(OH)_8$ with some Mg and Fe; the Mn analogue of amesite. Named for W. C. Kelly. [M.A. 75-2523; *Bull.* **98**, 265.]
- Khademite.** P. Bariand, J.-P. Berthelon, F. Cesbron, and M. Sadrzadeh, 1973. *Compt. Rend. Acad. Sci. Paris.* **277D**, 1585. Colourless crystals, space group $Pcab$, a 11.178, b 13.055, c 10.887 Å, from Saghand, Iran, have composition $8[AlSO_4OH \cdot 5H_2O]$. Named for N. Khadem. [A.M. **60**, 486; M.A. 74-3464; *Zap.* **103**, 625.] A dimorph of jurbanite (this List).
- Kinoshitalite.** M. Yoshii, K. Maeda, T. Kato, T. Watanabe, S. Yui, A. Kato, and N. Nagashima, 1973. *Chigaku Kemkya*, **24**, 181, abstr. *A.M.* **60**, 486. Small yellow-brown scales in hausmannite-tephroite ore in the Misago ore body, Noda-Tamagawa mine, Iwate prefecture, Japan, have space group $C2/m$, a 5.345, b 9.250, c 10.256 Å, β 99.99°; composition $2[(Ba,K)(Mg,Mn^{2+},Al,Mn^{3+})_3Si_2Al_2O_{10}(OH,F,O)_2]$, the magnesium analogue of anandite. Named for K. Kinoshita. [M.A. 75-476 and 3598; *Zap.* **104**, 614.]
- Koashvite.** Yu. L. Kapustin, Z. V. Pudovkina, A. V. Bykova, and G. V. Lyubomilova, 1974. *Zap.* **103**, 559 (Коашвит). Veinlets replacing lomonosovite in alkali pegmatite on Mt. Koashva, Khibina massif, Kola Peninsula, are near $4[Na_6(Ca,Mn)(Ti,Fe)Si_6O_{18} \cdot H_2O]$. Space group $Pbam$, or $Pba2$, a 7.356, b 20.950, c 10.194 Å. Named for the locality. [A.M. **60**, 487; M.A. 75-2524; *Zap.* **104**, 613.]
- Krautite.** F. Fontan, M. Orliac, and F. Permingeat, 1975. *Bull.* **98**, 78. Thin pale pink lamellae from Nagyag (Săcăramb) and Kapnik (Cavnic), Transylvania, labelled hoernesite manganésifère, prove to consist of $MnHAsO_4 \cdot H_2O$; monoclinic, a 8.00, b 15.93, c 6.79 Å, β 96° 32'. Named for Dr. F. Kraut. [M.A. 76-1988; *A.M.* **61**, 503.]
- Krupkaite.** L. Zak, V. Sybecsek, and J. Hybler, 1974. *Neues Jahrb. Min., Monatsch.* **533**. Fibrous dark grey aggregates with bismuthinite at Krupka, Teplica, Bohemia, have space group $Pb2_1m$, a 11.15, b 11.51, c 4.01 Å, composition $2[CuPbBi_3S_6]$. Named from the locality. [A.M. **60**, 737; M.A. 75-3599; *Bull.* **98**, 320.]
- Krutovite.** R. A. Vinogradova, N. S. Rudashevskii, I. A. Budko, L. I. Bocek, P. Kashpar, and K. Padera, 1976. *Zap.* **105**, 59 (Крутовит). Isotropic grains in quartz veins at Potuchka, Czechoslovakia, are cubic or pseudocubic, a 5.79 Å, composition $Ni_{1-x}As_2$ with x 0 to 0.1. Named for G. A. Krutov. [M.A. 76-3678.]
- Kulanite.** J. A. Mandarino and B. D. Sturman, 1976, *C.M.* **14**, 127. Blue to green plates in an ironstone formation in the region of the Big Fish River and Blow River, Yukon Territory, are anorthic pseudomonoclinic with a 9.032, b 12.119, c 4.936, $\alpha \approx 90^\circ$, β 120° 23', $\gamma \approx 90^\circ$; sp. gr. 3.91. Composition $2[Ba(Fe,Mn,Mg)_2(Al,Fe)_2(PO_4)_3(OH)_3]$. Named for A. Kulan.
