

Eighteenth list of new mineral names.

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PREVIOUS lists of this series have been given every three years at the ends of vols. 11–27 (1897–1946) of this Magazine. Lists 1–17 contained 2537 names and in the present list there are 173. The 1560 names in lists 1–10 are included in one alphabetical arrangement in the General Index (1926) to vols. 11–20 (1895–1925). References to ‘Mineralogical Abstracts’ are given in the form [M.A. 10–].

Only a selection of the multitude of compound chemical-cum-mineral names for artificially prepared substitution and base-exchange products has been included. These often have a different meaning from identical names that have been applied to minerals. For example, natural orthoclase containing a small amount of ferric iron replacing alumina has been named ferri-orthoclase or iron-orthoclase (11th List), while the same names have been applied to the artificial compound KFeSi_3O_8 . In different cases such names have in the first instance been applied either to the natural mineral or to the artificial compound. Further complication has been recently introduced by such terms as copper-chalcanthite and iron-melanterite (q.v.).

Trade-names for partly manufactured mineral products and the host of trivial names for gemstones have in general been excluded. Also misspellings and variants in different languages: e.g. pickingerite for pickeringite; schröckerite, schröckingerite, and schroeckerite for schröckingerite; kleit (q.v.) for clayite.

Every endeavour has been made to trace the author and original spelling of each name. This has, however, not been possible with the many names and variants listed by H. Strunz:¹ a selection has been made here of some of those for which he appears to be responsible.

Achavalite. J. Olsacher, 1939. Bol. Fac. Cienc. Univ. Córdoba, vol. 2, no. 3–4, p. 73 (achavalita). R. Herzenberg, *ibid.*, 1944, vol. 7, no. 4, p. 3 of reprint. Iron selenide FeSe , occurring with other selenides at Cacheuta, Argentina. Named after Prof. Luis Achaval (1870–1938) of Córdoba. [M.A. 10–8.]

Aldanite. Mentioned by O. M. Shubnikova in a list of uranium minerals, Fersman memorial volume, Acad. Sci. USSR, 1946, p. 79

¹ H. Strunz, *Mineralogische Tabellen*. Leipzig, 1941. [M.A. 10–249.]

(Алданит), $k\text{ThO}_2.l\text{UO}_2.m\text{UO}_3.l\text{PbO}$. Presumably from the Aldan region, east Siberia.

Aluminocopiapite. L. G. Berry, 1947. Univ. Toronto Studies, Geol. Ser., no. 51 (for 1946), p. 29. A variety of copiapite in which X in the formula $\text{X}(\text{OH})_2\text{Fe}'''(\text{SO}_4)_6.n\text{H}_2\text{O}$ is mainly Al (Al_2O_3 1.72–4.45 %). Compare Ferricopiapite, 15th List. [M.A. 10–99.]

Aluminoscorodite. T. Ito and K. Sakurai, 1947. Wada's minerals of Japan, 3rd edit., Tokyo, p. 309 (Aluminoscorodite, Alumskorodit, and Japanese script). A variety of scorodite containing Al_2O_3 5–11 %, $(\text{Fe},\text{Al})\text{AsO}_4.2\text{H}_2\text{O}$. The same as aluminum-bearing scorodite [M.A. 9–142] = aluminous-scorodite [M.A. 9–262] = aluminian scorodite [M.A. 10–353] with Al_2O_3 5.76 % from Oregon. [M.A. 10–351.]

Ammonium-cryolite. C. Hintze, Handb. Min., 1913, vol. 1, pt. 2, p. 2524 (Ammoniumkryolith). C. Brosset, Arkiv Kemi, Min. Geol., 1946, vol. 21 A, no. 9, p. 8 (ammonium cryolite). Artificial ammonium fluo-aluminate near $(\text{NH}_4)_3\text{AlF}_6$, analogous to cryolite, but cubic. See Potassium-cryolite. [M.A. 4–362, 10–16, 208.]

Ammonium-mica. J. W. Gruner, 1939. Amer. Min., vol. 24, p. 428 (Ammonium mica). An artificial product containing up to 2.4 % NH_4 obtained by the action of H_2O_2 and NH_4OH on vermiculite. [M.A. 7–479.]

Ammonium-syngenite. J. D'Ans, 1906. Ber. Deutsch. Chem. Gesell., vol. 39 (pt. 3), p. 3326 (Ammoniumsyrngentit). A. E. Hill and N. S. Yanick, Journ. Amer. Chem. Soc., 1935, vol. 57, p. 650 (Ammonium Syngenite). An artificial compound, $(\text{NH}_4)_2\text{SO}_4.\text{CaSO}_4.2\text{H}_2\text{O}$, isomorphous with syngenite. See Koktaite. [M.A. 10–352.]

Andersonite. J. Axelrod, F. Grimaldi, C. Milton, and K. J. Murata, 1948. Program and Abstracts, Min. Soc. Amer., 29th Annual Meeting, p. 4; Bull. Geol. Soc. Amer., vol. 59, p. 1310; Amer. Min., 1949, vol. 34, p. 274. Hydrous sodium-calcium-uranyl carbonate, $\text{Na}_2\text{CaUO}_2(\text{CO}_3)_3.n\text{H}_2\text{O}$, from Arizona. Named after Charles Alfred Anderson (1902–) of the United States Geological Survey. [M.A. 10–452.]

Anthoinite. N. Varlamoff, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 153. Hydrous aluminium tungstate, $\text{Al}_2\text{O}_3.2\text{WO}_3.3\text{H}_2\text{O}$, as white chalky material, from Belgian Congo. Named after Raymond Anthoine, mining geologist of Bruxelles. [M.A. 10–145, 495.]

Apoanalcite. C. Oftedahl, 1947. Norsk Geol. Tidsskrift, vol. 26, p. 215. H. Neumann, *ibid.*, 1949, vol. 27, p. 171. Hydrated sodium aluminium silicate $\text{NaAl}(\text{Al},\text{Si})\text{SiO}_6.1\frac{1}{2}\text{H}_2\text{O}$, as red masses in syenite-pegmatite from Nordmarka, Norway; possibly an alteration product of analcime. [M.A. 10–145, 510.]

Argental. D. R. Hudson, 1943. *Metallurgia*, Manchester, vol. 29, p. 56. Syn. of moschellandsbergite and landsbergite (17th List), erroneously taking the adjective from 'mercure argental' (L. Cordier, 1802). [M.A. 9-55.]

Arsenvanadinite. H. Strunz, *Min. Tab.*, 1941, p. 156 (Arsenvanadinit). Syn. of endlichite.

Bacillarite. H. Strunz, *Min. Tab.*, 1941, p. 227 (Bacillarit), given as a synonym of leverrierite, A. Orlov, *Tsch. Min. Petr. Mitt.*, 1942, vol. 54, p. 225 (Bacillarites). An ill-defined clay mineral with bacillary structure, originally described by C. Feistmantel in 1869 as a fossil 'Bacillarites problematicus'. [M.A. 10-24, 29.]

Barium-aragonite. H. Strunz, *Tab. Min.*, 1941, p. 118 (Bariumaragonit). Syn. of alstonite.

Baryt-hedyphane. G. Lindström, *Geol. För. Förh. Stockholm*, 1879, vol. 4, p. 266 (Barythaltig hedyfan från Långban); British Museum, *Index of minerals*, 9th edit., 1881 (Barythedyphane), from a dealer's label; *ibid.*, 27th edit., 1936 (Baryt-hedyphane). Variety of hedyphane containing BaO 8.03%. Later named calcium-barium-mimetite (q.v.).

Barytoanglesite. P. Ramdohr, 1947. *Abhandl. Deutsch. Akad. Wiss. Berlin*, for 1945-6, no. 4, p. 22 (Barytoanglesit). Variety of anglesite containing some barium. [M.A. 10-253.]

Basaluminite. F. A. Bannister and S. E. Hollingworth, 1948. *Nature*, London, vol. 162, p. 565. Hydrous basic aluminium sulphate, $2\text{Al}_2\text{O}_3 \cdot \text{SO}_3 \cdot 10\text{H}_2\text{O}$, as white compact material lining crevices in ironstone from Irchester, Northamptonshire. Felsöbányite with the same formula has a different X-ray pattern. So named because more basic than aluminite. See Hydro-basaluminite. [M.A. 10-452.]

Bayleyite. J. Axelrod, F. Grimaldi, C. Milton, and K. J. Murata, 1948. *Program and Abstracts, Min. Soc. Amer.*, 29th Annual Meeting, p. 4; *Bull. Geol. Soc. Amer.*, vol. 59, p. 1310; *Amer. Min.*, 1949, vol. 34, p. 274. Hydrous magnesium-uranyl carbonate, $\text{Mg}_2\text{UO}_2(\text{CO}_3)_3 \cdot n\text{H}_2\text{O}$, from Arizona. Named after William Shirley Bayley (1861-1943) of the University of Illinois. [M.A. 10-452.]

