A (fifth) list of new mineral names: with an index of authors.[1]

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Aglaurite. R. Handmann, 1907. Zeits. Min. Geol. Stuttgart, vol. i, p. 78. Orthoclase-felspar with a fine blue reflection forming a constituent of quartz-porphyry (Aglauritporphyr) from Teplitz, Bohemia. Named from ἄγλαυρος = ἀγλαός, bright.

Alaite. K. A. Nenadkevič, 1909. Bull. Acad. Sci. Saint-Pétersbourg, ser. 6, vol. iii, p. 185 (Алаитъ). Hydrated vanadic oxide, $V_2O_5 . H_2O$, forming blood-red, mossy growths with silky lustre. Found with turanite (q. v.) in the neighbourhood of the Alai Mountains, Russian Central Asia.

Alamosite. C. Palache and H. E. Merwin, 1909. Amer. Journ. Sci., ser. 4, vol. xxvii, p. 399; Zeits. Kryst. Min., vol. xlvi, p. 513. Lead meta-silicate, $PbSiO_3$, occurring as snow-white, radially fibrous masses. Crystals are monoclinic, though apparently not isomorphous with wollastonite. From Alamos, Sonora, Mexico. Prepared artificially by S. Hilpert and P. Weiller, Ber. Deutsch. Chem. Ges., 1909, vol. xlii, p. 2969.

Aloisiite. L. Colomba, 1908. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xvii, sem. 2, p. 233. A hydrated sub-silicate of calcium, ferrous iron, magnesium, sodium, and hydrogen, $(R'', R'_2)_4 SiO_6$, occurring in an amorphous condition, intimately mixed with calcium carbonate, in a palagonite-tuff at Fort Portal, Uganda. Named in honour of H.R.H. Prince Luigi Amedeo of Savoy, Duke of Abruzzi. Aloisius or Aloysius is a Latin form of Luigi or Lewis.

[1] Previous lists of this series are given at the ends of vols. xi, xii, xiii, and xiv of this Magazine (1897, 1900, 1903, 1907). In the present list are included several trivial names which have been recently applied for trade purposes to the cheaper gem-stones. Although such names are here listed alphabetically for convenience of reference, it is to be hoped that they will not find their way into mineralogical literature.

Alomite. Trade-name for the fine blue sodalite quarried at Bancroft, Ontario, Canada, for use as an ornamental stone. Named alomite [not allomite] after Charles Allom, of White, Allom & Co., marble merchants, London. Also called 'Princess Blue'. (The Quarry, London, 1908, vol. xiii, p. 257. W. G. Renwick, 'Marble and marble working,' London, 1909, p. 115.)

Alundum. Trade-name for artificial corundum manufactured in the electric furnace from bauxite by the Norton Emery Wheel Company, of Worcester, Mass., since 1904. The material is used as an abrasive, and the name is no doubt a contraction of aluminium and carborundum (4th list). (Mineral Industry, New York, for 1906, 1907, vol. xv, p. 28.)

Amatrice. Trade-name for a green gem-stone from Utah, consisting of variscite, utahlite, or wardite, or a mixture of these, in a matrix of quartz, chalcedony, &c. So called (A-matrix) because it is an American matrix gem-stone. (D. B. Sterrett, Mineral Resources of the United States, for 1907, 1908, part ii, p. 832. J. Wodiska, A book on precious stones, New York, 1909, p. 185.)

Anemousite. H. S. Washington and F. E. Wright, 1910. Amer. Journ. Sci., ser. 4, vol. xxix, p. 61. A plagioclase-felspar found, together with linosite (q. v.), as loose crystals in a volcanic tuff on the Island of Linosa, off the coast of Tunis. The silica percentage is rather lower than that required by the albite-anorthite series, and the composition is explained as a mixture of albite and anorthite together with soda-anorthite (carnegieite, q. v.) in the ratio 8 : 10 : 1. Named from the ancient Greek name of the island.