- Kuranakhite.** S. V. Yablokova, L. S. Dubakina, A. L. Dmitrik, and G. V. Sokolova, 1975. *Zap.* **104**, 310 (Куранахит). Minute grains intergrown with gold and electrum in oxidized quartz-hematite ore of the Kuranakh gold deposit, southern Yakutia,

- are orthorhombic, a 5.1, b 8.9, c 5.3 Å. Composition $\text{PbMn}^{4+}\text{TeO}_6$ (microprobe analysis). Named from the locality. [M.A. 76-881; A.M. 61, 339.]
- Laplandite.** E. M. Eskova, E. I. Semenov, A. P. Khomyakov, M. A. Kazakova, and O. V. Sidorenko, 1974. *Zap.* 103, 571 (Лапландит). Radiating fibrous aggregates in the natrolite zone of the Jubilee (Юбилей) pegmatite, Mt. Karnasurt, Lovozero massif, Kola Peninsula, are near $4[\text{Na}_4\text{CeTiPO}_4\text{Si}_7\text{O}_{18} \cdot 5\text{H}_2\text{O}]$. Space group $Pmmm$, a 7.27, b 14.38, c 22.25 Å. Named for the locality. [A.M. 60, 487; M.A. 75-2525; *Zap.* 104, 616.]
- Leonardite.** P. L. Broughton, 1972. *Journ. Sedim. Petr.* 42, 356. Weathered lignite from Saskatchewan. Not to be confused with Leonhardite (Blum, 1843) or with Leonhardtite (19th List).
- Magnesiouxinite.** E. A. Jobbins, A. E. Tresham, and B. R. Young, 1975. *Journ. Gemmology*, 14, 368. A pale-blue 0.16 g gemstone from Tanzania closely approaches the CaMg axinite end-member. [M.A. 76-882; A.M. 61, 503.]
- Magnesium astrophyllite,** A.M. 60, 737, variant of Magnesiastrophyllite (26th List).
- Malanite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* 2, 202], abstr. M.A. 75-2522. Cubic $(\text{Cu,Pt,Ir})\text{S}_2$, a 6.030, from an undisclosed locality in China. [A.M. 61, 185.]
- Meixnerite.** S. Koritnig and P. Süsser, 1975. *Tschermaks Min. Petr. Mitt.* 22, 79. Colourless tabular crystals in cracks of a serpentine rock near Ybbs-Persenberg, Lower Austria, have a 3.046, c 22.93, space group $R\bar{3}m$. Composition $\text{Mg}_6\text{Al}_2(\text{OH})_{18} \cdot 4\text{H}_2\text{O}$, a CO_2 -free member of the hydrotalcite family. Named for Dr. H. Meixner. [A.M. 61, 176.]
- Metavivianite.** C. Ritz, E. J. Essene, and D. R. Peacor, 1974. A.M. 59, 896. A polymorph of vivianite, isomorphous with symplectite, has a 7.81, b 9.08, c 4.65 Å, α 94.77°, β 97.15°, γ 107.37°; it occurs in the Big Chief pegmatite near Glendale, South Dakota. Named for the relation to vivianite, [M.A. 75-1393; *Zap.* 104, 611; *Bull.* 98, 265.]
- Monocerotite.** G. Arrhenius, 1975. *Meteoritics*, 10, 354. 'proposed as an appropriate zoomorphic term for this characteristic pseudomorph' of olivine in epitaxial replacement of enstatite.
- Mroseite.** J. A. Mandarino, R. S. Mitchell, and R. G. V. Hancock, 1975. *Geol. Soc. Amer. Abstr. Progr.* 7, 814; C.M. 13, 286. White massive material from Mina la Moctezuma, Sonora, Mexico, has space group $Pbca$, a 6.93, b 11.16, c 10.54 Å, composition $8[\text{CaTeO}_2\text{CO}_3]$. Named for M. E. Mrose. [A.M. 60, 946 and 61, 339.]
- Natisite.** Yu. P. Menshikov, Ya. A. Pakhomovskii, E. A. Goiko, I. V. Bussem, and A. N. Merkov, 1975. *Zap.* 104, 314 (Натисит). Yellowish-green platy crystals in natrolite-ussingite veinlets on Karnasurt Mt., Lovozero massif, Kola Peninsula, have space group $P4/nmm$, a 6.50, c 5.07 Å. Composition $2[\text{Na}_2\text{TiSiO}_5]$; identical with the synthetic compound. Named from the composition. [M.A. 76-883; A.M. 61, 339.]