Beryllium-felspar. M. E. Kazakova, 1946. *Compt. Rend. (Doklady) Acad. Sci. URSS*, vol. 54, p. 623 (beryllium feldspar). E. I. Kutukova, *ibid.*, p. 724 (beryllium microcline). Felspar containing BeO 1.2%, with bavenite from the decomposition of beryl and plagioclase in the emerald mines, Urals. [M.A. 10-247.]

Billietite. J. F. Vaes, 1947. *Ann. (Bull.) Soc. Géol. Belgique*, vol. 70, p. B 214. Hydrous barium uranate as amber-yellow orthorhombic

plates resembling becquerelite, from Katanga. Named in memory of Valère Louis Billiet (1903-1945) of Ghent. [M.A. 10-146, 255.]

Boryslawite. British Museum Index of minerals, 18th edit., 1895 (Boryslavite), from a dealer's label (1890). C. Hintze, *Handb. Min.*, 1933, vol. 1, Abt. 4, pt. 2, p. 1362 (Boryslawit). A hard brittle variety of ozocerite from Boryslaw, Galicia.

Bowleyite. H. P. Rowledge and J. D. Hayton, 1948. *Journ. Roy. Soc. W. Australia*, vol. 33 (for 1946-7), p. 45. Hydrous silicate of Al, Ca, Be (BeO 7.30 %), $3(\text{Ca,Be})\text{O}\cdot 2\text{Al}_2\text{O}_3\cdot 3\text{SiO}_2\cdot 2\text{H}_2\text{O} + n(\text{Li,Na})_2\text{O}$, as white compact material with beryl in pegmatite, from Londonderry, Western Australia. Named after H. Bowley, late government Chemist and Mineralogist of Western Australia. [M.A. 10-508.]

Bredigite. C. E. Tilley and H. C. G. Vincent, 1948. *Min. Mag.*, vol. 28, p. 255. Calcium orthosilicate, Ca_2SiO_4 , orthorhombic high-temperature α' -form, in the dolerite-chalk contact-zone at Scawt Hill, Co. Antrim, and in the gabbro-limestone contact-zone on the island of Muck, Inverness-shire. Named after Max Albert Bredig (1902-), of New York, formerly of Berlin.

Bromcarnallite. A. de Schulten, 1897. *Bull. Soc. Chim. Paris*, ser. 3, vol. 17, p. 166 (Carnallites bromées). K. R. Andress and O. Saffé, *Zeits. Krist.*, 1939, vol. 101, p. 451 (Bromkarnallit). Artificial mixed crystals $\text{KMg}(\text{Cl,Br})_3\cdot 6\text{H}_2\text{O}$. Carnallite from New Mexico, Utah, and Spain contains Br 0.1-0.29 %. [M.A. 7-490; 10-304, 344.]

Bromchlorargyrite. H. Strunz, *Min. Tab.*, 1941, p. 85 (Bromchlorargyrit). Syn. of embolite.

Bütschliite. C. Milton and J. M. Axelrod, 1946. *Bull. Geol. Soc. Amer.*, vol. 57, p. 1218; *Amer. Min.*, 1947, vol. 32, pp. 204, 607. Hydrous potassium and calcium carbonate, $3\text{K}_2\text{CO}_3\cdot 2\text{CaCO}_3\cdot 6\text{H}_2\text{O}$, probably hexagonal, formed by the hydration of fairchildite (q.v.) in the fused wood-ash of burnt trees. Named after Johann Adam Otto Bütschli (1848-1920), formerly professor of zoology at Heidelberg, who prepared the compound artificially. [Not the bütschliite of R. Lang, 1914; 7th List.] [M.A. 10-101, 252.]

Cadmiumspat. H. Strunz, *Min. Tab.*, 1941, p. 117. Syn. of otavite (4th List; M.A. 8-366.)

Calciobaryt. H. Strunz, *Min. Tab.*, 1941, p. 130. Syn. of calcareo-barite (T. Thomson, 1836).

Calcium-barium-mimetite. H. Strunz, *Min. Tab.*, 1941, p. 156 (Calciumbariummimetesit). Syn. of baryt-hedyphane (q.v.).

Calcium-pectolite. E. S. Larsen, 1917. *Amer. Journ. Sci.*, ser. 4, vol. 43, p. 465 (calcium pectolite). R. Koechlin, *Min. Taschenb. Wien.*

Min. Gesell., 2nd edit., 1928, p. 15 (Calciumpektolith). Syn. of eakleite = xonotlite. [M.A. 1-206; 2-253.]

Calcium-pyromorphite. H. Strunz, Min. Tab., 1941, p. 156 (Calciumpyromorphit). Syn. of polysphaerite.

Calcium-strontianite. H. Strunz, Min. Tab., 1941, p. 118 (Calciumstrontanit). The same as calciostrontianite (A. Cathrein, 1888), syn. of emmonite (T. Thomson, 1836).

Calclacite. R. Van Tassel, 1945. Bull. Musée Roy. Hist. Nat. Belgique, vol. 21, no. 26, p. 2. Hydrous chloride and acetate of calcium, $\text{CaCl}_2 \cdot \text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 10\text{H}_2\text{O}$, formed as a fibrous efflorescence on certain limestones stored in wooden drawers. Named from the composition Ca, Cl, Ac. [M.A. 10-101.]

Calcowulfenite. V. Zepharovich, 1884. Zeits. Kryst. Min., vol. 8, p. 583 (Kalkhaltige Wulfenit). A. Krantz's label, 1884 (Kalkwulfenit). Student's index to the collection of minerals, British Museum, 13th edit. 1886 (Calco-wulfenite); *ibid.*, 27th edit., 1936 (Calcowulfenite). A variety of wulfenite containing CaO 1.24 %, from Carinthia.

Cerium-ankerite. H. Strunz, Min. Tab., 1941, p. 118 (Ceriumankerit, Coddazit [sic]). Syn. of codazzite (11th List).

Cerorthite. A variety of orthite rich in cerium (Ce_2O_3 20 %) from Finland. Bull. Soc. Franç. Min., 1933, vol. 56, p. 188. Student's index to the collection of minerals, British Museum, 27th edit., 1936 (Cerorthite), from a dealer's label (Cer-Orthit).

Chernyshevite. English equivalent of tschernichewite (4th List). Named after T. H. Чернышевъ (1856-1914).

Chrome-antigorite. H. Strunz, Min. Tab., 1941, p. 204 (Chrom-Antigorit). Antigorite containing some chromium.

Chrome-magnetite. J. J. Frankel, 1942. South African Journ. Sci., vol. 38, p. 153. A magnetic mineral containing Cr_2O_3 12.34 %, associated with non-magnetic chromite and titaniferous magnetite at Lydenburg, Transvaal. Compare iskulite (16th List). [M.A. 10-493.]

Chrome-phengite. P. de Wijkerslooth, 1943. Maden Tetkik ve Arama Enstitüsü Mecmuası, Ankara, vol. 8, p. 256 (kromfengit, Turkish), p. 261 (Chromphengit, German). A chromium-bearing mica enclosed in chromite ore. [M.A. 9-244.]

Chrome-tourmaline. A. Cossa and A. Arzruni, 1883, Zeits. Kryst. Min., vol. 7, p. 1 (Chromturmalin). A. G. Gill, Johns Hopkins Circulars, 1889, vol. 8, p. 101 (chrome-tourmaline). Variety of tourmaline from Urals (Cr_2O_3 10.86 %) and Maryland (Cr_2O_3 4.32 %).

Cleïte. S. J. Thugutt, 1945. Arch. Min. Tow. Nauk. Warszaw. (Arch. Min. Soc. Sci. Varsovie), vol. 15 (for 1939-45), p. 233 (cleïte, French), p. 236 (kleit; Polish). Variants of clayite (5th List). [M.A. 10-23.]

Cobalt-manganese-spar. C. Bergemann, 1857. Verh. Naturhist. Ver. Rheinl. Westph., vol. 14, p. 111 (Kobalt-Manganspath). British Museum Catalogue of minerals, 1st edit., 1863 (Cobalt manganese spar). Rhodochrosite from Rheinbreitbach containing CoCO_3 3.71 %.

Cobaltorhodochrosite. Bull. Soc. Franç. Min., 1936, vol. 59, p. 385. Cobaltiferous rhodochrosite from Schneeberg, Saxony. The same as cobalt-manganese-spar (q.v.).

Copper-chalcanthite. A. N. Winchell, 1942. Elements of mineralogy, p. 292; Amer. Min., 1949, vol. 34, p. 223 (Copper chalcanthite). Syn. of chalcanthite ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$), which with siderotil ($\text{FeSO}_4 \cdot 5\text{H}_2\text{O}$) and cobalt-chalcanthite = bieberite ($\text{CoSO}_4 \cdot 5\text{H}_2\text{O}$) is classed as sub-species under a species 'chalcanthite'. [M.A. 10-568.]