Anophorite. W. Freudenberg, 1908. Mitt. Badisch. geol. Landesanst., 1908, vol. vi, p. 45 (Anophorit). A variety of alkali-hornblende from the shonkinite of the Katzenbuckel, Baden. It resembles catophorite in its pleochroism, but differs in chemical composition (containing more MgO and less FeO) and optical orientation. Named from ἀνώφορος, ascending, because the angle of optical extinction is less than that of catophorite.

Arizonite. C. Palmer, 1909. Amer. Journ. Sci., ser. 4, vol. xxviii, p. 353. Ferric meta-titanate, $Fe_2O_3 . 3TiO_2$, found as irregular masses, with sub-conchoidal fracture, dark steel-grey colour, and metallic to sub-metallic lustre, in a pegmatite-vein near Hackberry in Arizona. It is probably monoclinic, and is distinct from ilmenite (ferrous titanate, $FeO . TiO_2$).

Asphaltite. W. P. Blake, 1890. Trans. Amer. Inst. Mining Engin., vol. xviii, p. 576. G. H. Eldridge, 22nd Ann. Rep. United States Geol. Survey, for 1900–1, 1901, part i, p. 220. The same as asphalt or asphaltum with the mineralogical termination *ite*. Includes the solid bituminous hydrocarbons known as albertite, impsonite (q. v.), gilsonite, grahamite, nigrite, and uintahite. The word asphaltite appears in Greek and in English dictionaries as an adjective, meaning bituminous or asphaltic.

Azurchalcedony. G. F. Kunz, 1907. *See* Azurlite.

Azurlite or Azurchalcedony. G. F. Kunz, 1907. [New York Acad. Sci., April, 1907] quoted in Mineral Industry, New York, for 1907, 1908, vol. xvi, p. 792. Chalcedony coloured blue by chrysocolla, from Arizona; used as a gem-stone.

Azurmalachite. G. F. Kunz, 1907. Engin. and Mining Journ. New York, vol. lxxxiv, p. 296; Mineral Industry, New York, for 1907, 1908, vol. xvi, p. 792. D. B. Sterrett, Mineral Resources of the United States, for 1907, 1908, part ii, p. 797; for 1908, 1909, part ii, p. 809. A popular term for a mixture of azurite and malachite in concentric bands; used as a gem-stone. From Arizona.

Beldongrite. L. L. Fermor, 1909. Mem. Geol. Survey India, vol. xxxvii, pp. lxix, 115. A black, pitch-like mineral closely allied to psilomelane. Formula, perhaps $6Mn_3O_5 . Fe_2O_3 . 8H_2O$. Probably an alteration product of spessartite. From Beldongri, Nágpur district, Central Provinces, India.

Benitoite. G. D. Louderback, 1907. Bull. Dep. Geol. Univ. California, vol. v, p. 149; ibid., 1909, vol. v, p. 331. Also papers and notes by R. Arnold, H. Baumhauer, W. C. Blasdale, C. Hlawatsch, E. H. Kraus, C. Palache, and A. F. Rogers, references to which are given in Louderback's later paper. B. Ježek, Bull. Intern. Acad. Sci. Bohême, 1909, année xiv, p. 213.

An acid titano-silicate of barium $BaTiSi_3O_9$, forming beautiful, sapphire-blue, transparent crystals, suitable for cutting as gems, and the only representative (except Ag_2HPO_4, H. Dufet, 1886) of the ditrigonal-bipyramidal class of the hexagonal system. Occurs with neptunite in natrolite veins traversing schistose rocks near the source of the San Benito River, in San Benito Co., California.

Bityite. A. Lacroix, 1908. Compt. Rend. Acad. Sci. Paris, vol. cxlvi, p. 1371; Bull. Soc. franç. Min., vol. xxxi, p. 241. Small,

yellowish-white, pseudo-hexagonal prisms occurring with tourmaline in pegmatite near Mt. Bity [or Ibity] in Madagascar. A basic orthosilicate, $10SiO_2 . 8Al_2O_3 . 5\frac{1}{2}(Ca,Be,Mg)O . 1\frac{1}{2}(Li,Na,K)_2O . 7H_2O$, allied to staurolite.