- Natrosilite.** I. M. Timoshenkov, Yu. P. Menshikov, L. F. Gannibal, and I. V. Bussem, 1975. *Zap.* 104, 317 (Натросилит). Irregular grains intergrown with analcime,

- natrolite, and lomonosovite in nepheline syenite on Mt. Karnasurt, Lovozero massif, are identical with synthetic β - $\text{Na}_2\text{Si}_2\text{O}_5$. Monoclinic, a 12.30, b 4.88, c 8.27 Å, β 104° 14', space group $P2_1/a$. [M.A. 76-884; A.M. 61, 339.]
- Nickel-Palladium Arsenide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. Two minerals from the Talnakh deposit, U.S.S.R., are formulated $(\text{Ni,Pd})_{5-x}\text{As}_2$ and β - $(\text{Ni,Pd})_{21-x}\text{As}$. The powder pattern of the former is indexed as hexagonal, a 9.910, c 6.601 Å. [Not enough data to differentiate between the two; synthetic Ni_5As_2 is hexagonal, a 6.70, c 12.41 Å.—L. J. C.]
- Olmsteadite.** P. B. Moore, T. Araki, A. R. Kampf, and I. M. Steele, 1976. A.M. 61, 5. Deep brown to black prismatic crystals elongated along [010] from the Big Chief pegmatite, Black Hills, South Dakota, have a 7.512, b 10.000, c 6.492 Å, space group $Pb2_1m$; α 1.725, dark blue, \parallel [001], absorption $\gg \beta$ 1.755, light brown, \parallel [100], and γ 1.815, brown; D 3.31. Composition $[\text{K}_2\text{Fe}_4^{2+}(\text{Nb,Ta})_2(\text{PO}_4)_4\text{O}_4 \cdot 4\text{H}_2\text{O}]$. Also found at the Hesnard pegmatite, Custer, Custer County, South Dakota. Named for Milo Olmstead.
- Palladium Bismuthide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. A single grain, near PdBi, from the Talnakh deposit, U.S.S.R., is indexed as hexagonal, a 4.20, c 5.64 Å. Not to be confused with Palladium bismuthide of Yushko-Zakharova and Cherayev, PdBi₃ (25th List). Apparently identical with Sobolevskite (this List).
- Palladium-Copper-Platinum Stannide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. A premature name for a tetragonal mineral from the Talnakh deposit, U.S.S.R. with a 4.072, c 3.720 Å, space group $P4/mmm$. [May be the same as some of the minerals grouped under Unnamed Z of Cabri, 1972. The essential nature of all the elements found is yet to be proved.—L. J. C.]
- Palladium Plumboarsenide.** L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 181. A mineral from the Talnakh deposit, U.S.S.R. is near PdPbAs; orthorhombic, a 7.180, b 8.619, c 10.662 Å.
- Palladium Platinum Arsenoplumbostannide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. A premature name for a cubic mineral (a 3.99 Å) from the Talnakh deposit, U.S.S.R. [Not enough data to determine whether the analysis represents a new species or a Pb-rich ordered Pd₃Sn with some As.—L. J. C.]
- Palladium-Platinum Arsenostannide and Palladium-Platinum Plumbostannoarsenide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. Premature names assigned on the basis of single probe analyses of two grains; both are tetragonal (a 3.99, c 3.655 Å, $P4/mmm$) from the Talnakh deposit, U.S.S.R. [Not enough data to determine whether either mineral is a unique species, and the second appears to be merely a plumbian variety of the first.—L. J. C.]
- Palladium-Platinum Stannide. L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, 108, 96], abstr. A.M. 61, 180. An inappropriate name for

- a platinum ordered form of Pd_3Sn from the Talnakh deposit, U.S.S.R., a 3.984 Å, space group $Pm\bar{3}m$.
- Palladium Stannide.** L. V. Razin, V. D. Begizov, and V. I. Mashchankina, 1973. [*Trudy Ts NIGRI*, **108**, 96], abstr. A.M. **61**, 181. [Appears to be identical with Paolovite (this List).—L. J. C.]
- Palladium Stibiostannoarsenide.** L. V. Razin, V. D. Begizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, **108**, 96], abstr. A.M. **61**, 181. A mineral from the Talnakh deposit, U.S.S.R. is formulated $\text{Pd}_{2-x}(\text{As}, \text{Sn}, \text{Sb})$ and its 10-line X-ray pattern is indexed as orthorhombic, a 8.107, b 5.625, c 4.360 Å [The powder pattern is very similar to that of the monoclinic Palladoarsenide Pd_2As (28th List)—L. J. C.]
