Eighth list of new mineral names.[1]

By L. J. Spencer, M.A., F.G.S.

Assistant in the Mineral Department of the British Museum.

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Adamite. (Mineral Resources, U.S. Geol. Survey, for 1903, 1904, p. 1015; Thorpe's Dictionary of Applied Chemistry. 2nd edit., 1912, vol. i, p. 47; The Mineral Industry, New York, 1917, vol. xxv for 1916, p. 31). Trade-name for artificial corundum manufactured for abrasive purposes. Compare Alundum (fifth list) and Aloxite (seventh list). Not the Adamite of C. Friedel, 1866.

Ambatoarinite. A. Lacroix, 1916. Bull. Soc. franç. Min., vol. xxxviii (for 1915), p. 265. An orthorhombic carbonate of cerium metals and strontium, $5SrCO_3 . 4(Ce,La,Di)_2(CO_3)_3 . (Ce,La,Di)_2O_3$, occurring with celestite, monazite, felspar, &c., as a constituent of a crystalline limestone at Ambatoarina, Madagascar. Compare Ancylite (G. Flink, 1900; second list).

Amosite. A. L. Hall, 1918. Geol. Survey S. Africa, Mem. No. 12, p. 20 et seq.; Trans. Geol. Soc. S. Africa, 1919, vol. xxi, p. 8. A monoclinic amphibole-asbestos rich in iron (FeO 32–44 per cent.) sometimes

[1] Previous lists of this series have been given at the ends of vols. xi–xvii (1897–1916) of this Magazine. A few older names, not given in Dana (System of Mineralogy, 6th edit., 1892) or Chester (Dictionary of the names of minerals, 1896), are also included.

A long list of names of gem-minerals has recently been published by W. T. Schaller ('Gems and precious stones in 1917.' Mineral Resources, United States Geol. Survey, for 1917, 1918, part II, pp. 147–168). Many of these are quite trivial and have been introduced solely for trade purposes. Only a selection of them, for which bibliographical references could be traced, are included in the present list. One is inclined to deal with such names in the manner of Adam Littleton, who in the preface to his 'Latine Dictionary' (London, 1678) writes: 'As to the Chymical terms of Paracelsus, (which have formerly pestered Latinity) and other strange words used by men of his Tribe, which have no affinity with Latine or Greek, they are wholly omitted, and not so much as set down amongst the Barbarous.'

containing sodium, and near to cummingtonite and grünerite in composition. Material of commercial quality occurs in large amount over a wide area in the Lydenburg and Pietersburg districts, Transvaal. Named from the Amosa asbestos mine, this word being formed of the initial letters of the company 'Asbestos Mines of South Africa'.

Apricotine. (D. B. Sterrett, Mineral Resources, U.S. Geol. Survey, for 1909, 1911, part ii, p. 802; W. T. Schaller, ibid., for 1917, 1918, part ii, p. 148.) Trade-name for yellowish-red, apricot-coloured quartz pebbles from near Cape May, New Jersey, used as gem-stones.

Arsenobismite. A. H. Means, 1916. Amer. Journ. Sci., ser. 4, vol. xli, p. 127 (Arseno-Bismite). A hydrated bismuth arsenate, $2Bi_2O_3.As_2O_5.2H_2O$, forming yellowish-green crystalline aggregates in a mixed friable ore from the Mammoth mine, Tintic district, Utah. This formula is deduced from a very unsatisfactory analysis, and the characters as given are not sufficient to distinguish the supposed new mineral from atelestite and rhagite. The name, which is suggested by the chemical composition, is not intended to imply an arsenical variety of bismite.

Auxite. E. W. Hilgard, 1916. Proc. National Acad. Sci. U.S.A., vol. ii, p. 11. A name suggested, but discarded in favour of Lucianite (q. v.). From αὔξω, to increase.

Bariohitchcockite. E. T. Wherry, 1916. Proc. U.S. Nat. Museum, vol. li, p. 88. Taking the name hitchcockite (C. U. Shepard, 1856) [= plumbogummite] for the group-name of the isomorphous series of minerals with the general formula $R'_2O.3Al_2O_3.2P_2O_5.8H_2O = R'_2H_4[Al(OH)_2]_6(PO_4)_4$, the several end-members become: when $R' = \frac{1}{2}Ba$, bariohitchcockite (= gorceixite); when $R' = \frac{1}{2}Sr$, strontiohitchcockite (= hamlinite = goyazite); when R′ = K, kaliohitchcockite; and when R′ = Na, natrohitchcockite. The last two of these salts have been met with in only small proportions in isomorphous mixtures.

Basobismutite. K. A. Nenadkevich, 1917. Bull. Acad. Sci. Pétrograd, ser. 6, vol. xi (1), p. 454 (базобисмутитъ). A basic bismuth carbonate, $2Bi_2O_3.CO_2.H_2O$, from Transbaikal, Siberia.

Belgite. R. Panebianco, 1916. Riv. Min. Crist. Italiana, vol. xlvii, p. 13 (Belgito). Synonym of willemite (Zn_2SiO_4), which was named by A. Lévy in 1830 after William I (1772–1844), king of the Netherlands. Writing in Esperanto, the author objects to naming minerals after kings,

preferring a name derived from the locality. He, however, overlooks the fact that this mineral is not from Belgium, but from the neutral state of Moresnet.

Brazilite.

(1) Used commercially since about 1884 for an oil-bearing rock from Bahia (L. Fletcher, Mineralogical Magazine, 1893, vol. x, p. 160).

(2) E. Hussak, 1892 (first list), synonym of baddeleyite, monoclinic zirconia, ZrO_2.

(3) Used commercially since about 1916 for the fibrous, mamillated form of zirconia, which is perhaps distinct from baddeleyite (H. C. Meyer, Mineral Foote-Notes, Philadelphia, March 1917, p. 2; W. T. Schaller, ibid., March 1918, p. 2; E. H. Rodd, Journ. Soc. Chem. Industry, 1918, vol. xxxvii, p. 213 R). *See* Caldasite and Zirkite.

Caldasite. O. A. Derby in T. H. Lee, 1917. Revista Soc. Brasileira Sci., No. 1, p. 31; Amer. Journ. Sci., 1919, vol. xlvii, p. 126. Zirconia-ore or rock consisting mainly of baddeleyite or of a mixture of zircon and orvillite (q. v.), from the Caldas district, Minas Geraes, Brazil. *See* Zirkite.