Bonamite. A jeweller's trade-name for an apple-green calamine ($ZnCO_3$), resembling chrysoprase in colour, from Kelly, New Mexico. Called 'bonamite' by Goodfriend Brothers, of New York [no doubt in playful allusion to their own name]. (D. B. Sterrett, Mineral Resources of the United States, for 1908, 1909, part ii, p. 839.)

Bravoite. W. F. Hillebrand, 1907. Amer. Journ. Sci., ser. 4, vol. xxiv, p. 151; Journ. Amer. Chem. Soc., vol. xxix, p. 1028. D. F. Hewett, Trans. Amer. Min. Engin., 1910, vol. xl, p. 286. A highly nickeliferous (Ni,18 per cent.) pyrites, $(Fe,Ni)S_2$, disseminated as grains in vanadium-ore (patronite) from Minasragra, near Cerro de Pasco, Peru. Named after José J. Bravo, of Lima, Peru.

Brugnatellite. E. Artini, 1909. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xviii, sem. 1, p. 3; Riv. Min. Crist. Italiana, xxxvii, p. 119. A hydrated ultra-basic carbonate

$$Mg_6FeCO_{20}H_{21} = MgCO_3 . 5Mg(OH)_2 . Fe(OH)_3 . 4H_2O.$$

Flesh-red, lamellar masses with perfect micaceous cleavage. Optically uniaxial; rhombohedral or hexagonal. Found in an asbestos quarry in Val Malenco, Lombardy. Named after Dr. Luigi Brugnatelli, professor of mineralogy in the University of Pavia.

Calciopalygorskite. A. Fersmann, 1908. Bull. Acad. Sci. Saint-Pétersbourg, ser. 6, vol. ii, p. 274 (Calciopalygorskit). A 'mountain-leather' from Strontian, Argyllshire, containing much calcium (CaO, 10 per cent., according to T. Thomson's analysis, 1836).

Carlosite. G. D. Louderback, 1907. Bull. Dep. Geol. Univ. California, vol. v, p. 153; ibid., 1909, vol. v, p. 354. A supposed new mineral, found with benitoite (q. v.) in San Benito Co., California, which was very soon afterwards identified with the neptunite of Greenland. Named from the San Carlos peak, one of the highest points in the locality.

Carnegieite. H. S. Washington and F. E. Wright, 1910. Amer. Journ. Sci., ser. 4, vol. xxix, p. 52. A triclinic felspar closely allied to the plagioclases, which from its composition, $Na_2Al_2Si_2O_8$, may be described as soda-anorthite (S. J. Thugutt, 1895; 2nd list), sodium taking the place of calcium in the anorthite formula. It has been

prepared artificially; and, in isomorphous intermixture with albite and anorthite, its presence is assumed to explain the composition of anemousite (q. v.). Named after Andrew Carnegie, founder of the Carnegie Institution of Washington, D.C., where the mineral was determined.

The compound $Na_2Al_2Si_2O_8$ is dimorphous, being also prepared artificially as hexagonal crystals closely allied to nepheline.

Chapapote. *See* Malthite.

Chromitite. M. Z. Jovitschitsch, 1908. Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Klasse, vol. cxvii, Abt. II b, p. 818; Monatshefte für Chemie, &c., Wien, 1909, vol. xxx, p. 44 (Chromitit). Oxide of chromium and iron, $FeCrO_3 = Fe_2O_3 . Cr_2O_3$, found as shining octahedra in the sands of streams from the Kopaonik Mountains, Servia. Differs from chromite in containing ferric oxide in place of ferrous oxide [and therefore possibly an altered chromite].