- Paolovite.** A. D. Genkin, T. I. Evstigneeva, L. N. Vyalsov, I. P. Laputina, and N. V. Groneva, 1974. *Geol. Rudn. Mestorzhd.* **16**, 98 (Паоловит). Polysynthetically twinned grains intergrown with sperrylite, from the Oktyabr deposit, Talnakh ore field, U.S.S.R., have a 8.11, b 5.662, c 4.324 Å, space group $Pbnm$; composition Pd_2Sn , with small amounts of Pt. Named for Palladium and *olovo* (tin). [M.A. 75-558; A.M. **59**, 1331; Zap. **103**, 612; Bull. **98**, 321.]
- Parastrengite.** S. V. Gevorkyan, L. N. Egorova, and A. S. Povarennykh, 1974. *Geol. Zhurn.* **34**, no. 3, 27 (Парастренгит). Name proposed for material giving infra-red absorption patterns analogous to those of paravariscite (q.v.), but with the composition and orthorhombic symmetry of strengite. [A.M. **60**, 340.]
- Paravariscite.** S. V. Gevorkyan, L. N. Egorova, and A. S. Povarennykh, 1974. *Geol. Zhurn.* **34**, no. 3, 27 (Параварисцит). A name for the 'Messbach' type of orthorhombic variscite, which gives infra-red spectra appreciably different from those of the 'Lucin' type. Synonym of Redondite (Shepard, 1869), see D. McConnell, M.M. **40**, 609. [A.M. **60**, 340.]
- Penkivilskite.** I. V. Bussem, Yu. P. Menshikov, A. M. Merkov, A. P. Nedorezova, E. I. Uspenskaya, and A. P. Khomyakov, 1974. *Dokl. akad. nauk. S.S.S.R.* **217**, 1161 (Пенквилскит). White massive material from the Lovozero massif, Kola Peninsula, are monoclinic or orthorhombic, a 7.48, b 8.77 Å, γ 90° (from electron-diffraction data). Composition that of a hydrated narsarsukite $(\text{Na}, \text{Ca})_4(\text{Ti}, \text{Zr})_2\text{Si}_8\text{O}_{32} \cdot 5\text{H}_2\text{O}$. Named for пенк, curly and виликис, white. [A.M. **60**, 340; M.A. 75-1394; Zap. **104**, 615.]
- Petamene.** Local name for a spodumene-quartz mixture chemically equivalent to petalite. (E. W. Heinrich, *Indian Journ. Earth Sci.* 1975, **2**, 18.)
- Phosinaite.** Yu. L. Kapustin, A. P. Khomyakov, E. I. Semenov, E. M. Eskova, A. V. Bykova, and Z. V. Pudovkina, 1974. Zap. **103**, 567 (Фосинаит). Colourless to brownish rose crystals from ussingite veinlets at Mt. Karnasurt, Lovozero massif, and infillings between anorthoclase from Mt. Koashva, Khibina (both in the Kola Peninsula) are near $\text{H}_2\text{Na}_3(\text{Ca}, \text{Ce}, \text{Nd}, \text{La})\text{SiO}_4\text{PO}_4$. Space group $P2_21_2$ or $P2_21_21$, a 12.23, b 14.62, c 7.21 Å. Named for Phosphorus, silicon, and natrium. [A.M. **60**, 488; M.A. 75-2526; Zap. **104**, 614.]
- Pinchite.** B. D. Sturman and J. A. Mandarino, 1974. C.M. **12**, 417. Brown to blackish crystals from Terlingua, Brewster County, Texas, have space group $Ibam$, a 11.6,

- b 6.07, c 11.7 Å; composition $4[\text{Hg}_5\text{O}_4\text{Cl}_2]$. Named for W. W. Pinch. [A.M. **61**, 340; M.A. 75-3602; Bull. **97**, 508; Zap. **104**, 608.]
- Platinum-Palladium Stannide.** L. V. Razin, V. D. Bergizov, and V. I. Meshchankina, 1973. [*Trudy Ts NIGRI*, **108**, 96], abstr. A.M. **61**, 180. A palladian ordered form of Pt_3Sn from the Talnakh deposit, U.S.S.R. a 3.984 space group $Pm\bar{3}m$.
- Plumbomatildite.** A. A. Godovikov, 1972. Abstr. in Zap. **103**, 617 (1974) (Плѹмбoматилдит). Unnecessary, invalid name based solely on an old analysis near $\text{Ag}_6\text{PbBi}_8\text{S}_{13}$.