Carbonate-apatite. R. Brauns, 1916. Neues Jahrb. Min., Beilage-Band xli, pp. 60, 73 (Carbonatapatit). A member of the apatite group with the composition $3Ca_3P_2O_8 . CaCO_3$. The same as carbapatite (P. N. Chirvinsky, 1906; fourth list: = podolite = dahllite). Crystals from the Laacher See district, Rhine, are, however, said to differ from these in having an optically *positive* biaxial shell surrounding an optically negative uniaxial nucleus. *See* Sulphate-apatite.

Carbonate-sodalite. R. Brauns, 1916. Neues Jahrb. Min., Beilage-Band xli, p. 73 (Carbonatsodalith). A hypothetical molecule assumed to explain the presence of carbonic acid (CO_2 1·27 per cent., together with Cl 1·08 and SO_3 7·97) in noselite from the Laacher See, Rhine.

Catoptrite. *See* Katoptrite.

Celedonite. M. F. Heddle, The Mineralogy of Scotland, Edinburgh, 1901, vol. i, p. 60; vol. ii, p. 145. An incorrect spelling of Celadonite.

Cerulene. (Review of Mining Operations, South Australia, for 1910, 1911, No. 13, p. 9.) Trade-name for a form of calcium carbonate coloured green and blue by malachite and chessylite; found near Bimbowrie, South Australia, and used as a gem-stone. Named from the Latin, *caeruleus*, sky-blue.

Chubutite. H. Corti, 1918. Anal. Soc. Quim. Argentina, vol. vi, p. 65; E. Rimann, ibid., p. 323 (Chubutita). A reddish-yellow, tetragonal (?) oxychloride of lead, $7PbO.PbCl_2$, from Chubut, Argentina. Evidently identical with Lorettoite (q. v.).

Clarain. M. C. Stopes, 1919. *See* Fusain.

Cochranite. J. E. Stead, 1918. Journ. Iron and Steel Inst., vol. xcvii, p. 171. Artificially-produced titanium dicyanide, $Ti(CN)_2$, found as minute, dark-blue cubes in blast-furnace 'bears'. It was first found in quantity by Mr. Alfred O Cochrane at the iron-works of Messrs. Cochrane & Co., at Ormesby near Middlesborough.

It is formed under the same conditions, and sometimes together with, the copper-red cubes of titanium cyano-nitride, $Ti(CN)_2.3Ti_3N_2$. This was named *sorbite* (after Henry Clifton Sorby, 1826–1908) by H. M. Howe (1890), a term afterwards withdrawn, as the same name was given by F. Osmond (1895) for one of the transition conditions in carbon-steel. A sugar also bears the name sorbite (from Lat. *Sorbus*, the service-tree).

Colerainite. E. Poitevin and R. P. D. Graham, 1918. Canada, Geol. Survey, Museum Bulletin, No. 27, p. 66; E. Poitevin, Trans. Roy. Soc. Canada, 1918, ser. 3, vol. xii, sect. iv and v, p. 37. Hydrated silicate of magnesium and aluminium, $4MgO.Al_2O_3.2SiO_2.5H_2O$, forming colourless, thin, hexagonal (optically uniaxial) crystals which are usually aggregated in white rosettes or botryoidal forms; occurs as veins in serpentine. Named from the locality, Coleraine township, Megantic Co., Quebec.

Collbranite. D. F. Higgins, 1918. Economic Geology, vol. xiii, p. 19. A black acicular mineral forming stellar aggregates in crystalline limestone in the Suan mining district, central Korea. It was identified by B. Kotô (1910) as ilvaite; the microscopical characters, however, suggest a highly ferriferous pyroxene of the hedenbergite type, possibly near $FeSiO_3$, but no analysis is given. Named after Mr. H. Collbran and his son A. H. Collbran, of the Suan mine.

Cornetite. H. Buttgenbach, 1916. Les Minéraux et les Roches, Liège, p 452 (Cornètite), p. 521 (cornétite). Described, but without name, by G. Cesàro, Annales Soc. Géol. Belgique, 1912, vol. xxxix, Bull. p. 241; Annexe to vol. xxxix (Publ. relatives au Congo Belge), p. 41. Phosphate of copper and cobalt occurring as small, blue, orthorhombic crystals in l'Étoile du Congo copper mine, Katanga, Belgian Congo. Named after the Belgian geologist Jules Cornet.

Cornuite. A. F. Rogers, 1917. Journ. Geol. Chicago, vol. xxv, p. 537. A glassy, green or bluish-green copper silicate, $m\mathrm{CuO} . n\mathrm{SiO_2} . x\mathrm{H_2O}$, the amorphous equivalent of chrysocolla (of which microcrystalline and crystallized material is known). Named in memory of Dr. Felix Cornu (1882–1909), who wrote on colloidal minerals.

Crandallite. G. F. Loughlin and W. T. Schaller, 1917. Amer. Journ. Sci., ser. 4, vol. xliii, p. 69. A hydrated phosphate of calcium and aluminium, $\mathrm{CaO} . 2\mathrm{Al_2O_3} . \mathrm{P_2O_5} . 5\mathrm{H_2O}$, forming compact, greyish masses with fibrous structure and probably resulting from the alteration of goyazite. From the Tintic district, Utah. Named after Mr. M. L. Crandall, mining engineer of Provo, Utah.

Creedite. E. S. Larsen and R. C. Wells, 1916. Proc. Nat. Acad. Sci. U.S.A., vol. ii, p. 362. Hydrated fluoride and sulphate of calcium and aluminium, $2\mathrm{CaF_2} . 2\mathrm{Al(F,OH)_3} . \mathrm{CaSO_4} . 2\mathrm{H_2O}$, the formula being the same as that of gearksutite (with which the new mineral occurs) with the addition of $\mathrm{CaSO_4}$. The cleavages and optical characters point to monoclinic symmetry. Occurs as white to colourless grains embedded in kaolinite near Wagon Wheel Gap, Colorado. This locality lies near the centre of the Creede quadrangle of the United States Geological Survey; hence the name.

Crestmoreite. A. S. Eakle, Bull. Dep. Geol. Univ. California, vol. x, p. 344. Hydrated calcium silicate, perhaps $\mathrm{CaSiO_3} . \mathrm{H_2O}$, occurring as compact, snow-white masses as an alteration product of wilkeite (7th list) in blue calcite at Crestmore, Riverside Co., California. Named after the locality.