Clayite. J. W. Mellor, 1909. Trans. English Ceramic Soc., Longton, vol. viii, p. 28. The non-crystalline variety of kaolinite, $Al_2O_3 . 2SiO_2 . 2H_2O$, of which china-clay and most other clays are largely composed. Not the clayite of W. J. Taylor, 1859.

Clinobronzite. W. Wahl, 1906. *See* Clinoenstatite. W. Wahl, loc. cit. (Klinobronzit). A. Lacroix, loc. cit. (Clinobronzite).

Clinoenstatite. W. Wahl, 1906. Die Enstatitaugite, Helsingfors, May 1906, p. 141; Min. Petr. Mitt. (Tschermak), 1907, vol. xxvi, p. 121; Öfvers. Finska Vet. Soc. Förh., 1908, vol. l, No. 2, p. 1 (Klinoenstatit). A. Lacroix, Bull. Soc. Sci. Nat. Ouest France, September 1906, ser. 2, vol. vi, p. 94 (Clinoenstatite). E. T. Allen and others, Amer. Journ. Sci., 1909, ser. 4, vol. xxvii, pp. 30, 45 (clino-enstatite). F. Zambonini, Zeits. Kryst. Min., 1909, vol. xlvi, pp. 12, 601. F. E. Wright, Zeits. Kryst. Min., 1909, vol. xlvi, p. 599.

A monoclinic pyroxene with the chemical composition of enstatite; that is, dimorphous with enstatite, and differing from diopside in containing no calcium. It occurs in meteoric stones, and has been prepared artificially (β-$MgSiO_3$). The magnesium-diopside of H. Rosenbusch (1905; 4th list) approximates to this.

Similarly, clinobronzite and clinohypersthene are dimorphous forms of the magnesium-iron meta-silicates bronzite and hypersthene respectively.

Clinohypersthene. W. Wahl, 1906. *See* Clinoenstatite. W. Wahl, loc. cit. (Klinohypersthen). A. Lacroix, loc. cit., p. 93 (Clinohypersthène).

Cobaltocalcite. F. Millosevich, 1910. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xix, sem. 1, p. 92. A bright red variety of calcite containing cobalt (CoO, 1·27 per cent.), occurring as crystalline masses at Capo Calamita, Elba.

Colomite. J. Blake, 1876. Proc. California Acad. Sci., vol. vi (for 1875), p. 150. A supposed chromium mica, from Coloma, California, which was re-described by the author in the same year under the name of roscoelite or vanadium mica.

Delorenzite. F. Zambonini, 1908. Rend. R. Accad. Sci. Fis. Mat. Napoli, ser. 3, vol. xiv, p. 113; Riv. Min. Crist. Italiana, vol. xxxiv, p. 74; Zeits. Kryst. Min., vol. xlv, p. 76. Black, orthorhombic crystals resembling polycrase (but differing from this in containing no niobium), from pegmatite at Craveggia, Piedmont. $2FeO . UO_2 . 2Y_2O_3 . 24TiO_2$, or expressed as a meta-titanate

$$2FeTiO_3 . U(TiO_3)_2 . 2Y_2(TiO_3)_3 . 7(TiO)TiO_3.$$

Named after Giuseppe De Lorenzo, professor of geology in the University of Naples.

Didjumolite. *See* Didymolite.

Didymolite. A. Meister, 1908. Verh. Russ. Mineral. Ges., ser. 2, vol. xlvi, p. 151 (Дидюмолить). Monoclinic, twinned crystals in nepheline-syenite from Siberia. $2CaO . 3Al_2O_3 . 9SiO_2$. Named from δίδυμος, a twin, and λίθος, a stone. The German translation of the title on the wrapper of the journal gives the form Didjumolit.

Ehrenwerthite. F. Cornu, 1909. Zeits. prakt. Geol., Jahrg. xvii, p. 82 (Ehrenwerthit). Colloidal hydroxide of iron with the same composition ($Fe_2O_3 . H_2O$) as the crystalline mineral goethite; occurring as pseudomorphs after iron-pyrites. Named after Professor Josef von Ehrenwerth, of Leoben, Styria.