Courzite. S. J. Thugutt, 1945. See Kurtzite.

Csiklovaite. S. Koch, 1948. Acta Min. Petr., Publ. Min. Petr. Inst. Univ. Szeged, vol. 2, p. 11 (csiklovait), p. 19 (csiklovaite). Sulphide and telluride of bismuth Bi_2TeS_2 , in the series $\text{Bi}_2\text{Te}_3 \rightarrow \text{Bi}_2\text{Te}_2\text{S} \rightarrow \text{Bi}_2\text{TeS}_2 \rightarrow \text{Bi}_2\text{S}_3$; isomorphous with the associated tetradymite ($\text{Bi}_2\text{Te}_2\text{S}$), but differing in colour and etching reactions. Named from the locality Csiklova (Ciclova), Banat, Romania. [M.A. 10-446, 509.]

Cuproarquerite. R. Koechlin, Min. Taschenb. Wien. Min. Gesell., 2nd edit., 1928, p. 19 (Cuproarquerit). Silver-amalgam containing some copper, from Chile.

Cymrite. W. C. Smith, F. A. Bannister, and M. H. Hey, 1949. Min. Mag., vol. 28, p. 676. Barium aluminium silicate, $\text{BaAlSi}_3\text{O}_8(\text{OH})$, as hexagonal crystals from the Benallt manganese mine, Wales. Named from Cymru, the Welsh name for Wales.

Dervillite. R. Weil, 1941. Rev. Sci. Nat. Auvergne, Clermont-Ferrand, vol. 7, p. 110. An incompletely determined black metallic mineral containing Sb, Pb, (Bi?), S, as minute monoclinic crystals from Markirch, Alsace. Named after Dr. Henri Derville of Strasbourg university. [M.A. 10-353.]

Diderichite. J. V. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 224. Slightly hydrated uranium carbonate as yellow-green fibrous crusts, orthorhombic, from Katanga. Named after Nobert Diderich, who was the first to study the copper and iron ores of Katanga. [M.A. 10-146.]

Dunhamite. E. E. Fairbanks, 1946. *Econ. Géol.*, vol. 41, p. 767. A pale brown alteration product, perhaps $\text{PbO} \cdot \text{TeO}_2$, of altaite from Organ Mts., New Mexico. Named after Dr. Kingsley Charles Dunham (1910–) of the Geological Survey of Great Britain, who first noticed it (*Bull. New Mexico School of Mines*, 1935, no. 11, p. 158). See micro-dunhamite. [M.A. 10–100.]

Duplexite. H. P. Rowledge and J. D. Hayton, 1948. *Journ. Roy. Soc. W. Australia*, vol. 33 (for 1946–47), p. 49. Hydrous silicate, $6\text{CaO} \cdot 4\text{BeO} \cdot \text{Al}_2\text{O}_3 \cdot 14\text{SiO}_2 \cdot 2\text{H}_2\text{O}$, as white rosettes with beryl in pegmatite from Londonderry, Western Australia. Differing from bavenite in containing rather more BeO (7%). Named after S. Duplex, manager of the felspar quarry, who found the material. [M.A. 10–508.]

Epiianthinite. A. Schoep and S. Stradiot, 1947. *Amer. Min.*, vol. 32, p. 344. Uranic hydroxide, $y\text{UO}_3 \cdot x\text{H}_2\text{O}$, as yellow orthorhombic crystals, an alteration product of ianthinite (11th List); from Belgian Congo. [M.A. 10–145.]

Eulite. A. Poldervaart, 1947. *Min. Mag.*, vol. 28, p. 165. F. Walker and A. Poldervaart, *Bull. Geol. Soc. Amer.*, 1949, vol. 80, p. 632. Orthopyroxenes containing 70–90 mol. % FeSiO_3 . A contraction of eulysite ($\epsilon\delta\lambda\upsilon\tau\omicron\varsigma$, easy to dissolve or break), a rock in which the mineral occurs.

Fairchildite. C. Milton and J. M. Axelrod, 1946. *Bull. Geol. Soc. Amer.*, vol. 57, p. 1218; *Amer. Min.*, 1947, vol. 32, pp. 204, 607. Potassium and calcium carbonate, $\text{K}_2\text{CO}_3 \cdot \text{CaCO}_3$, hexagonal, formed by the fusion of wood-ash in burnt trees. On hydration it yields buetschliite (q.v.) and calcite. Named after John Gifford Fairchild (1882–) of the United States Geological Survey. [M.A. 10–101, 252.]

Falkenstenite. T. F. W. Barth, 1945. *Skrifter Norske Videnskaps-Akad. Oslo, I. Mat.-Naturv. Kl.*, 1945, no. 8, p. 13. An incompletely determined tetragonal zeolite, related to ashcroftine and gonnardite, forming the groundmass (40%) of variolite at Falkensten, Oslo fjord. Named from the locality. [M.A. 10–5.]

Ferrialunogen. H. Strunz, *Min. Tab.*, 1941, p. 135 (Ferrialunogen), p. 239 (Ferroalunogen). Alunogen with some alumina replaced by ferric oxide. Identified with tecticite (Tekticit).

Ferribraunite. B. Wasserstein, 1943. *Econ. Geol.*, vol. 38, p. 393. Intermediate between braunite and sitaparite. [M.A. 9–38.]

Ferriedenite. A. N. Winchell, 1949. *Amer. Min.*, vol. 34, p. 225. Hypothetical molecule $\text{NaCa}_2\text{Fe}_3\text{Fe}_2\text{O}_2\text{Si}_7\text{AlO}_{22}$ in hornblendes, differing from ferroedenite (q.v.) in containing some ferric iron. [M.A. 10–568.]

Ferrihastingsite. A. N. Winchell, 1949. Amer. Min., vol. 34, p. 225. Hypothetical molecule $\text{NaCa}_2\text{Fe}_2(\text{Al,Fe})_3\text{O}_2\text{Si}_6\text{Al}_2\text{O}_{22}$, differing from ferrohastingsite (12th List) in containing some ferric iron. [M.A. 10-568.]

Ferrimontmorillonite. I. Z. Korin, 1939. Bull. Acad. Sci. URSS, Sér. Géol., 1939, no. 6, p. 149 (Ферримонтмориллонит), p. 158 (ferrimontmorillonite). V. P. Ivanova, D. S. Belyankin Jubilee vol., Acad. Sci. USSR, 1946, p. 102. The correct form of ferromontmorillonite (15th List). $\text{Fe}_2\text{O}_3 \cdot 4\text{SiO}_2 \cdot 2\text{H}_2\text{O}$. Syn. of nontronite. [M.A. 9-240, 10-554.]

Ferroactinolite. N. Sundius, 1946. Årsbok Sveriges Geol. Undersök., vol. 40, p. 7. A hypothetical molecule $\text{Ca}_2\text{Fe}_5''\text{Si}_8\text{O}_{22}(\text{OH})_2$ to explain the composition of the amphibole group. [M.A. 10-70.]

Ferroedenite. N. Sundius, 1946. Årsbok Sveriges Geol. Undersök., vol. 40, p. 6. A hypothetical molecule $\text{NaCa}_2\text{Fe}_5''\text{AlSi}_7\text{O}_{22}(\text{OH})_2$ to explain the composition of the amphibole group. [M.A. 10-70.]

Ferrohedenbergite. A. Poldervaart, 1947. Min. Mag., vol. 28, pp. 159, 161. F. Walker and A. Poldervaart, Bull. Geol. Soc. Amer., 1949, vol. 80, p. 632. A variety of hedenbergite richer in iron.

Ferromagnesite. H. Strunz, Min. Tab., 1941, p. 117 (Ferromagnesit). Syn. of mesitite. Similarly, for other mixed crystals of the calcite group: Zinkocalcit, Kobaltcalcit, Mangancalcit, Strontiumcalcit, Bariumcalcit, Zinkrhodochrosit, Ferrorhodochrosit, Kalkrhodochrosit, Zinksiderit, Mangansiderit, Calciumsiderit, Ferrosmithsonit, Mangan-smithsonit.

Ferromangandolomite. J. A. Smythe and K. C. Dunham, 1947. Min. Mag., vol. 28, p. 65. Hypothetical molecule $(\text{Fe,Mn})\text{CO}_3 \cdot \text{CaCO}_3$ as an end-member of the ankerite series.

Ferro-ortho-titanate. F. Mogensen, 1946. See Ulvöspinel.

Ferrophengite. A. N. Winchell, 1949. Amer. Min., vol. 34, p. 223. A hypothetical molecule $\text{K}_2\text{FeAl}_3(\text{OH})_4\text{Si}_7\text{AlO}_{20}$, classed as a sub-species of muscovite. Compare picrophengite (q.v.). [M.A. 10-568.]