Crystolon. (The Mineral Industry, New York, 1913, vol. xxi, for 1912, p. 774. Mineral Resources, U.S. Geol. Survey, for 1914, 1915, part ii, p. 568.) Trade-name for an artificially-produced crystalline carbide of silicon, CSi, used for abrasive purposes. *See* Carborundum (fourth list).

Deodatite. K. W. Nose, 1790. Orographische Briefe über das Siebengebirge (Niederrheinische Reise), Frankfurt am Mayn, 1790, part 2, p. 198; Beschreibung einer Sammlung von meist vulkanischen Fossilien die Deodat-Dolomieu im Jahre 1791 von Maltha aus . . . versandt, Frankfurt a. M., 1797, pp. 27, 43, 80; Revision des Beschlusses der Kritik über die Theorie der Geologie, Bonn, 1835, p. 7. A bluish mineral found in the trass of the Lower Rhenish district, at first regarded as perhaps the same as prehnite, and by some authors referred to

pleonaste or hatlyne (J. R. Zappe, Mineralogisches Hand-Lexicon, Wien, 1817, vol. i, p. 257). In 1797 Nose, apparently extending the use of the name to other substances, considered deodatite to be identical with pitchstone, at the same time changing the name to *dolomian*. Both names, now obsolete, are after Déodat G. S. T. G. de Dolomieu (1750–1801).

Doelterite. A. Lacroix, 1913. Nouv. Arch. Muséum Hist. Nat. Paris, ser. 5, vol. v, p. 334 (dœltérites). The titanium dioxide commonly shown in analyses of laterites is presumably present in a hydrated colloidal form: when soluble in hydrochloric acid it is perhaps the ortho-titanic acid H_4TiO_4, or, when soluble only in sulphuric acid, the meta-titanic acid H_2TiO_3. This constituent of laterite is not visibly recognizable even under the microscope. Named after Professor Cornelius August Doelter y Cisterich, of Vienna. Compare Paredrite.

Durain. M. C. Stopes, 1919. *See* Fusain.

Eakleite. E. S. Larsen, 1917. Amer. Journ. Sci., ser. 4, vol. xliii, p. 464. A pale pink, fibrous mineral from California resembling pectolite in appearance and perhaps a calcium pectolite, $5CaO . 5SiO_2 . H_2O$. Named after Professor Arthur Starr Eakle, of the University of California.

Ectropite. *See* Ektropite.

Eisenanthophyllit. *See* Iron-anthophyllite.

Ektropite. G. Flink, 1917. Geol. För. Förh., vol. xxxix, p. 426 (Ektropit). Abstracts in Amer. Journ. Sci., 1917, vol. xliv, p. 484, and Amer. Min., 1917, vol. ii, p. 128 give the spelling Ectropite. Hydrated silicate of manganese, with some magnesium, ferrous iron, and calcium, $12RO . 8SiO_2 . 7H_2O$, forming small, brown, monoclinic crystals of tabular rectangular habit. Occurs with garnet in magnetite in the Norrbotten iron mine at Långban, Sweden. Named from ἐκτροπή, a turning aside, an evasion, on account of the difficulty experienced in determining the characters.

El Doradoite. S. L. Watkins, 1912. [Los Angeles Mining Review, January 13, 1912]; American Mineralogist, 1917, vol. ii, p. 26. Trade-name for a blue variety of quartz used as a gem-stone; from El Dorado Co., California. W. T. Schaller (Mineral Resources, U.S. Geol. Survey, for 1917, 1918, part ii, p. 153) spells the name Eldoradoite, and states it to be iridescent quartz.

Ferrierite. R. P. D. Graham, 1918. Trans. Roy. Soc. Canada, ser. 3, vol. xii, sect. iv and v, p. 185. A zeolitic mineral forming spherical

aggregates of white, pearly, orthorhombic blades, occurring with chalcedony and calcite in basalt at Kamloops Lake, British Columbia. Chemically, it is related to ptilolite and mordenite, but with magnesium in place of calcium, the formula being $(Mg,Na_2,H_2)_4Al_2(Si_2O_5)_5 . 6H_2O$. Named after Dr. Walter F. Ferrier, of Ottawa, who discovered the mineral.

Ferroludwigite. B. S. Butler and W. T. Schaller, 1917. *See* Magnesioludwigite.

Flokite. K. Callisen, 1917. Meddelelser Dansk Geol. For., vol. v, No. 9; Contributions to Mineralogy, Min. Geol. Museum Univ. Copenhagen, No. 16 (Flokit). A zeolite from Iceland, hitherto regarded as mesolite, forming slender, water-clear or pale yellowish-green, flattened, monoclinic crystals, with the composition $H_8(Ca,Na_2)Al_2Si_9O_{26} . 2H_2O$. Named after the viking, Floki Vilgerðarson.

Fornacite. A. Lacroix, 1916. Bull. Soc. franç. Min., vol. xxxix, p. 84. The correct form of Furnacite (A. Lacroix, 1915; compare seventh list), from the Latin *fornax*.

Framesite. (J. R. Sutton, Trans. Roy. Soc. South Africa, 1918, vol. vii, pp. 75, 95; Chem. News, 1919, vol. cxviii, pp. 39, 66.) A form of black diamond (bort) from South Africa. Material collected by Mr. P. Ross Frames at the Premier diamond mine, Transvaal, was described in detail by D. P. McDonald, Trans. Geol. Soc. South Africa, 1914, vol. xvi, p. 156.

Fusain. (C. Grand'Eury, Ann. des Mines, 1882, ser. 8, vol. i, Mém., p. 106; A. Lacroix, Minéralogie de la France, 1910, vol. iv, p. 651.) A name used by French geologists for a constituent of coal known as 'mineral charcoal' (Ger. Faserkohle). The name, from the Latin *fusus*, a spindle, is applied in French to the spindle-tree, to charcoal (especially that made from the wood of the spindle-tree), to charcoal crayons, and, lastly, to charcoal sketches.

Other visible constituents of banded bituminous coal are distinguished by their external characters and named by M. C. Stopes, Proc. Roy. Soc. London, 1919, ser. B, vol. xc, p. 472: *Durain*, dull, hard coal (Ger. Mattkohle): from the Latin *durus*, hard. *Clairain*, bright or glance coal (Ger. Glanzkohle); from the Latin *clarus*, bright. *Vitrain*, similar to the last, with conchoidal fracture and brilliant appearance; from the Latin *vitreus*, glassy, with the same termination as fusain in each case. The chemical characters of these materials have been determined by

F. V. Tideswell and R. V. Wheeler, Journ. Chem. Soc. London, 1919, Trans. vol. cxv, p. 619.

Geldiadochite, Gelfischerite, Gelpyrophyllite, Gelvariscite. F. Cornu, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 17 (Geldiadochit, Gelfischerit, Gel-Pyrophyllit, Gelvariscit); Zeits. prakt. Geol., 1909, vol. xvii, pp. 84, 144; Centralblatt Min., 1909, p. 330. A. F. Rogers, Journ. Geol. Chicago, 1917, vol. xxv, p. 522. The gel-forms equivalent to the crystalloid forms diadochite, &c. *See* Uhligite.