Enstatite-augite. W. Wahl, 1906. Die Enstatitaugite, Helsingfors, 1906; Min. Petr. Mitt. (Tschermak), 1907, vol. xxvi, p. 1; Öfvers. Finska Vet. Soc. Förh., 1908, vol. l, No. 2, p. 11. A group of monoclinic pyroxenes intermediate in optical properties and chemical composition between the enstatite group and the calcium-bearing monoclinic pyroxenes (diopside, augite, &c.), and yet distinct from clinoenstatite (q. v.). For the various members of the group several compound names are given, e.g. enstatite-diopside, bronzite-augite, augite-bronzite, hypersthene-hedenburgite, &c.

Ferganite. I. A. Antipov, 1908. Gornyi Zhurnal, St. Petersburg, year lxxxiv, vol. iv, p. 259 (Ферганитъ); abstract in Neues Jahrb. Min., 1909, vol. ii, Ref. p. 38 (Ferghanit). A hydrated uranium vanadate, $U_3(VO_4)_2 . 6H_2O$, containing also a small amount of lithium. Found as sulphur-yellow scales, together with other uranium minerals, in province Fergana, Russian Turkistan. Related to carnotite.

Fermorite. G. T. Prior and G. F. H. Smith, 1910. Nature, London, vol. lxxxiii, p. 513. Arsenate, phosphate, and fluoride of calcium and strontium, isomorphous with apatite. Occurs as white, crystalline masses in the Indian manganese-ore deposits. Named after Dr. Lewis Leigh Fermor, of the Geological Survey of India.

Ferripurpurite. W. T. Schaller, 1907. Amer. Journ Sci., ser. 4, vol. xxiv, p. 154. Purpurite (L. C. Graton and W. T. Schaller, 1905; 4th list, 1907) is a hydrated manganic ferric phosphate, $2(Mn,Fe)PO_4 . H_2O$, in which either manganese or iron may predominate. For the end members of this isomorphous series the names ferripurpurite and manganipurpurite are suggested.

Ferroaxinite. W. T. Schaller, 1909. Second Appendix to 6th edit. of Dana's System of Mineralogy, p. 11. Axinite consists of isomorphous mixtures of ferroaxinite, $8SiO_2 . 2Al_2O_3 . 2FeO . H_2O . 4CaO . B_2O_3$, and manganoaxinite, $8SiO_2 . 2Al_2O_3 . 2MnO . H_2O . 4CaO . B_2O_3$.

Georgiadesite. A. Lacroix and A. de Schulten, 1907. Compt. Rend. Acad. Sci. Paris, vol. cxlv, p. 784; Bull. Soc. franç. Min., 1908, vol. xxxi, p. 86 (georgiadésite). White or brownish-yellow, orthorhombic crystals associated with lead oxychlorides in the ancient lead slags at Laurion, Greece. A chloro-arsenate of lead, $Pb_3(AsO_4)_2 . 3PbCl_2$, containing much more chlorine than mimetite. Named after Mr. — Georgiades, director of the mines at Laurion.

Grandite. L. L. Fermor, 1909. Mem. Geol. Survey India, vol. xxxvii, pp. lxxi, 165. A contraction from grossularite and andradite for garnets of intermediate composition. A manganiferous variety is called 'mangan-grandite'. Compare 'spandite' (L. L. Fermor, 1907; 4th list).

Hallerite. P. Barbier, 1908. Compt. Rend. Acad. Sci. Paris, vol. cxlvi, p. 1221 (Hallérite). A lithium-bearing variety of soda-mica (paragonite) resembling muscovite in appearance. From Mesvres, Autun, France. Named after Albin Haller, professor of organic chemistry at the Sorbonne, Paris.