- Protoastrakhanite.** B. Friedel, 1976. *Neues Jahrb. Min., Abh.* **126**, 187 (Protoastrakanit). $\text{Na}_2\text{Mg}(\text{SO}_4)_2 \cdot 5\text{H}_2\text{O}$, a metastable phase found in salt soils and efflorescences on soils (localities not stated). [M.A. 76-3679.]
- Restite.** Author and date? A petrological term for the remainder after mobile constituents have moved out of a rock during metamorphism.
- Rhodium.** L. J. Cabri and J. H. G. Laflamme, 1974. C.M. **12**, 399. A single grain from the platinum ores of the Stillwater complex, Montana, has composition $\text{Rh}_{0.57}\text{Pt}_{0.43}$ and is a platinian rhodium. Cubic, a 3.856 Å. [A.M. **61**, 340; Bull. **97**, 509.]
- Riebeckite-arfvedsonite.** W. G. Ernst, 1962. *Journ. Geol.* **70**, 689. Used for solid solutions intermediate between riebeckite and arfvedsonite.
- Rustenbergite.** P. Mihalik, S. A. Hiemstra, and J. P. R. de Villiers, 1975. C.M. **13**, 146. Two grains in concentrates from the Rustenberg and Atok mines in the Bushveld Complex, S. Africa, gave $\text{Pt}_{1.52}\text{Pd}_{1.48}\text{Sn}_{0.83}$ (palladian rustenbergite) and $\text{Pd}_{1.85}\text{Pt}_{1.15}\text{Sn}_{0.81}$ (platinian atokite). Space group $Fm\bar{3}m$, a 3.991 Å. Synthetic study shows a complete solid solution series from $\text{Pt}_3\text{Sn}_{1-x}$ (rustenbergite) to $\text{Pd}_3\text{Sn}_{1-x}$ (atokite). Named from the localities. [A.M. **61**, 340.]
- Ruthenium.** Y. Urashima, T. Wakabayashi, T. Masaki, and Y. Terasaki, 1974. *Min. Journ. (Japan)*, **7**, 438. A tabular crystal (7 by 35 mm) of iridian ruthenium was found in platy ruthenium from the Horokanai placer, Hokkaido, Japan. [A.M. **61**, 177.]
- Samuelsonite.** P. B. Moore and T. Araki, 1975. *Geol. Soc. Amer. Abstr. Progr.* **7**, 825; P. B. Moore, A. J. Irving, and A. R. Kampf, A.M. **60**, 957 (1975). Colourless prisms up to 1 mm long from the Palermo no. 1 pegmatite, North Groton, New Hampshire, space group $C2/m$, have a 18.495, b 6.805, c 14.000 Å, β 112.75°; α 1.645, β 1.650, γ 1.655. Composition $(\text{Ca},\text{Ba})\text{Fe}_2^{2+}\text{Mn}_2\text{Ca}_8\text{Al}_2(\text{PO}_4)_{10}(\text{OH})_2$, with considerable cation vacancies; occurs with whitlockite and hydroxyapatite. Named for P. B. Samuelson. [A.M. **60**, 947.]
- Senegalite.** Z. Johan, 1976. *Lithos*, **9**, 165. Colourless crystals in the oxidation zone of the Kouroudiako iron deposit, Senegal, have a 9.678, b 7.597, c 7.668 Å, space group $Pna2_1$; composition $4[\text{Al}_2\text{PO}_4(\text{OH})_3 \cdot \text{H}_2\text{O}]$. Named for the locality.
- Skinnerite.** S. Karup-Møller and E. Makovicky, 1974. A.M. **59**, 889. Aggregates intergrown with tetrahedrite, chalcostibite, etc., in analcime-natrolite veins in the Ilimaussaq intrusion, S. Greenland, have space group $P2_1/c$, a 7.81, b 10.25, c 13.27 Å, β 90° 21'; composition $8[\text{Cu}_3\text{SbS}_3]$. Undergoes a reversible transition to an orthorhombic form at 122°C. Named for B. J. Skinner. [M.A. 75-1397; Zap. **104**, 606; Bull. **98**, 266.]

- Sobolevskite.** T. L. Evstigneeva, A. D. Genkin, and V. A. Kovalenker, 1974. *Zap.* **104**, 568 (Соболевскит). Small grains in the Oktyabr ore deposit, eastern Siberia, are hexagonal, $P6_3/mmc$, a 4.23, c 5.69 Å, composition PdBi. Named for P. G. Sobolevskii.