Gelfischerite.
Gelpyrophyllite.
Gelvariscite.
} F. Cornu, 1909. *See* Geldiadochite.

Geraesite. O. C. Farrington, 1912. Bull. Geol. Soc. America, vol. xxiii, p. 728. A preliminary abstract states this to be 'a hydrous barium aluminium phosphate more acidic than gorceixite', as the result of an analysis of a pebble ('fava') from the diamond washings of Minas Geraes, Brazil. Named after the locality. In the complete account (Amer. Journ. Sci., 1916, ser. 4, vol. xli, p. 356) the name does not appear, the material being evidently impure gorceixite.

Gilpinite. E. S. Larsen and G. V. Brown, 1917. American Mineralogist, vol. ii, p. 75. Hydrated sulphate of uranium with some copper, ferrous iron, &c., $RO.UO_3.SO_3.4H_2O$, occurring as minute, monoclinic laths on pitchblende from Gilpin County, Colorado. Differs from zippeite and uranopilite in its optical characters. Named after the locality.

Griffithite. E. S. Larsen and G. Steiger, 1917. Journ. Washington Acad. Sci., vol. vii, p. 11. A member of the chlorite group occurring as a filling in amygdaloidal cavities in basalt, and differing both optically and chemically from any chlorite previously described. Formula, $4(Mg,Fe,Ca)O.(Al,Fe)_2O_3.5SiO_2.7H_2O$. Named after the locality, Griffith Park, Los Angeles, California.

Hematogelite. (A. F. Rogers, Journ. Geol. Chicago, 1917, vol. xxv, pp. 523, 528.) An alternative spelling of Haematogelite, Hämatogelit (F. Tućan, 1913; sixth list).

Hibbenite. A. H. Phillips, 1916. Amer. Journ. Sci., ser. 4, vol. xlii, p. 276. A basic zinc phosphate identical in crystalline form, cleavage, and optical properties (so far as determined) with hopeite, occurring in intimate association with spencerite (q.v.) from Salmo in British Columbia. The formula, given as $2Zn_3(PO_4)_2.Zn(OH)_2.6\frac{1}{2}H_2O$, suggests that the

material analysed was a mixture of hopeite [$Zn_3(PO_4)_2 . 4H_2O$] and spencerite [$Zn_3(PO_4)_2 . Zn(OH)_2 . 3H_2O$]. Named after Dr. John Grier Hibben, President of Princeton University. Hopeite from this locality was subsequently independently described by T. L. Walker (Journ. Washington Acad. Sci., 1916, vol. vi, p. 685).

Högbomite. A. Gavelin, 1916. Bull. Geol. Inst. Univ. Upsala, vol. xv, p. 289 (Högbomit). Abstract in American Mineralogist, 1919, vol. iv, p. 76, gives the spelling Hoegbomite. A black, rhombohedral mineral occurring intimately intermixed with magnetite, ilmenite, and pleonaste in the iron-ores of Swedish Lapland. It resembles haematite in its physical characters, but approximates to pleonaste (iron-magnesia-spinel) in composition, $MgO . 2(Al_2O_3,Fe_2O_3,TiO_2)$. Named after Professor Arvid Gustaf Högbom, of Upsala.

Hydro-wollastonite. A. S. Eakle, 1917. Bull. Dep. Geol. Univ. California, vol. x, p. 348. A general term for the hydrated calcium metasilicates crestmoreite and riversideite (qq. v.).

Iolanthite. (D. B. Sterrett, Gems and precious stones in 1914, Mineral Resources, U.S. Geol. Survey, for 1914, 1915, part II, p. 823; W. T. Schaller, ibid., for 1917, 1918, part II, p. 155). Trade-name for a jasper-like mineral from Crooked River, Crook Co., Oregon, placed on the gem market by Mr. Don Maguire.

Iron-anthophyllite. C. H. Warren, 1903. Amer. Journ. Sci., ser. 4, vol. xvi, p. 341 (iron anthophyllite). An orthorhombic iron amphibole, $FeSiO_3$, found with fayalite at Rockport, Massachusetts; and later described and analysed (FeO 42·34 per cent.) from the rock eulysite at Tunaberg, Sweden (J. Palmgren, Bull. Geol. Inst. Univ. Upsala, 1917, vol. xiv, p. 133 (Eisenanthophyllit)).

Iron-sarcolite. W. T. Schaller, 1916. *See* Soda-sarcolite.

Kaliägirin. P. Niggli, 1913. Zeits. Anorg. Chem., vol. lxxxiv, p. 42. Artificially prepared potassium ferric metasilicate, $KFe'''(SiO_3)_2$, analogous to aegirite with potassium in place of sodium.

Kalioalunite. E. T. Wherry, 1916. Proc. U.S. Nat. Museum, vol. li, p. 82 (kalio-alunite), p. 83 (kalioalunite). Synonym of alunite. The potassium (kalium) end-member of the alunite isomorphous group $R_2'[Al(OH)_2]_6(SO_4)_4$, the sodium end-member being natroalunite (W. F. Hillebrand and S. L. Penfield, 1902; third list).

Kaliohitchcockite. E. T. Wherry, 1916. *See* Bariohitchcockite.

Katoptrite. G. Flink, 1917. Geol. För. Förh., vol. xxxix, p. 431 (Katoptrit). Abstracts in Amer. Journ. Sci., 1917, vol. xliv, p. 484, and Amer. Min., 1917, vol. ii, p. 129, give the spelling Catoptrite. Silico-antimonate of manganese, aluminium, &c.,

$$14(Mn,Mg,Fe)O \cdot 2(Al,Fe)_2O_3 \cdot Sb_2O_5 \cdot 2SiO_2,$$

forming monoclinic crystals with black colour and metallic lustre. There is a highly perfect cleavage parallel to the orthopinacoid. Occurs with magnetite in granular limestone at Nordmark, Sweden. Named from *κάτοπτρον*, a mirror, because of the brilliant lustre on the cleavage surface.