Ferrorichterite. N. Sundius, 1946. Årsbok Sveriges Geol. Undersök., vol. 40, p. 16. A hypothetical molecule $\text{Na}_2\text{CaFe}_5''\text{Si}_8\text{O}_{22}(\text{OH})_2$ to explain the composition of the amphibole group. [M.A. 10-70.]

Fersmite. E. M. Bohnstedt-Kupletskaia and T. A. Burova, 1946. Compt. Rend. (Doklady) Acad. Sci. URSS, vol. 52, p. 69. Calcium niobate, CaNb_2O_5 , with some other constituents, as black orthorhombic crystals resembling columbite and euxenite, from the Urals. Named after

Aleksandr Evgenievich Fersman, Александр Евгеньевич Ферсман (1883–1945). Not to be confused with fersmanite (12th List). [M.A. 10–102.]

Fluor-chondrodite. K. Rankama, 1947. Amer. Min., vol. 32, p. 154. Artificially prepared chondrodite, $\text{MgF}_2 \cdot 2\text{Mg}_2\text{SiO}_4$, with OH completely replaced by F. [M.A. 10–106.]

Fluor-norbergite. K. Rankama, 1947. Amer. Min., vol. 32, p. 154. Artificially prepared norbergite, $\text{MgF}_2 \cdot \text{Mg}_2\text{SiO}_4$, with OH completely replaced by F. [M.A. 10–106.]

Frohbergite. R. M. Thompson, 1946. Bull. Geol. Soc. Amer., vol. 57, p. 1238; Univ. Toronto Studies, Geol. Ser., 1947, no. 51 (for 1946), p. 35; Amer. Min., 1947, vol. 32, p. 210. Iron telluride, FeTe_2 , isomorphous with marcasite, found in polished sections of telluride ore from Montbray, Quebec. Named after Dr. Max Hans Frohberg, mining geologist, of Toronto. [M.A. 10–99.]

Giannettite. D. Guimarães, 1948. Bol. Inst. Tecn. Indust. Minas Gerais, no. 6, p. 22 (giannettita), p. 62 (giannettite). Chloro-zirconotitano-silicate of Ca, Na, Mn, as minute triclinic crystals with aegirine in nepheline-rocks from Poços de Caldas, Brazil. Named after Dr. Americo René Giannetti, mining engineer. [M.A. 10–510.]

Harbolite. C. E. Taşman, 1946. Maden Tetkik ve Arama Enstitüsü Mecmuası, Ankara, vol. 11, p. 50 (harbolit), p. 51 (harbolite); Bull. Amer. Assoc. Petroleum Geol., 1946, vol. 30, p. 1051. A hard lustrous asphalt from Harbol, SE. Turkey. Named from the locality. [M.A. 10–7, 354.]

Harkerite. C. E. Tilley, 1948. Geol. Mag. Hertford, vol. 85, p. 215; Min. Mag., 1949, vol. 28, p. lxxi. Carbonate-borosilicate of calcium and magnesium in dolomite skarns from Skye. Named after Alfred Harker (1859–1939) of Cambridge. [M.A. 10–355.]

Heikkolite. [Y. Kinoshita, 1935. Trans. Mining. Eng. Assoc., vol. 18, no. 3 (Japanese). Minerals of Korea, 2nd edit., Bull. Geol. Surv. Chosen, 1941, no. 15, p. 198. J. Harada, Journ. Geol. Soc. Japan, 1939, vol. 46, p. 290; S. Hori, *ibid.*, 1942, vol. 49, p. 445.] An alkali-amphibole with no extinction between crossed nicols and other optical anomalies. Named from the locality, Heiko, Kogen-do, Korea. Not to be confused with hokutolite (6th List).

Hydro-basaluminite. F. A. Bannister and S. E. Hollingworth, 1948. Nature, London, vol. 162, p. 565. Hydrous basic aluminium sulphate as a white plastic material occurring with basaluminite (q.v.) and differing from this in its X-ray pattern. When air dried it loses

about 50 % H_2O , falling to a white powder of basaluminite. [M.A. 10-452.]

Hydrohausmannite. W. Feitknecht and W. Marti, 1945. *Helvetica Chim. Acta*, vol. 28, p. 133 (Hydrohausmannit). An artificial product obtained, together with hausmannite, by the oxidation of $\text{Mn}(\text{OH})_2$. It has the composition $\text{MnO}_{1.15}\text{—MnO}_{1.45} + \frac{1}{2}\text{H}_2\text{O}$ and gives an X-ray pattern similar to that of hausmannite (Mn_3O_4). Not the hydrohausmannite of A. K. Boldyrev, 1928 (14th List). [M.A. 10-105.]

Hydroxyl-sodalite. W. Borchert and J. Keidel, 1947. Heidelberg. *Beitr. Min. Petr.*, vol. 1, p. 3 (Hydroxyd-Sodalith, Hydroxydsodalith). An artificial product $\text{Na}_8\text{Al}_6\text{Si}_6\text{O}_{24}(\text{OH})_{2.\text{aq}}$. with the crystal-structure of sodalite (Chloridsodalith). [M.A. 10-364.]

Iron-melanterite. A. N. Winchell, 1942. *Elements of mineralogy*, p. 291; *Amer. Min.*, 1949, vol. 34, p. 223 (Iron Melanterite). Syn. of melanterite ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$), classed with boothite ($\text{CuSO}_4 \cdot 7\text{H}_2\text{O}$) and zinc-copper melanterite ($(\text{Zn,Cu,Fe})\text{SO}_4 \cdot 7\text{H}_2\text{O}$) as sub-species under a species 'melanterite'. [M.A. 10-568.]

Johachidolite. E. Iwase and N. Saito, 1942. [*Sci. Papers Inst. Phys. Chem. Research, Tokyo*, vol. 39, p. 300.] *Abstr. in Amer. Min.*, 1948, vol. 33, p. 98. Hydrous fluoroborate, ' $\text{H}_6\text{Na}_2\text{Ca}_3\text{Al}_4\text{F}_5\text{B}_6\text{O}_{20}$ ', colourless, optically biaxial. In nepheline veins from Johachido, Korea. Named from the locality. [M.A. 10-253.]

Jujuyite. F. Ahlfeld, 1948. *Econ. Geol.*, vol. 43, p. 600. Iron antimonate, as brown to black compact masses intermixed with opal, from prov. Jujuy, Argentina. Named from the locality. [M.A. 10-508.]

Kleit. Polish form of clayite. See Cleite.

Koktaite. J. Sekanina, 1948. *Acta Acad. Sci. Nat. Moravo-Silesicae*, vol. 20, no. 1 (koktait, koktaite, ammonium-syngenite). Hydrated sulphate of calcium and ammonium, $(\text{NH}_4)_2\text{Ca}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$, as acicular monoclinic crystals pseudomorphous after gypsum, from Moravia. Named after Dr. Jaroslav Kokta of Brno, Moravia. See Ammonium-syngenite. [M.A. 10-352.]

Korteite. [C. Prager, 1923?]. Student's index to the collection of minerals, British Museum, 27th edit., 1936, p. 21, from a dealer's label. Described as $\text{MgO} \cdot \text{Al}(\text{OH})_3$, found with wathlingenite (q.v.). Named after G. Korte, director of potash-salt works. Identical with koenenite (3rd List).

Kurtzite. S. J. Thugutt, 1945. *Arch. Min. Tow. Nauk. Warszaw.* (Arch. Min. Soc. Sci. Varsovie), vol. 15 (for 1939-45), p. 182 (courzite), p. 187 (kurcyt). A zeolite from the Crimea, identified by A. E. Fersman

(1909) as wellsite, is given a complex structural formula different from that of wellsite. Named from the locality, Kurtzy (Курцы) village near Simferopol. [M.A. 10-6.]

Kuttenbergite. R. Koechlin, Min. Taschenb. Wien. Min. Gesell., 2nd edit., 1928, p. 36. Another form of kutnohorite (4th List), named from the locality in Bohemia: Kutná Hora in Czech, Kuttenberg in German.

Lembergite. T. Sudo, 1943. [Bull. Chem. Soc. Japan, vol. 18, p.—]; abstract in Amer. Min., 1947, vol. 32, p. 483. Hydrous silicate of Al, Fe, Mg, Ca, belonging to the montmorillonite group, as a fine-grained green cement in ferruginous sandstones from Japan. Named after Johann Theodor Lemberg (1842-1903) of Dorpat, who described similar material in 1877. Not the leMBERGITE of A. Lagorio, 1895 (1st List). [M.A. 10-147.]

Lime-bronzite. A. Poldervaart, 1947. Min. Mag, vol. 28, p. 170. An unstable form of bronzite containing CaSiO_3 up to 9%.