- Sobotkite.** C. Haranczyk and K. Prchazka, 1974. [*Prace Muzeum Ziemi*, **22**, 3], abstr. A.M. **61**, 177. A trioctahedral member of the montmorillonite group, $(Ca_{0.13}K_{0.015})(Mg_{1.91}Al_{0.95})(Si_{3.06}Al_{0.94})(OH)_2O_{10} \cdot 5.18H_2O$, occurs in the serpentinites of the Gogolow–Jordanow massif, Lower Silesia, at Wiryin. Named from Mt. Sobotka. [Could be considered an aluminian saponite.—M.F.]
- Spodulite.** Local name for a spodumene–quartz mixture chemically equivalent to petalite (E. W. Heinrich, *Indian Journ. Earth Sci.* 1975, **2**, 18).
- Strelkinite.** M. A. Alekseeva, A. A. Chernikov, D. P. Shashkin, E. A. Komkov, and I. N. Gavrilova, 1974. *Zap.* **103**, 576 (Стрелкинит). Yellow powdery crusts and small plates from an unnamed Russian locality have space group $Pnmm$ or $Pnm2$, a 10.64, b 8.36, c 32.72 Å. Composition $8[NaUO_2VO_4 \cdot 3H_2O]$, 'the Na analog of carnotite'. Named for M. F. Strelkin. (Cf. Sodium carnotite (artificial), 24th List.) [A.M. **60**, 488; M.A. 75–2527; *Zap.* **104**, 612.]
- Strätlingite.** G. Hentschel and H.-J. Kuzel, 1976. *Neues Jahrb. Min., Monatsh.* 326. $Ca_2Al_2SiO_7 \cdot 8H_2O$ ('gehlenite hydrate') occurs naturally in a limestone inclusion in basalt at Bellerberg, Mayen, Germany. Uniaxial negative plates, space group $R3$ or $R\bar{3}$, a 5.737, c 37.59. Named for W. Strätling, who described the artificial compound in 1938.
- Stringhamite.** J. R. Hindeman, 1976. A.M. **61**, 189. Deep-blue crystals with thaumasite in a diopside–magnetite skarn at the Bwana mine, Milford, Utah, are monoclinic, a 5.028, b 16.07, c 5.303 Å, β 102.58°, space group $P2_1/c$; α 1.709, light grey-blue, \parallel [010], β 1.717, light blue, γ 1.729, dark blue; β : [001] 2.5°. Composition $CuCaSiO_4 \cdot 2H_2O$. Named for B. F. Stringham. Appears to be identical with the unnamed 'Mineral F' of Woodford, 1943. A polytype with doubled a -axis occurs at the Christmas mine. [M.A. 76–3680.]
- Surinamite.** E. W. F. de Roever, C. Kieft, E. Murray, E. Klein, and W. H. Drucker, 1976. A.M. **61**, 193. A mineral closely resembling sapphirine, from the Bakhuis Mtns., western Surinam, is monoclinic, a 9.64, b 11.36, c 4.95 Å, β 109.0°, space group $P2_1/a$; α 1.738, β 1.743 \parallel [010], violet, γ_{Na} 1.746; γ to a cleavage \perp (010) 31° for violet, 44° for yellow; on (010), blue-green for vibrations \parallel the cleavage, pale greenish-brown \perp it; $2V_\alpha$ 67°. Composition $(Al_{1.38}Mg_{1.12}Fe_{0.46}Mn_{0.04})_{\Sigma 3}(Si_{1.51}Al_{0.49})_{\Sigma 2}\{O_{7.36}(OH)_{0.64}\}_{\Sigma 8}$. [M.A. 76–3680].
- Swinefordite.** Pei-lin Tien, P. B. Leavens, and J. A. Nelen, 1975. A.M. **60**, 540. A swelling clay from the Foote Mineral Co. mine, Kings Mountain, Cleveland County, North Carolina, has d_{001} 13 Å at relative humidity 60 %, and composition approximately $Li_{0.72}K_{0.04}Na_{0.11}Ca_{0.23}Mg_{0.05}(Al_{1.87}Fe_{0.15}^{3+}Fe_{0.09}^{2+}Mg_{1.31}Li_{1.76})(Si_{7.86}Al_{0.34})O_{20}\{F_{0.65}(OH)_{3.35}\}$. Named for A. Swineford. [M.A. 76–887.]
- Taiyite.** Chi Ling-Yi, 1974. [*Acta. Geol. Sin.* 91], abstr. A.M. **61**, 178. An unnecessary name for a priorite (aeschynite-(Yt)) from southern China.