Leifite. O. B. Bøggild, 1915. Meddelelser om Grønland, vol. li, p. 427 (Leifit). A highly acidic fluo-silicate of sodium and aluminium, $Na_2Al_2Si_9O_{22} \cdot 2NaF$ or $Na_4(AlF)_2Si_9O_{22}$, occurring as colourless hexagonal prisms in the drusy alkali-pegmatite veins at Narsarsuk, Greenland. Named after the Scandinavian explorer Leif Ericsson (fl. 1000 A. D.).

Lithargite. E. T. Wherry, 1917. American Mineralogist, vol. ii, p. 19. The yellow, orthorhombic modification of lead monoxide, PbO, recognized as a mineral species from Austria and California by E. S. Larsen (ibid., p. 18), as distinct from the red, tetragonal modification called massicot or massicotite. The old name litharge with the mineralogical termination *ite*.

Lorettoite. R. C. Wells and E. S. Larsen, 1916. Journ. Washington Acad. Sci., vol. vi, p. 669. An oxychloride of lead, approximating to $6PbO \cdot PbCl_2$, forming honey-yellow, bladed masses with perfect basal cleavage and probably tetragonal. Named after the locality, Loretto, Tennessee. Compare Chubutite.

Lucianite. E. W. Hilgard, 1916. Proc. National Acad. Sci. U.S.A., vol. ii, p. 11. A clayey material consisting mainly of a colloidal hydrated magnesium silicate, which swells up to many times its original volume when immersed in water. Named from the locality, the hacienda Santa Lucia, near the City of Mexico. A. F. Rogers (Journ. Geol. Chicago, 1917, vol. xxv, p. 537) suggests that it is identical with stevensite, which he regards as the amorphous equivalent of talc. *See* Auxite.

Lusitanite. [T. L. Walker, 1916.] Summary Report, Geol. Survey, Dept. Mines, Canada, for 1916, 1917, p. 306. Named in memory of the disaster to the steamship *Lusitania*, but later withdrawn. Synonym of spencerite (q. v.).

The same name was applied by A. Lacroix (Compt. Rend. Acad. Sci.

Paris, 1916, vol. clxiii, p. 283) to an igneous rock—a mesocrate form of riebeckite-syenite—from Portugal, being named after the locality, Lusitania, a Roman province in the Iberian Peninsula.

Mackensite. F. Kretschmer, 1918. Neues Jahrb. Min., 1918, pp. 19, 23 (Mackensit (Schwarzeisenerz)); Archiv f. Lagerstätten-forschung, Berlin. A chloritic mineral approximating in composition to the hydrated ferric silicate, $Fe_2O_3 . SiO_2 . 2H_2O$, which is regarded as an end-member of the thuringite series. It occurs as iron-black to greenish-black compact masses in diabase and schalstein in northern Moravia and southern Silesia, where with thuringite, moravite (F. Kretschmer, 1906), and viridite (q. v.), it is mined as an ore of iron. The optical characters of the minute needles indicate monoclinic symmetry. Named after the German Field-Marshal, August von Mackensen.

Magnesioludwigite. B. S. Butler and W. T. Schaller, 1917. Journ. Washington Acad. Sci., vol. vii, p. 29. An ivy-green variety of ludwigite from Utah in which ferrous iron is largely replaced by magnesia, the formula being $MgO . Fe_2O_3 . 3MgO . B_2O_3$ with only about 15 per cent. of the corresponding ferrous compound *ferroludwigite* ($FeO . Fe_2O_3 . 3MgO . B_2O_3$).

Manganalmandine. J. Palmgren, 1917. Bull. Geol. Inst. Univ. Upsala, vol. xiv, p. 171 (Manganalmandin). A manganiferous garnet containing MnO 11·04, FeO 23·48, Al_2O_3 19·37 per cent., and thus intermediate between almandine and spessartite in composition.

Manganfayalite. C. Hintze, 1897. Handbuch der Mineralogie, vol. ii, p. 27 (Manganfayalit). A member of the olivine group between fayalite and knebelite in chemical composition. The name was first applied to an artificial product from a furnace slag; and later (J. Palmgren, Bull. Geol. Inst. Univ. Upsala, 1917, vol. xiv, p. 116) to a mineral from Sweden containing MnO 5–26·5 per cent., and with characters more like those of fayalite than knebelite.

Margarosanite. W. E. Ford and W. M. Bradley, 1916. Amer. Journ. Sci., ser. 4, vol. xlii, p. 159. A metasilicate of lead and calcium (with a little manganese replacing calcium), $PbCa_2(SiO_3)_3$, occurring at Franklin, New Jersey, as colourless and transparent lamellar masses with three good cleavages, the lustre being pearly on the best lamellar cleavage. Named from *μαργᾰρίτης*, a pearl, and *σᾰνίς*, a board, in reference to the pearly lustre and lamellar structure. Triclinic crystals and large masses of the same mineral were afterwards found at Långban, Sweden (G. Flink, Geol. För. Förh., 1917, vol. xxxix, p. 438).

Merrillite. E. T. Wherry, 1917. American Mineralogist, vol. ii, p. 119. A calcium phosphate belonging to the apatite group occurring in meteoric stones and identified by G. P. Merrill (Amer. Journ. Sci., 1917, ser. 4, vol. xliii, p. 322) as francolite, from which, however, it differs somewhat in its optical characters. Named after Dr. George Perkins Merrill, of the United States National Museum, Washington.

Minasite. O. C. Farrington, 1912. Bull. Geol. Soc. America, vol. xxiii, p. 728. Analysis of a pebble ('fava') from the diamond washings of Minas Geraes, Brazil, gave results suggesting at first a new aluminium hydroxide, $2Al_2O_3 . 3H_2O$. In the complete account (Amer. Journ. Sci., 1916, ser. 4, vol. xli, p. 360) this name is omitted and the material admitted to be impure. W. E. Ford (Amer. Journ. Sci., 1916, ser. 4, vol. xli, p. 569) incorrectly describes it as a hydrous aluminium phosphate. *See also* Geraesite. The two names from the locality Minas Geraes.

Mullanite. E. V. Shannon, 1918. Amer. Journ. Sci., ser. 4, vol. xlv, p. 66. A sulphantimonite of lead, $5PbS . 2Sb_2S_3$ (corresponding with the silver-lead diaphorite), occurring as acicular (orthorhombic ?) crystals and felted masses near Mullan in Idaho, and in western Montana. Named after Captain John Mullan, a pioneer road-maker in this region.