Llallagualite. M. C. Bandy, 1946. Mineralogía de Llallagua, Bolivia, La Paz, p. 56 (Llallagualita, Monasita romboédrica). Provisional name for an undescribed rhombohedral mineral which has perhaps the same composition as monazite. Named from the locality Llallagua (pronounced Yayawa). [M.A. 10-9.]

Loughlinite. J. J. Fahey and J. M. Axelrod, 1947. Program and Abstracts, 28th Annual Meeting, Min. Soc. Amer., p. 9; Bull. Geol. Soc. Amer., vol. 58, p. 1178; Amer. Min., 1948, vol. 33, p. 195 (abstract). Hydrous magnesium silicate, $\text{MgSi}_2\text{O}_5 \cdot \text{aq.}$, an asbestiform mineral from Wyoming. Named after Dr. Gerald Francis Loughlin (1880-1946) formerly of the United States Geological Survey. [M.A. 10-255.]

Magnesium-cordierite. H. M. Richardson and G. R. Rigby, 1949. Min. Mag., vol. 28, p. 548. Synonym of cordierite, distinguishing it from iron-cordierite (10th List) and manganese-cordierite (q.v.).

Magnesium-phosphoruranite. H. Strunz, Min. Tab., 1941, p. 165, (Magnesiumphosphoruranit). Syn. of saleite (13th List). Similarly, Kupferphosphoruranit (torbernite), Kupferarsenuranit (zeunerite), Calciumphosphoruranit (autunite), Calciumarsenuranit (uranospinite), Bariumphosphoruranit (uranocircite).

Magnesium-wollastonite. C. E. Tilley, 1948. Amer. Min., vol. 33, p. 737 (magnesium wollastonite solid solutions). Compare iron-wollastonite (14th List).

Manganese-anorthite. O. Glaser, 1926. Centralblatt Min., Abt. A, p. 86 (Mangananorthit). R. B. Snow, Journ. Amer. Ceramic Soc., 1943, vol. 26, p. 19 (manganese anorthite); J. R. Rait and H. W. Pinder,

Journ. Iron & Steel Inst., 1947, vol. 154 (no. 2 for 1946), p. 375 P (manganese felspar, manganese anorthite). Artificial $\text{MnAl}_2\text{Si}_2\text{O}_8$, analogous to anorthite, in the system $\text{MnO}-\text{Al}_2\text{O}_3-\text{SiO}_2$. [M.A. 10-462.]

Manganese-cordierite. R. B. Snow, 1943. Journ. Amer. Ceramic Soc., vol. 26, p. 15 (manganese compound analogous to cordierite). H. M. Richardson and G. R. Rigby, Min. Mag., 1949, vol. 28, p. 551 (Manganese-cordierite). Artificial $2\text{MnO} \cdot 2\text{Al}_2\text{O}_3 \cdot 5\text{SiO}_2$ in the system $\text{MnO}-\text{Al}_2\text{O}_3-\text{SiO}_2$. [M.A. 10-462.]

Manganese-gehlenite. O. Glaser, 1926. Centralblatt. Min., Abt. A, p. 86 (Mangangehlenit). Artificial $2\text{MnO} \cdot \text{Al}_2\text{O}_3 \cdot \text{SiO}_2$, analogous to gehlenite, in the system $\text{MnO}-\text{Al}_2\text{O}_3-\text{SiO}_2$.

Manganmelanterit. H. Strunz, Min. Tab., 1941, p. 134. $(\text{Fe}, \text{Mn})\text{SO}_4 \cdot 7\text{H}_2\text{O}$. Syn. of Luckyit = luckite.

Mangan-niobite. H. Strunz, Min. Tab., 1941, p. 106 (Manganniobit). Syn. of manganocolumbite.

Manganonatrolite. C. A. Thomas, 1947. Rocks and Minerals, Peekskill, N.Y. vol. 22, p. 804. Variety of natrolite from Pennsylvania. [M.A. 10-294.]

Mangan-orthite. L. N. Ovchinnikov and N. N. Tzimbalko, 1948. Doklady Acad. Sci. USSR, vol. 63, p. 191 (манган-ортит). A variety of orthite containing MnO 5-37 %, from Vishnev Mt., Urals. [M.A. 10-453.]

Manganoxapatite. H. Strunz, Min. Tab., 1941, p. 156 (Manganoxapatit). Syn. of manganvoelckerite (15th List).

Masuyite. J. F. Vaes, 1947. Ann. (Bull.). Soc. Géol. Belgique, vol. 70, p. B 219. Hydrous lead uranate as orange-red orthorhombic scales, from Katanga. Named in memory of Gustave Masuy who died a prisoner of war in 1945. [M.A. 10-146.]

Mavinite. B. Rama Rao, 1946. Rec. Mysore Geol. Dept., vol. 43 (for 1944), p. 27. A dark-green brittle mica, $3(\text{Fe}, \text{Mg})\text{O} \cdot 6(\text{Al}, \text{Fe})_2\text{O}_3 \cdot 7\text{SiO}_2 \cdot 9\text{H}_2\text{O}$, intermediate between chloritoid and xanthophyllite. Named from the locality, Mavinhalli, Mysore. [M.A. 10-7.]

Mechernichite. G. Kalb, not published, later replaced by bravoite [M.A. 3-154.] Dealer's label (1925) in British Museum. H. Strunz, Min. Tab., 1941, p. 256; P. Ramdohr, Klockmann's Lehrb. Min., 13th edit., 1948, pp. 376, 656 (Mechernichit). Named from the locality, Mechernich, Eifel, Rhineland. Syn. of bravoite. [M.A. 3-154, 339; Min. Mag. 25-609.]

Merumite. S. Bracewell, 1946. Geology and mineral resources, section 4 in Handbook of natural resources of British Guiana, George-

town, 1946, p. 36. Hydrous chromic oxide (Cr_2O_3 81.30, Al_2O_3 6.55, H_2O 8.18 %, &c.), from the Merume river, Mazaruni district. Named from the locality. [M.A. 10-292.]

Micro-dunhamite. E. E. Fairbanks, 1947. Amer. Min., vol. 32, p. 683. Synonym of dunhamite (q.v.). The prefix 'micro' to indicate that the determination was made only in polished sections under the microscope. [M.A. 10 255.]

Miskeyite. Trade-name for a compact chlorite (pseudophite) used as an ornamental stone from St. Gallenkirch, Vorarlberg. Named after J. von Miskey, director of the Miskeyitwerksgesellschaft. F. Berwerth, Tschermak's Min. Petr. Mitt., 1912, vol. 31, p. 112. W. C. Smith, Min. Mag., 1912, vol. 31, p. 112.

Molybdoscheelite. H. Strunz, Min. Tab. 1941, p. 144 (Molybdoscheelite, *pl.*), p. 258 (Molybdoscheelit). O. H. Ödman, Årsbok Sveriges Geol. Undersök., 1947, vol. 41, no. 6, p. 47 (molybdoscheelite). Calcium tungstate and molybdate, $\text{Ca}(\text{W},\text{Mo})\text{O}_4$, as mixed crystals intermediate between scheelite and powellite. Syn. of seyrigite (15th List). [M.A. 10-492.]

Monteponite. E. E. Fairbanks, 1946. Econ. Geol., vol. 41, p. 767. Cadmium oxide, CdO , as minute black octahedra described by B. Neumann and E. Wittich (Natürliches Cadmiumoxyd, Chem.-Ztg., 1901, vol. 25, p. 561; E. Wittich and B. Neumann, Cbl. Min., 1901, p. 549) from Monteponi, Sardinia. Named from the locality. [M.A. 10-100.]

Natronbiotite. H. Strunz, Min. Tab., 1941, p. 199 (Natronbiotit). Biotite with potassium partly replaced by sodium.

Nickel-asbolane. S. Dimitrov, 1942. Ann. Univ. Sofia, Fac. Phys.-Mat., Sci. Nat., vol. 38, p. 207 (никеловъ асболанъ, Bulgarian), p. 225 (Nickel-Asbolan, German). A variety of asbolane containing NiO 3.58 %, from Bulgaria. [M.A. 10 300.]

Nickel-pyrite. H. Strunz, Min. Tab., 1941, p. 80; P. Ramdohr, Klockmann's Lehrb. Min., 13th edit., 1948, p. 376 (Nickelpyrit). Syn. of bravoite.

Nigerite. R. Jacobson and J. S. Webb, 1947. Min. Mag., vol. 28, p. 118. F. A. Bannister, M. H. Hey, and H. P. Stadler, *ibid.*, p. 129. Aluminate of tin (SnO_2 25.33 %), iron, zinc, &c. $(\text{Zn},\text{Mg},\text{Fe}'')(\text{Sn},\text{Zn})_2(\text{Al},\text{Fe}''')_{12}\text{O}_{22}(\text{OH})_2$, as dark brown hexagonal plates from Nigeria. Named from the country. [M.A. 10-276.]

Nitrokalite. H. Strunz, Min. Tab., 1941, p. 115 (Nitrokalit, Kalisal-peter). Syn. of nitre, KNO_3 .