- Telargpalite.** V. A. Kovalenker, A. D. Genkin, T. L. Evstigneeva, and I. P. Laputina,

1974. Zap. **103**, 595 (Теларгпалит). Rounded grains 5 to 200 μm in chalcopyrite in the Oktyabr deposit, Norilsk region U.S.S.R., are cubic, a 12.60 Å. Composition near $(\text{Pd,Ag})_{4+x}\text{Te}$. Named for *Tellurium, argentum, palladium*. [A.M. **60**, 489; M.A. 75-2528; Zap. **104**, 607.]
- Testibiopalladite**. Anon., 1974. [*Geochimica*, **3**, 169], abstr. M.A. 75-2529. Cubic $4[\text{Pd}(\text{Sb,Bi})\text{Te}]$, a 6.56 to 6.58 Å occurs in copper-nickel sulphide deposits in SW. and NE. China. Named from the composition. This is the Sb analogue of miche-nerite. [A.M. **61**, 183.]
- Tetraferroplatinum**. L. J. Cabri and C. E. Feather, 1975. C.M. **13**, 117. Tetragonal ordered PtFe occurs at Mooihoek, Transvaal. a 3.850, c 3.693 Å. [A.M. **61**, 341.]
- Thalcusite**. V. A. Kovalenker, I. P. Laputina, T. L. Evstigneeva, and V. M. Izoitko, 1976. Zap. **105**, 202 (Талкусит). Platy grains up to 150 μm along galena-chalcopyrite boundaries in ores of the Talnakh deposit are tetragonal, a 3.882, c 13.25 Å, composition $\text{Cu}_{3-x}\text{Tl}_2\text{Fe}_{1+x}\text{S}_4$, the S analogue of bukovite (28th List). X-ray data match those of synthetic $\text{Cu}_3\text{Tl}_2\text{FeS}_4$. Named from the composition.
- Titanochondrodite**. K. Aoki, K. Fujino, and M. Akaogi, 1976. *Contr. Min. Petr.* **56**, 243. Unnecessary name for titanian chondrodite (9 % TiO_2), occurring in the Buell Park Kimberlite, Arizona.
- Tlalcite**. S. A. Williams, 1975. M.M. **40**, 221. Blue velvety crusts on fracture surfaces in ore are probably orthorhombic but X-ray powder data could not be indexed. Composition $\text{Cu}_{10}\text{Zn}_6\text{TeO}_3(\text{TeO}_4)_2\text{Cl}(\text{OH})_{25} \cdot 27\text{H}_2\text{O}$. Named for Tlaloc, the god of rain in Toltec and Aztec mythology. [M.A. 75-3606; A.M. **61**, 504.]
- Trilliumite**. Author ?, 1975. *Lapidary Journ.* **29**, 1463. A yellowish-green gem quality apatite.
- Tsavorite**. H. Bank, 1975. [*Zeits. deut. gemmol. Gesell.* **24**, 13], abstr. in A.M. **61**, 178. An unnecessary name for a green chromian vanadian grossular from the Tsavo National Park, Kenya. E. G. Gübelin and M. Weibel (*Lapidary Journ.* **29**, 402 and 424) spell the name Tsavorite and give the locality as Laulenyi, Voi, Kenya. [M.A. 76-549.]
- Tsavorite, see Tsavolite.
- Umbozerite**. E. M. Eskova, A. P. Khomyakov, A. N. Merkov, S. I. Lebedina, and L. S. Dubakina, 1974. *Dokl. akad. nauk. S.S.S.R.* **216**, 169 (Умбозерит). Bottle-green to greenish-brown translucent metamict material from Umbozera, Kola Peninsula, have composition near $\text{Na}_3\text{Sr}_4\text{ThSi}_8(\text{O,OH})_{24}$. [A.M. **60**, 341; M.A. 75-1398; Zap. **104**, 617.]
- Whitmoreite**. P. B. Moore, A. R. Kampf, and A. J. Irving, 1974. A.M. **59**, 900. Crystals up to 2 mm long in cavities of altered triphylite at the Big Chief pegmatite, Glendale, South Dakota, have space group $P2_1/c$, a 10.00, b 9.73, c 5.47 Å, β 93.8°; composition $2[\text{Fe}^{2+}\text{Fe}_2^{3+}(\text{PO}_4)_2(\text{OH})_2 \cdot 4\text{H}_2\text{O}]$. Named for R. W. Whitmore. [M.A. 75-1399; Bull. **98**, 266.]