Natrohitchcockite. E. T. Wherry, 1916. *See* Bariohitchcockite.

Oliveiraite. T. H. Lee, 1917. Revista Soc. Brasileira Sci., No. 1, p. 31; Amer. Journ. Sci., 1919, vol. xlvii, p. 126; Chem. News, 1919, vol. cxviii, p. 125. Hydrated titanate of zirconium, $3ZrO_2 . 2TiO_2 . 2H_2O$, occurring as greenish-yellow, radially-fibrous masses with euxenite in Brazil. Named after the Brazilian geologist Dr. Francisco de Paula Oliveira.

Oruetite. S. Piña de Rubies, 1919. Anal. Soc. Española Fís. Quím., vol. xvii, p. 83 (Oruetita). A bismuth sulphotelluride, Bi_2TeS_4, occurring in the Serranía de Ronda, Spain, as brilliant steel-grey lamellar masses very like tetradymite in appearance. All the naturally occurring bismuth sulphotellurides (tetradymite, joseite, grünlingite, and ornetite) are regarded as eutectic mixtures of $Bi_2Te_3 . Bi_2S_3$ with Bi_2Te_3 and Bi_2S_3 and bismuth. Named after Domingo de Orueta, who collected the material.

Orvillite. T. H. Lee, 1917. Revista Soc. Brasileira Sci., No. 1, p. 31; Amer. Journ. Sci., 1919, vol. xlvii. p. 126; Chem. News, 1919, vol. cxviii, p. 125. Hydrated zirconium silicate, $8ZrO_2 . 6SiO_2 . 5H_2O$, occurring

with zircon in one variety of the zirconia-ore (*see* Caldasite and Zirkite) of the Caldas district, Brazil. It is evidently an altered zircon similar to those already described under various names. Named after Orville A. Derby (1851–1915), formerly director of the Geological Survey of Brazil.

Osmite. V. I. Vernadsky, 1909. Opuit Opisatelnoĭ Mineralogii, St. Petersburg, vol. i, pp. 248, 249 (Осмить); translation in Mining Journ. London, 1912, vol. xcviii, p. 851. Native osmium, perhaps present amongst the grains of crude iridosmine from Brazil and the Urals. In the Supplement, 1914, p. 752, the name is applied to an iridosmine from Borneo containing Os 80, Ir 10, Rh 5 per cent.

Paredrite. O. C. Farrington, 1916. Amer. Journ. Sci., ser. 4, vol. xli, p. 356. A black, compact form of titanium dioxide differing from rutile in containing a little water, 0·6 per cent. [not sufficient, however, to form a hydrate, and no doubt present as an impurity]. Named from πάρεδρος, an associate, on account of its association as 'favas' (bean-shaped pebbles) with the diamonds of Brazil. Compare Doelterite.

Pelinite. A. B. Searle, 1912. The Natural History of Clay, Cambridge Manuals of Science and Literature, 1912, pp. 83, 148, 149. An unidentified hydrated aluminium silicate, which is highly plastic and partly colloidal. The essential clay substance of the widely distributed, secondary (i.e. transported from their place of origin) plastic clays. The term is analogous to the term clayite (J. W. Mellor, 1909; 5th list), which is here restricted to the corresponding essential constituent of the less plastic, primary (i.e. not transported) clays, such as china-clay (kaolin). Named from πήλινος, made of clay.

Psilomelanite. (T. Egleston, Catalogue of Minerals and Synonyms, Bull. U.S. Nat. Mus., 1887 (1889), No. 33, p. 137. E. T. Wherry, Proc. U.S. Nat. Mus., 1916, vol. li, p. 84.) Synonym of Psilomelane (W. Haidinger, 1828) with the termination *ite*.

Crystalline psilomelane is distinguished by L. L. Fermor (Rec. Geol. Survey India, 1917, vol. xlviii, p. 120) as X-psilomelane [perhaps a misprint for χ-psilomelane], and is considered to be identical with hollandite. The colloidal form he describes as κ-hollandite or simply as psilomelane. (*See* seventh list under Diasporogelite.)

Racewinite. A. N. Winchell, 1918. Economic Geology, vol. xiii, p. 611. Hydrated silicate of aluminium and iron (Fe_2O_3 7·37 per cent.)

approximating to the formula $2(Al,Fe)_2O_3 . 5SiO_2 . 9H_2O$. The bluish-green, coarsely crystalline masses change on exposure to brownish-black, and the material undergoes certain other remarkable changes in colour. It occurs in metamorphic limestone at Bingham, Utah. Named from Racewin, the cable address of H. V. Winchell, who collected the material examined.

Riversideite. A. S. Eakle, 1917. Bull. Dep. Geol. Univ. California, vol. x, p. 347. Hydrated calcium silicate, perhaps $2CaSiO_3 . H_2O$, occurring as a white, fibrous material filling small veins in massive idocrase and blue calcite at Crestmore, Riverside Co., California. Named from the locality.

Sabalite. (D. B. Sterrett, Mineral Resources, U.S. Geol. Survey, for 1914, 1915, part II, p. 334; W. T. Schaller, ibid., for 1917, 1918, part II, p. 161.) Trade-name for a banded variscite, from Utah, used as a gem-stone. Compare Trainite.

Schadeite. M. Lazarevič, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 306 (Schadeit). The colloidal equivalent of plumbogummite; the material from Huelgoat, Brittany, being partly optically isotropic and in part showing a chalcedonic structure. Named after Dr. Heinrich Schade, of Kiel.

Schernikite. D. S. Martin, 1912. Annals New York Acad. Sci., vol. xxi, p. 189. A pink, fibrous variety of muscovite occurring intergrown with lepidolite at Haddam Neck, Connecticut. Named after Mr. Ernest Schernikow, of New York, who presented to the Oxford Museum the specimens described by H. L. Bowman, Mineralogical Magazine, 1902, vol. xiii, p. 98. A special name is here clearly superfluous.

Sobralite. J. Palmgren, 1917. Bull. Geol. Inst. Univ. Upsala, vol. xiv, p. 173 (Sorbalit). A triclinic manganese pyroxene, $4MnSiO_3 . 2FeSiO_3 . CaSiO_3 . MgSiO_3$, from Tunaberg, Sweden, differing from pyroxmangite (7th list) in the position of the optic axial plane. Named after Dr. J. M. Sobral, of Buenos Aires. Compare Vogtite.