Nitronatrite. E. F. Glocker, 1847. *Generum et specierum mineralium . . . synopsis*, p. 292 (Nitronatrites, Nitronatrit). Syn. of nitratine, soda-nitre, NaNO_3 .

Nuevite. J. Murdoch, 1946. *Bull. Geol. Soc. Amer.*, vol. 57, p. 1219; *Amer. Min.*, 1947, vol. 32, p. 204. Titanio-niobate of yttrium and iron as black grains and orthorhombic (?) crystals in quartz from Nuevo, Riverside Co., California. Named from the locality. [M.A. 10-100.]

Paragearksutite. N. A. Smolyaninov and E. N. Isakov, 1946. *D. S. Belyankin Jubilee vol.*, *Acad. Sci. U.S.S.R.*, p. 147 (парагеарксутит), Hydrrous calcium aluminium fluoride $4\text{CaF}_2 \cdot 4\text{Al}(\text{F}, \text{OH})_3 \cdot 3\text{H}_2\text{O}$, differing from gearsutite in containing slightly less water, from Transbaikalia. [M.A. 10-453.]

Paraguanajuatite. P. Ramdohr, 1948. *Klockmann's Lehrb. Min.*, 13th edit., p. 360. Rhombohedral paramorphs after natural and artificial orthorhombic guanajuatite, $\text{Bi}_2(\text{Se}, \text{S})_3$.

Parajamesonite. V. Zsivny and I. v. Náray-Szabó, 1947. *Schweiz. Min. Petr. Mitt.*, vol. 27, p. 183 (Parajamesonit). Dimorphous with jamesonite, $4\text{PbS} \cdot \text{FeS} \cdot 3\text{Sb}_2\text{S}_3$, distinguished by the X-ray pattern. [M.A. 10-254.]

Para-Kupferglanz. H. Strunz, *Min. Tab.*, 1941, p. 65. Paramorphs of low-temperature orthorhombic Cu_2S after high-temperature cubic [hexagonal?] $\alpha\text{-Cu}_2\text{S}$. Syn. of chalcosine. [M.A. 2-506, 10-202.]

Paraschoepite. A. Schoep and S. Stradiot, 1947. *Amer. Min.*, vol. 32, p. 344. Uranic hydroxide, $5\text{UO}_3 \cdot 9\frac{1}{2}\text{H}_2\text{O}$, as yellow orthorhombic crystals, differing from schoepite (10th List) in its optical properties; from Katanga. [M.A. 10-145, 544.]

Para-Silberglanz. H. Strunz, *Min. Tab.*, 1941, p. 66. Paramorphs of low-temperature orthorhombic Ag_2S (acanthite) after high-temperature cubic $\alpha\text{-Ag}_2\text{S}$. Syn. of argentite. [M.A. 3-338.]

Paratenorite. H. Strunz, *Min. Tab.*, 1941, p. 95 (Paratenorit). Syn. of paramelaconite.

Patiñoite. M. C. Bandy, 1946. *Mineralogía de Llallagua, Bolivia, La Paz*, p. 57 (Patiñoíta). Provisional name for an undescribed mineral as yellow tetragonal crystals probably a phosphate or arsenate. Named after Simon Iturbi Patiño, who was the first to work the Llallagua mines. [M.A. 10-9.]

Pennaite. D. Guimarães, 1948. *Bol. Inst. Tecn. Indust. Minas Gerais*, no. 6, p. 19 (pennaita), p. 59 (pennaite). Chloro-zircono-titanosilicate of Na, Ca, Fe, as minute triclinic crystals with aegirine in nepheline-rocks from Poços de Caldas, Brazil. Named after Dr. José

Moreira dos Santos Penna, director of the Instituto de Tecnologia Industrial. [M.A. 10-510.]

Perplexite. P. Marshall, 1946. New Zealand Journ. Sci. Techn., Sect. B, vol. 28, p. 51. A compact zeolitic mineral not definitely identified in the groundmass of phonolitic rocks. [M.A. 10-295.]

Phosphoralunogen. H. Strunz, Min. Tab., 1941, p. 135. Alunogen containing some P_2O_5 replacing SO_3 , $Al_2[PO_3OH_7(SO_4)_2].16H_2O$. The formula $Al_2(SO_4)_2(HPO_4).11\frac{1}{2}H_2O$, as originally given [M.A. 7-470], however, points to meta-alunogen [M.A. 8-278] rather than to alunogen.

Phosphormimetesit. H. Strunz, Min. Tab., 1941, p. 156. Mimetite with some arsenic replaced by phosphorus. Identified with campylite (Kampylit).

Phrophengite. A. N. Winchell, 1949. Amer. Min., vol. 34, p. 223. A hypothetical molecule $K_2MgAl_3(OH)_4Si_7AlO_{20}$, classed as a sub-species of muscovite. Compare ferrophengite (q.v.). [M.A. 10-568.]

Plumbocolumbite. H. Strunz, Min. Tab., 1941, p. 108 (Plumbocolumbit). Syn. of plumboniobite (5th List).

Polyaugite. A. N. Winchell, 1949. Amer. Min., vol. 34, p. 224. To replace clinopyroxene as a species, rather than a group, name, with diopside, augite, jadeite as sub-species, excluding clinoenstatite and spodumene. [M.A. 10-568.]

Potassium-cryolite. A. Duboin, 1892. Bull. Soc. Franç. Min., vol. 15, p. 191 (cryolithe potassique). P. Groth, Chem. Kryst., 1906, vol. 1, p. 416 (Kaliumkryolith). C. Brosset, Diss. Stockholm, 1942, p. 119 (potassium-cryolite). Artificial potassium fluo-aluminate near K_3AlF_6 , analogous to cryolite. See Ammonium-cryolite. [M.A. 10-16, 208.]

Protoenstatite. W. Büssem and C. Scheusterius, 1938. Wiss. Veröff. Siemens-Werken, vol. 17, p. 62 (Protoenstatit). Replacing the name metatalc (15th List) for an artificially produced modification of $MgSiO_3$.

Pseudo-kaliophilite. E. Gruner, 1935. Zeits. Anorg. Chem., vol. 224, p. 366 (Pseudokaliophilit). W. Borchert and J. Keidel, Heidelberger Beitr. Min. Petr., 1947, vol. 1, p. 11. $KAlSiO_4$ prepared by desulphurizing ultramarine in fused KCN, differing in X-ray pattern from kaliophilite. [M.A. 10-364.]

Pulszkyite. J. S. Krenner, 1948. Schweiz. Min. Petr. Mitt., vol. 28, p. 707 (Pulszkyit). Sulphate of copper and magnesium as green hexagonal crystals with herrengrundite from Hungary (now Slovakia). Named after Ferencz Pulszky (1814-1897) formerly director of the Hungarian National Museum. [M.A. 10-510.]

Pyrandine. B. W. Anderson, 1947. *Journ. Gemmology*, London, vol. 1, no. 2, p. 15. A contraction of pyrope and almandine for gem garnets of intermediate composition. (Cf. rhodolite, 2nd List; pyralmandite and pyralspite, 11th List.) [M.A. 10-102.]

Rashleighite. A. Russell, 1948. *Min. Mag.*, vol. 28, p. 353. Hydrous phosphate of aluminium, ferric iron, and copper, intermediate between turquoise and chalcosiderite, as blue to green encrustations from Cornwall. Named after the Cornish mineralogist Philip Rashleigh (1729-1811).

Renierite. J. F. Vaes, 1948. *Ann. (Bull.) Soc. Géol. Belgique*, vol. 72 (for 1948-9), p. B 19 (reniérite). Sulphide of Cu, Fe, Ge (7.75 %), Zn, As, near RS, tetrahedral-cubic, from Katanga. Named after Prof. Armand Renier, Director of the Geological Survey of Belgium. Near germanite. [M.A. 10-454.]

Retgersite. C. Frondel and C. Palache, 1948. *Program and Abstracts Min. Soc. Amer.*, 29th Annual Meeting, p. 6; *Bull. Geol. Soc. Amer.*, vol. 59, p. 1323. *Amer. Min.*, 1949, vol. 34, pp. 188, 276. Nickel sulphate hexahydrate, $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$, tetragonal trapezohedral, long known as an artificial salt, has been recognized as a natural mineral at five localities, in association with morenosite (orthorhombic, $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$). Named after Jan Willem Retgers (1856-1896), Dutch chemical crystallographer. [M.A. 10-452, 506.]

Richetite. J. F. Vaes, 1947. *Ann. (Bull.) Soc. Géol. Belgique*, vol. 70, p. B 221. Hydrous (?) lead uranate as black monoclinic plates, from Katanga. Named in memory of Emile Richet, died 1939, chief geologist of the Union Minière du Haut-Katanga. [M.A. 10-146.]