- Wroewolfeite**. P. J. Dunn and R. C. Rouse, 1975. M.M. **40**, 1. Blue platy crystals from the Loudville lead mine, Massachusetts, have space group Pc or $P2/c$, a 6.058, b 5.654, c 14.360, β 93° 28'; composition $2[\text{Cu}_4\text{SO}_4(\text{OH})_6 \cdot 2\text{H}_2\text{O}]$. Named for C. Wroe Wolfe. [M.A. 75-2530; Bull. **98**, 322.]

- Xingzhongite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. (Ir,Cu,Rh)S, cubic or pseudocubic, a 8.72 Å, from an undisclosed locality in China. [A.M. **61**, 185.]
- Xocomecatlite.** S. A. Williams, 1975. M.M. **40**, 221. Emerald-green spherules on altered rhyolite at the Bambollita mine, Moctezuma, Sonora, Mexico, are probably orthorhombic with a 12.140, b 14.318, c 11.662 Å and composition $12[\text{Cu}_3\text{TeO}_4(\text{OH})_4]$. Named from the Nahua word for grapes, xocomecatl. [M.A. 75-3606; A.M. **61**, 504.]
- Yanzhongite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. Synonym of Kotulskite (23rd List). [A.M. **61**, 185.]
- Yedinite.** W. J. McLean, R. A. Bideaux, and R. W. Thomssen, 1974. A.M. **59**, 1157. M. M. Wood, W. J. McLean, and R. B. Laughon, *ibid.* 1160. Prismatic red-violet crystals, space group $R\bar{3}$, a 12.868, c 9.821, occur with diaboileite, quartz, wulfenite, etc., in a complex paragenesis on a few specimens from the Mammoth mine, Tiger, Arizona. Composition $\text{Pb}_6\text{Cl}_6\text{Cr}X_6Y_2$, where X and Y are O, OH, or H_2O ; the Cr is 6-coordinated, but it could not be decided whether it is present as Cr^{3+} or as Cr^{6+} . Named for N. Yedlin. [M.A. 75-2531; Bull. **98**, 267.]
- Yenshanite.** Jen Ying-Chen and Huang Wan-Kang, 1973. [*Geochimica*, **1**, 23], abstr. A.M. **60**, 737. An unnecessary name for a nickel-free Vysotskite (23rd List) from an unnamed Chinese locality.
- Yixunite.** Yu Tsu-Hsiang, Lin Shu-Jen, Chao Pao, Fang Ching-Sung, and Huang Chi-Shun, 1974. [*Acta Geol. Sin.* **2**, 202], abstr. M.A. 75-2522. Cubic PtIn, a 3.948, from an undisclosed locality in China. [A.M. **61**, 185.]
- Yofortierite.** G. Perrault, Y. Harvey, and R. Pertowsky, 1975. C.M. **13**, 68. The manganese analogue of palygorskite occurs as pink to violet fibres in pegmatite veins at Mt. St. Hilaire, Quebec. Composition $\text{Mn}_5\text{Si}_8\text{O}_{20}(\text{OH})_2(\text{H}_2\text{O})_4 \cdot 4$ to $5\text{H}_2\text{O}$. Named for Y. O. Fortier. [A.M. **61**, 341; Bull. **98**, 322.]
- Zaireite.** L. van Wambeke, 1975. Bull. **98**, 351. Small greenish masses in the weathering zone of quartz veins at Eta-Eta, Kivu, Zaïre, are rhombohedral, a_h 7.015, c_h 16.365, space group $R\bar{3}m$. Uniaxial negative, $n \approx 1.82$ - 1.83 ; ρ 4.37 g. cm^{-3} . Ideal composition $[\text{Bi}(\text{Fe},\text{Al})_3(\text{PO}_4)_2(\text{OH})_6]$; some replacement of Bi by Ba, Ca, and Cu, and of P by Si, S, Te, and H₄. Crandallite family. Named for the country of origin. [M.A. 76-3682.]
- Zirsinalite.** Yu. L. Kapustin, Z. V. Pudovkina, and A. V. Bykova, 1974. Zap. **103**, 551 (Цирсиналит). Colourless irregular deposits on Mt. Koashva, Khibina massif, Kola Peninsula, have space group $R3m$, $R\bar{3}m$, or $R32$, a_h 10.29, c_h 13.11 Å, a_{th} 7.38, α 88° 28'. Composition $\text{Na}_6(\text{Ca},\text{Mn},\text{Fe})\text{ZrSi}_6\text{O}_{18}$. Named for the composition. [A.M. **60**, 489; M.A. 75-2532; Zap. **104**, 612.]