Soda-sarcolite. W. T. Schaller, 1916. Bull. U.S. Geol. Survey, No. 610, p. 112 (soda-sarcolite), p. 115 (soda sarcolite). A hypothetical molecule, $3Na_2O . Al_2O_3 . 3SiO_2$, corresponding with sarcolite but containing sodium in place of calcium, assumed to explain the composition of minerals of the melilite group. It is present to the extent of

2·2 per cent. in a melilite from Vesuvius. A ferric iron sarcolite, $3CaO.Fe_2O_3.3SiO_2$, is also suggested (p. 119).

Sorbite. *See* Cochranite.

Spencerite. T. L. Walker, 1916. Nature, London, vol. xcvii, p. 375; Mineralogical Magazine, vol. xviii, p. 76; Journ. Washington Acad. Sci., 1917, vol. vii, p. 456; Univ. Studies, Geol. Ser. No. 10, Toronto, 1918. A. H. Phillips, Amer. Journ. Sci., 1916, ser. 4, vol. xlii, p. 275. A hydrated basic zinc phosphate, $Zn_3(PO_4)_2.Zn(OH)_2.3H_2O$, occurring in some abundance as pearly white, scaly cleavage masses, and small monoclinic crystals, forming large stalactites thinly encrusted with hemimorphite, from Salmo, British Columbia. Named after Leonard James Spencer, of the Mineral Department, British Museum. (*See* Lusitanite.)

The same name (Spencerit) had been used earlier (C. Hlawatsch, Min. Petr. Mitt., 1903, vol. xxii, p. 498) for an artificial furnace product, the rhombic modification of iron carbide, Fe_3C, or $(Fe,Mn)_3(C,Si)$ corresponding with Spiegeleisen, as distinct from the anorthic modification corresponding with ferro-manganese (cf. Mineralogical Magazine, 1903, vol. xiii, p. 296).

Starolite. (J. B. Sterrett, Mineral Resources, U.S. Geol. Survey, for 1914, 1915, part II, p. 324; W. T. Schaller, ibid., for 1917, 1918, part II, p. 162.) Jeweller's trade-name for asteriated quartz showing a six-rayed star by reflected light.

Strontiohitchcockite. E. T. Wherry, 1916. *See* Bariohitchcockite.

Sulphate-apatite. R. Brauns, 1916. Neues Jahrb. Min., Beilage-Band xli, p. 60 (Sulfatapatit). Small, colourless crystals of apatite occurring in the sanidinite bombs of the Laacher See district, Rhine, contain some sulphuric acid (SO_3 1·13–1·35 per cent.) in addition to fluorine and chlorine. The molecule $3Ca_3P_2O_8.CaSO_4$ therefore enters into their composition, the general formula for apatite being

$$3Ca_3P_2O_8.Ca(F_2,Cl_2,SO_4,CO_3,O,[OH]_2).$$

Sulphatic Cancrinite. E. S. Larsen and G. Steiger, 1916. Amer. Journ. Sci., ser. 4, vol. xlii, p. 332. A cancrinite from Colorado with about half of the CO_3 isomorphously replaced by SO_4.

Sulphurite. (E. T. Wherry, Journ. Washington Acad. Sci., 1917, vol. vii, p. 447 (sulfurite); Chem. News, 1917, vol. cxvi, p. 251 (sulphurite).) A mineralogical name for native sulphur. The name Sulfurit has been previously used (F. Rinne, 1902; third list) for naturally-occurring amorphous sulphur.

Tangiwaite. (R. Koechlin, Mineralogisches Taschenbuch der Wiener Mineralogischen Gesellschaft, 1911, p. 55 (Tangawait).) A variety of serpentine, identical with bowenite, from New Zealand. The Maori name, tangiwai, for the stone means 'tear-water', since polished specimens have the appearance of drops of water. For a description of the mineral and its occurrence see F. Berwerth, Sitz.-Ber. Akad. Wiss. Wien, Math.-naturw. Cl., 1880, vol. lxxx (for 1879), Abt. I, p. 116; A. M. Finlayson, Quart. Journ. Geol. Soc. London, 1909, vol. lxv, pp. 361, 369.

Trainite. (W. T. Schaller, Mineral Resources, U.S. Geol. Survey, 1918, for 1917, part II, p. 163.) An impure banded variscite from Manhattan, Nevada. Named after the collector, Mr. Percy Train, of Manhattan. A specimen so named, and described on the dealer's label as aluminium phosphosilicate, was acquired by the British Museum mineral collection in 1913. The material has been described, although not under this name, by E. T. Wherry (Journ. Washington Acad. Sci., 1916, vol. vi, p. 105; and Chem. News, 1916, vol. cxiii, p. 290), who determines it to be a lamellar intergrowth of colloidal vashegyite ($4Al_2O_3 . 8P_2O_5 . 30H_2O$; fifth list) and a hydrated calcium aluminium silicate near the zeolite laubanite. Compare Sabalite.

Tungstenite. R. C. Wells and B. S. Butler, 1917. Journ. Washington Acad. Sci., vol. vii, p. 596. Tungsten sulphide, probably WS_2, occurring as minute graphite-like scales intimately intermixed with other minerals in a compact ore from the Little Cottonwood district, Utah. Named from analogy to molybdenite.

Turite. (J. A. Samoilov, Bull. Soc. Nat. Moscou, 1900, vol. xiv (for 1899), p. 142, Турьитъ). The correct form of the name Turgite (R. Hermann, 1845) or Turjit (R. Hermann, 1860), after the Turya (Turia, Turja, Турья) river, northern Urals. See this vol., p. 341.

Uhligite. F. Cornu, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 17 (Uhligit). Apparently given as an alternative name for gelvariscite (q. v.) for the amorphous variscite of Leoben in Styria; but it also appears as an alternative name for gelfischerite (q. v.) for the amorphous fischerite of Roman-Gladna in Hungary. Probably named after Viktor Karl Uhlig (1857–1911), Professor of Geology at Vienna. Not the uhligite of O. Hauser, 1909 (fifth list).

Viridite. F. Kretschmer, 1918. Neues Jahrb. Min., 1918, p. 19 (Viridit); Archiv f. Lagerstättenforschung, Berlin. A chloritic

mineral approximating in composition to hydrated ferrous silicate, $4FeO . 2SiO_2 . 3H_2O$, occurring as compact, leek-green masses in diabase and schalstein in northern Moravia and southern Silesia, where, with mackensite (q. v.), &c., it is mined as an ore of iron. The optical characters of the minute needles and scales indicate monoclinic symmetry. Named from *viridis*, green. Not the viridite of H. Vogelsang, 1872.