Rooseveltite. R. Herzenberg, 1946. *Boletín Técnico, Fac. Nac. Ingeniería, Univ. Técnica, Oruro*, no. 1, p. 10 (Rooseveltita). Bismuth arsenate, BiAsO_4 , as a white coating on wood-tin from Santiaguillo, Bolivia. Named after Franklin Delano Roosevelt (1882-1945), President of the United States of America. [M.A. 10-9.]

Sanmartinite. V. Angelelli and S. G. Gordon, 1948. *Notulae Naturae, Acad. Sci. Philadelphia*, no. 205. Zinc tungstate, near ZnWO_4 with small amounts of Fe, Mn, Ca, as minute monoclinic crystals very similar to wolframite; from San Martin, prov. San Luis, Argentina. Named from the locality, which in turn was named after the liberator José de San Martin (1778-1850). [M.A. 10-353.]

Schmölnitzit. R. Koechlin, *Min. Taschenb. Wien. Min. Gesell.*, 2nd edit., 1928. Another form of szomolnokite (5th List), named from the locality in Slovakia: Szomolnok in Hungarian, Schmölnitz in

German, and Smolnik in Slovak. Evidently identical with ferropallidite, $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ (3rd List).

Schuilिंगite. J. F. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 233. Carbonate of lead and copper as blue orthorhombic needles from Katanga. Named after H. J. Schuilिंग, geologist to the Union Minière du Haut-Katanga. [M.A. 10-147.]

Scorzalite. W. T. Pecora and J. J. Fahey, 1947. Program and Abstracts, 28th Annual Meeting, Min. Soc. Amer., p. 18; Bull. Geol. Soc. Amer., vol. 58, p. 1216; Amer. Min., 1948, vol. 33, p. 205 (abstract); Mineração e Metalurgia, 1948, vol. 13, p. 53; Amer. Min., 1949, vol. 34, p. 83. Hydrous phosphate, $\text{Al}_2\text{O}_3 \cdot (\text{Fe}, \text{Mg})\text{O} \cdot \text{P}_2\text{O}_5 \cdot \text{H}_2\text{O}$, blue, monoclinic, differing from lazulite in having FeO in excess of MgO. From Divino, Brazil. Also from Custer, South Dakota (W. T. Pecora and J. J. Fahey, Amer. Min., 1949, vol. 34, p. 282). Named after Dr. Evaristo Pena Scorza, of the Mineral Survey of Brazil. [M.A. 10-254, 456, 507.]

Selenio-siegenite. J. F. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 231 (Sélénio-Siegenite). A variety of siegenite containing Se 11.65, Te 3.80 %, $(\text{Ni}, \text{Co}, \text{Cu})_3(\text{S}, \text{Se}, \text{Te})_4$, from Katanga. [M.A. 10-147.]

Selenio-vaesite. J. F. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 229 (Selenio-Vaesite), p. B 230 (Sélénio-Vaesite). A variety of vaesite (17th List) containing Se 13.70-19.70 %, $\text{Ni}(\text{S}, \text{Se})_2$, from Katanga. [M.A. 10-146.]

Selenojarosite. A. E. Fersman and O. M. Shubnikova, Sputnik geokhimiķa i mineraloga, Acad. Sci. U.S.S.R., 1937, p. 197 (селен(о) ярозит). B. K. Breshenkov, Compt. Rend. (Doklady) Acad. Sci. URSS, 1946, vol. 52, p. 329 (selenojarosite). Jarosite with some SO_3 replaced by SeO_3 (0.20 %) from Altai and Kazakhstan. [M.A. 2-113, 7-6, 10-248.]

Sengierite. J. F. Vaes and P. F. Kerr, 1949. Amer. Min., vol. 34, p. 109. (The name first appeared in newspapers in October 1948.) $2\text{CuO} \cdot 2\text{UO}_3 \cdot \text{V}_2\text{O}_5 \cdot 10\text{H}_2\text{O}$, as small green orthorhombic crystals from Katanga, Belgian Congo, Related to carnotite and tyuyamunite. Named after Edgard Sengier, Director of the Union Minière du Haut-Katanga. [M.A. 10-507.]

Shishimskite. L. L. Shilin, 1940. Compt. Rend. (Doklady) Acad. Sci. URSS, 1940, vol. 28, p. 346. An ore mixture of perovskite, spinel, magnetite, and haematite from the Shishim Mts., Urals. [M.A. 8-174.]

Souxite. R. Herzenberg, 1946. Boletín Técnico, Fac. Nac. Ingeniería, Univ. Técnica, Oruro, no. 1, p. 5. Hydrous tin oxide, $\text{SnO}_2 \cdot x\text{H}_2\text{O}$, as a

yellow colloidal powder from Potosí, Bolivia. Named after the late Louis Soux of Potosí. Compare Varlamoffite (q.v.). [M.A. 10-9.]

Souzalite. W. T. Pecora and J. J. Fahey, 1947. Program and Abstracts, 28th Annual Meeting, Min. Soc. Amer., p. 18; Bull. Geol. Soc. Amer., vol. 58, p. 1216; Amer. Min., 1948, vol. 33, p. 205 (abstract); *Mineração e Metalurgia*, 1948, vol. 13, p. 53; Amer. Min., 1949, vol. 34, p. 83. Hydrous phosphate, $(Al,Fe)_2O_3 \cdot 3(Mg,Fe)O \cdot 2P_2O_5 \cdot 5H_2O$, green, fibrous, monoclinic (?); an alteration product of scorzalite (q.v.) from Divino, Brazil. Named after Dr. Antonio José Alves de Souza, formerly director of the Mineral Survey of Brazil. [M.A. 10-254, 456, 507.]

Stannopalladinite. I. N. Maslennitsky, P. V. Faleev, and E. V. Iskyul, 1947. Doklady Acad. Sci. USSR, vol. 58, p. 1137 (станнопалладинит). Cubic alloy of tin and palladium, Pd_3Sn_2 , with some Pt and Cu. [M.A. 10-453.]

Stibioniobite. R. Koechlin, Min. Taschenb., Wien. Min. Gesell., 2nd edit., 1928, p. 60 (Stibioniobit). Syn. of stibiocolumbite (7th List).

Strontium-arsenapatite. H. Strunz, Min. Tab., 1941, p. 156 (Strontiumarsenapatit). Syn. of fermorite (5th List).

Studtite. J. F. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 223. Hydrous uranium carbonate as yellow flexible fibres, orthorhombic, from Katanga. Named after F. E. Studt, geologist, Tanganyika Concessions. [M.A. 10-146.]

Swartzite. J. Axelrod, F. Grimaldi, C. Milton, and K. J. Murata, 1948, Program and Abstracts, Min. Soc. Amer., 29th Annual Meeting, p. 4; Bull. Geol. Soc. Amer., vol. 59, p. 1310; Amer. Min., 1949, vol. 34, p. 274. Hydrous calcium-magnesium-uranyl carbonate. $CaMgUO_2(CO_3)_3 \cdot nH_2O$, from Arizona. Named after Charles Kephart Swartz (1861-) Emeritus Professor of Geology, Johns Hopkins University. [M.A. 10-452.]

Teshirogillite. Local name for ilmenorutile from Teshirogi, Fukushima-ken, Japan. T. Ito and K. Sakurai, Wada's Minerals of Japan, 3rd edition, 1947, vol. 1, p. 211 (figs. 3 and 4), p. 212 (two chemical analyses). [M.A. 10-351.]

Thermitocorundum. R. L. Pevzner, 1947. Compt. Rend. (Doklady) Acad. Sci. URSS, vol. 55, p. 233. Artificial corundum prepared by the thermite process. [M.A. 10-259.]

Thermitospinel. R. L. Pevzner, 1947. Compt. Rend. (Doklady) Acad. Sci. URSS, vol. 55, p. 233. Artificial spinel prepared by the thermite process. [M.A. 10-259.]

Tinticite. B. Stringham, 1946. Amer. Min., vol. 31, p. 395. Hydrated basic ferric phosphate, $2\text{FePO}_4 \cdot \text{Fe}(\text{OH})_3 \cdot 3\frac{1}{2}\text{H}_2\text{O}$, as a compact creamy-white wall-coating in a limestone cave at Tintic, Utah. Named from the locality. [M.A. 10-5.]

Titanspinel. F. Mogensen, 1943. See Ulvöspinel.

Ulvöspinel. F. Mogensen, 1943. Blad för Bergshandteringens Vänner, Stockholm, vol. 26, p. 135 (Ulvöspinellen), p. 134 (titanspinell). A titaniferous iron-ore in which a large excess of FeO is assumed to be present as Fe_2TiO_4 with a spinel structure. Named from the locality, Ulvö islands, Sweden. In a later paper, F. Mogensen, Geol. För. Förh. Stockholm, 1946, vol. 68, p. 578, these two names are replaced by 'ferro-ortho-titanate'. [M.A. 10-6, 101.]

Vandendriesscheite. J. F. Vaes, 1947. Ann. (Bull.) Soc. Géol. Belgique, vol. 70, p. B 217. Hydrous lead uranate as amber-orange orthorhombic crystals resembling fourmarierite, from Katanga. Named in memory of Adrien Vandendriessche (1914-40) of Ghent. [M.A. 10-146, 255.]

Varlamoffite. R. De Dycker, 1947. H. Buttgenbach, Les minéraux de Belgique et du Congo Belge, Liège, 1947, p. 182. N. Varlamoff, Ann. (Bull.) Soc. Géol. Belgique, 1948, vol. 71 (for 1947-8), pp. B 224, B 226, B 232; *ibid.*, 1948, vol. 72 (for 1948-9), p. B 41. Metastannic acid, H_2SnO_3 , as a yellow earthy material from alteration of stannite, from Kalima, Belgian Congo. Named after Nicolas Varlamoff, mining engineer, Belgian Congo, who found the mineral. Compare Souxite (q.v.). [M.A. 10-354, 454, 495.]

Wathlingenite. [C. Prager, 1923]. Student's index to the collection of minerals, British Museum, 27 edit., 1936, p. 37 (Wathlingite, Wathlingenite), from dealers' labels in 1923 and 1930. Described as $\text{CaSO}_4 \cdot \text{MgSO}_4 \cdot \text{H}_2\text{O}$, from salt deposits at Wathlingen, near Celle in Hanover. Probably a mixture of anhydrite and kieserite.

Weddellite. C. Frondel and E. L. Prien, 1942. Science (Amer. Assoc. Adv. Sci.), vol. 95, p. 431; E. L. Prien and C. Frondel, Journ. Urology, Baltimore, 1947, vol. 57, p. 965. Calcium oxalate, $\text{CaC}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$, described by F. A. Bannister and M. H. Hey [M.A. 6-341] in deep-sea deposits from the Weddell Sea, Antarctic, and also present in urinary calculi. [M.A. 10-40, 215.]

Wisaksonite. J. H. Druif, 1948. Mededeel. Algem. Proefstation Landbouw. (Communic. General Agricultural Experiment Station), Buitenzorg, Java, 1948, no. 69, p. 8. Clear green metamict zircon as minute crystals in river sands from Celebes. Named after Wisaksono Wirjodihardjo, of the Institute for Soil Reserach, Buitenzorg. [Metamict

zircon has been previously referred to as α -zircon, meta-zircon, pseudo-zircon, zirconoid, low-zircon, low-density zircon. Min. Mag. **14-48**, M.A. 7-130-1, 522-3, 8-123.] [M.A. 10-455.]

Yttroniobite. H. Strunz, Min. Tab., 1941, p. 107 (Yttroniobit). Syn. of yttracolumbite.

Zinc-aragonite. A. K. Boldyrev, Kurs opisatelnoi mineralogii, Leningrad, 1928, pt. 2, p. 202 (цинкараронит). H. Strunz, Min. Tab., 1941, p. 118 (Zinkararonit). Syn. of nicholsonite (6th List).

SYSTEMATIC CLASSIFICATION OF NEW MINERALS¹

<p style="text-align: center;">ELEMENTS</p> <p>Stannopalladinite, Pd₃Sn₂.</p> <p style="text-align: center;">SULPHIDES, ETC.</p> <p>Achavalite, FeSe. Erohbergite, FeTe₂. Csiklovaitc, Bi₂TeS₂. Selenio-vaesite, Ni(S,Se)₂. Selenio-siegenite, (Ni,Co,Cu)₃(S,Se,Te)₄. Parajamesonite, 4PbS.FeS.3Sb₂S₃. Dervillite, S, Sb, Pb. Renierite, S, Cu, Fe, Ge, &c.</p> <p style="text-align: center;">HALOIDS</p> <p>Paragearksutite, 4CaF₂.4Al(F,OH)₃.3H₂O. Bromcarnallite. Ammonium-cryolite.</p> <p style="text-align: center;">OXIDES</p> <p>Monteponite, CdO. Nigerite, (Zn,Mg,Fe'')(Sn,Zn)₂ (Al,Fe''')₁₂O₂₂(OH)₂.</p> <p style="text-align: center;">HYDROXIDES</p> <p>Souxite, SnO₂.xH₂O. Varlamoffite, H₂SnO₃. Hydrohausmannite. Paraschoepite, 5UO₃.9½H₂O. Epianthinite, UO₃.xH₂O. Merumite, Cr₂O₃, Al₂O₃, H₂O.</p> <p style="text-align: center;">CARBONATES</p> <p>Fairchildite, K₂CO₃.CaCO₃. Buetschliite, 3K₂CO₃.2CaCO₃.6H₂O. Andersonite, Na₂CaUO₂(CO₃)₃.nH₂O.</p>	<p>Bayleyite, Mg₂UO₂(CO₃)₃.nH₂O. Swartzite, CaMgUO₂(CO₃)₃.nH₂O. Diderichite, U, H₂O. Studtite, U, H₂O. Schuilingite, Pb, Cu.</p> <p style="text-align: center;">URANATES</p> <p>Aldanite, ThO₂, UO₂, UO₃, PbO. Billietite, Ba, H₂O. Masuyite, Pb, H₂O. Richtite, Pb, H₂O? Sengierite, 2CaO.2UO₃.V₂O₅.10H₂O. Vandendriesscheite, Pb, H₂O.</p> <p style="text-align: center;">SULPHATES</p> <p>Retgersite, NiSO₄.6H₂O. Basaluminite, 2Al₂O₃.SO₃.10H₂O. Hydro-basaluminite. Koktaite, (NH₄)₂Ca(SO₄)₂.H₂O. Aluminocopiapite. Barytoanglesite. Pulzkyite, Cu, Mg.</p> <p style="text-align: center;">TUNGSTATES</p> <p>Sanmartinite, ZnWO₄. Anthoinite, Al₂O₃.2WO₃.3H₂O. Calcowulfenite. Molybdoscheelite.</p> <p style="text-align: center;">PHOSPHATES, ETC.</p> <p>Rooseveltite, BiAsO₄. Scorzalite, Al₂O₃.(Fe,Mg)O.P₂O₅.H₂O. Souzalite, (Al,Fe)₂O₃.3(Mg,Fe)O.2P₂O₅.5H₂O. Tinticite, 2FePO₄.Fe(OH)₃.3½H₂O. Llallagualite. Patiñoite. Rashleighite.</p>
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¹ Only selected names given in the preceding alphabetical list are here included.

	NIOBATES	Eulite (orthopyroxene).
Fersmite, CaNb_2O_5 , &c.		Lime-bronzite.
Nuevite, Nb, Ti, Yt, Fe.		Ferroactinolite, &c.
	ANTIMONATES	Heikkolite (alkali-amphibole).
		Pyrandine (garnet).
Jujuyite, Sb, Fe.		Ammonium-mica.
	TELLURITES	Mavinite (mica).
		Loughlinitite, $\text{MgSi}_2\text{O}_5 \cdot \text{aq}$.
Dunhamite, $\text{PbO} \cdot \text{TeO}_2$?		Giannettite, Si, Ti, Zr, Cl, Ca, Na, Mn.
	BORATES	Pennaite, Si, Ti, Zr, Cl, Na, Ca, Fe.
Johachidolite,		Fluor-chondrodite.
' $\text{H}_6\text{Na}_2\text{Ca}_2\text{Al}_4\text{F}_5\text{B}_6\text{O}_{20}$ '		Fluor-norbergite.
	SILICATES	Magnesium-cordierite.
Bredigite, α' - Ca_2SiO_4 .		Manganese-cordierite.
Manganese-anorthite.		Apoanalcite, $\text{NaAl}(\text{Al},\text{Si})\text{SiO}_6 \cdot 1\frac{1}{2}\text{H}_2\text{O}$.
Beryllium-felspar.		Manganonatroilite.
Cymrite, $\text{BaAlSi}_3\text{O}_8(\text{OH})$.		Falkensteinite (zeolite).
Harkerite, Ca, B, CO_3 , SiO_2		Kurtzite (zeolite).
Bowleyite,		Perplexite (zeolite).
$3(\text{Ca},\text{Be})\text{O} \cdot 2\text{Al}_2\text{O}_3 \cdot 3\text{SiO}_2 \cdot 2\text{H}_2\text{O}$		Ferrimontmorillonite.
		Lembergite (clay).
		HYDROCARBONS
		Weddellite, $\text{CaC}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$.
Duplexite,		Calclacite, $\text{CaCl}_2 \cdot \text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 10\text{H}_2\text{O}$.
$6\text{CaO} \cdot 4\text{BeO} \cdot \text{Al}_2\text{O}_3 \cdot 14\text{SiO}_2 \cdot 2\text{H}_2\text{O}$		Harbolite.