Vitrain. M. C. Stopes, 1919. *See* Fusain.

Vogtite. C. Hlawatsch, 1907. Zeits. Kryst. Min., vol. xlii, p. 593 (Vogtit). A crystallized slag of unknown origin and chemical composition: the triclinic crystals possess a certain resemblance to rhodonite and were found to contain much manganese. The material is assumed to belong to the triclinic group of slags with the composition $(Mg,Fe,Mn)SiO_3$, studied by Professor Johan H. L. Vogt, of Christiania, after whom it is named. The angles of the crystals correspond with those of a triclinic metasilicate $(Fe,Ca.Mn,Mg)SiO_3$ formed in acid steel-furnace slags and described by A. F. Hallimond, Mineralogical Magazine, 1919, vol. xviii, p. 368. Compare Sobralite.

Winchellite. D. S. Martin, 1912. Annals New York Acad. Sci., vol. xxi, p. 190. Synonym of lintonite. Named after Professor Newton Horace Winchell (1839–1914), who examined the material and found it to be distinct in optical characters from both mesolite and thomsonite (Amer. Geol., 1898, vol. xxii, p. 349).

Xanthochroite. A. F. Rogers, 1917. Journ. Geol. Chicago, vol. xxv, p. 524. Amorphous cadmium sulphide, probably containing some adsorbed water, $CdS . xH_2O$, occurring as a thin, powdery, yellow coating on blende. It has hitherto been referred to the hexagonal species greenockite, but it is now to be regarded as the amorphous equivalent of this. Named from *ξανθός*, yellow, and *χρῶμα*, colour. It is possible, however, that, being optically isotropic, this material may be the cubic modification of cadmium sulphide, corresponding with zinc-blende.

Zebedassite. A. Brusoni, 1917. Rend. R. Ist. Lombardo, ser. 2, vol. l, p. 646; Riv. Min. Crist. Italiana, 1918, vol. l, p. 74. Hydrated silicate of magnesium and aluminium, $H_8Al_2Mg_5(SiO_4)_6$, occurring as silky white, fibrous (orthorhombic?) aggregates in fissures of an altered serpentinous rock. Named from the locality, Zebedassi, near Volpedo in Piedmont.

Zirkite. Monthly Price List, Foote Mineral Company, Philadelphia, September 1916, p. 26; November 1916, p. 29; Mineral Foote-Notes, March 1917, p. 2. Trade-name for a zirconia-ore from Brazil containing 73–97 per cent. ZrO_2. It is stated to be a mechanical mixture of baddeleyite, zircon, and a new zirconium silicate (*see* Orvillite). [It includes the 'favas' of zirconia described by E. Hussak in 1899, and the large mamillated lumps with radially-fibrous structure described by E. Hussak and J. Reitinger in 1903; the latter was regarded as possibly a modification of zirconia distinct from baddeleyite.] *See* Caldasite.

SYSTEMATIC CLASSIFICATION OF NEW MINERALS.[1]

Elements.

Osmite, Os.

Sulphides, &c.

Tungstenite, WS_2.
Xanthochroite, colloidal CdS.
Oruetite, Bi_3TeS_4.

Sulpho-salts.

Mullanite, $5PbS . 2Sb_2S_3$.

Haloids.

Lorettoite, $6PbO . PbCl_2$.
Creedite, $2CaF_2 . 2Al(F,OH)_3 . CaSO_4 . 2H_2O$.

Oxides.

Lithargite, PbO.
Högbomite, $MgO . 2(Al_2O_3,Fe_2O_3,TiO_2)$.
Doelterite, Hyd. TiO_2.

Carbonates.

Ambatoarinite, $5SrCO_3 . 4Ce_2(CO_3)_3 . Ce_2O_3$.
Basobismutite, $2Bi_2O_3 . CO_2 . H_2O$.

Sulphates.

Gilpinite, $(Cu,Fe)O . UO_3 . SO_3 . 4H_2O$.

Borates.

Magnesiolud wigite, $4MgO . Fe_2O_3 . B_2O_3$.

Phosphates, Arsenates, &c.

Carbonate-apatite, $3Ca_3P_2O_8 . CaCO_3$.
Sulphate-apatite, $3Ca_3P_2O_8 . CaSO_4$.
Crandallite, $CaO . 2Al_2O_3 . P_2O_5 . 5H_2O$.
Arsenobismite, $2Bi_2O_3 . As_2O_5 . 2H_2O$.
Spencerite, $Zn_3(PO_4)_2 . Zn(OH)_2 . 3H_2O$.
Katoptrite, $14(Mn,Mg,Fe)O . 2(Al,Fe)_2O_3 . Sb_2O_5 . 2SiO_2$.
Cornetite, phosphate Cu,Co.

Silicates.

Iron-anthophyllite, $FeSiO_3$.
Amosite, iron-amphibole.
Collbranite, var. of Pyroxene.
Sobralite, $Mn_4Fe_2CaMg(SiO_3)_8$.
Crestmoreite, $CaSiO_3 . H_2O$.
Riversideite, $2CaSiO_3 . H_2O$.
Eakleite, $5CaSiO_3 . H_2O$.
Margarosanite, $PbC_2a(SiO_3)_3$.
Manganfayalite, $(Fe,Mn)_2SiO_4$.
Colerainite, $4MgO . Al_2O_3 . 2SiO_2 . 5H_2O$.
Zebedassite, $H_8Al_2Mg_5(SiO_4)_6$.
Orvillite, $8ZrO_2 . 6SiO_2 . 5H_2O$.
Ektropite, $12MnO . 8SiO_2 . 7H_2O$.
Leifite, $Na_4(AlF)_2Si_9O_{22}$.
Racewinite, $2(Al,Fe)_4O_3 . 5SiO_2 . 9H_2O$.
Griffithite, $4(Mg,Fe,Ca)O . (Al,Fe)_2O_3 . 5SiO_2 . 7H_2O$
Mackensite, $Fe_2O_3 . SiO_2 . 2H_2O$.
Viridite, $4FeO . 2SiO_2 . 3H_2O$.
Ferrierite, $(Mg,Na_2,H_2)_4Al_2(Si_2O_5)_5 . 6H_2O$.
Flokite, $H_8(Ca,Na_2)Al_2Si_9O_{26} . 2H_2O$.

Titanates.

Oliveiraite, $3ZrO_2 . 2TiO_2 . 2H_2O$.

[1] Only the more important names given in the preceding alphabetical list are here included.