Hampdenite. A. D. Roe, 1906. Bull. Minnesota Acad. Sci., vol. iv, p. 268. A variety of serpentine from Hampden Co., Massachusetts; it forms the matrix of the pseudomorphs of serpentine after olivine known as hampshirite. C. Palache (Amer. Journ. Sci., 1907, ser. 4, vol. xxiv, p. 494) points out that it does not differ from picrolite.

Hawaiite. C. Elschner, 1906. Chemiker-Zeitung, Jahrg. xxx, p. 1119 (Hawaiit). A gem-variety of olivine from the lavas of the Hawaiian Islands. It contains but little iron, and is pale green in colour.

Hillebrandite. F. E. Wright, 1908. Amer. Journ. Sci., ser. 4, vol. xxvi, p. 551. J. E. Spurr and G. H. Garrey, Economic Geology, 1908, vol. iii, p. 707. Hydrated calcium ortho-silicate, $Ca_2SiO_4 . H_2O$. A white, porcellanous mineral with fibrous structure and orthorhombic symmetry. Occurs with spurrite (q. v.) in contact-metamorphic limestone at Velardeña, Durango, Mexico. Named after Dr. William Francis Hillebrand, of Washington, D.C.

Howdenite. Amer. Journ. Sci., 1907, ser. 4, vol. xxiv, p. 184. A local name for the large crystals of chiastolite found by G. R. Howden at Mount Howden, near Bimbowrie, South Australia, and described by C. Anderson (Records Australian Museum, 1902, vol. iv, p. 298).

Hulsite. A. Knopf and W. T. Schaller, 1908. Amer. Journ. Sci., ser. 4, vol. xxv, p. 323. W. T. Schaller, in 2nd Appendix to Dana's System of Mineralogy, 1909, p. 53; Amer. Journ. Sci., 1910, ser. 4, vol. xxix, p. 548. A. Knopf and W. T. Schaller, Zeits. Kryst. Min., 1910, vol. xlviii, p. 1. A black, opaque, orthorhombic (?) mineral occurring in a contact-metamorphic limestone in connexion with the tin-ores of Alaska. Originally described as a hydrous borate of ferrous and ferric iron and magnesium, but subsequently found to contain some tin. The revised formula is

$$12(Fe,Mg)O . 2Fe_2O_3 . SnO_2 . 3B_2O_3 . 2H_2O.$$

Named after Alfred Hulse Brooks, of the United States Geological Survey. *See* Pageite.

Hydrothomsonite. K. D. Glinka, 1906. Trav. Soc. Nat. Saint-Pétersbourg, vol. xxxiv, Sect. Géol. Min., p. 61 (Гидротомсонитъ), p. 176 (Hydrothomsonit). A zeolite, $(H_2,Na_2,Ca)Al_2Si_2O_8 . 5H_2O$, differing from thomsonite in containing more water (29·8 per cent.). Small, white or colourless, prismatic crystals with straight optical extinction. Occurs in soil as a product of weathering of augite-andesite in Transcaucasia.

Impsonite. G. H. Eldridge, 1901. 22nd Ann. Rep. United States Geol. Survey, 1900–1, part i, p. 265. Described by J. A. Taff (Amer. Journ. Sci., 1899, ser. 4, vol. viii, p. 219) as an albertite-like asphaltum occurring in the Choctaw Nation, Indian Territory: Impson Valley is one of the localities mentioned. It differs from albertite in being almost insoluble in turpentine.

Isomicrocline. W. Luczizky, 1905. Min. Petr. Mitt. (Tschermak), vol. xxiv, p. 347 (Isomikroklin). An optically positive microcline, analogous to the isorthose of L. Duparc, 1904 (4th list).

Jadeolite. G. F. Kunz, 1908. Mineral Industry, New York, for 1907, vol. xvi, p. 810. A deep-green chromiferous syenite cut as a gem-stone and resembling jade in appearance; from the jadeite mine at Bhamo, Burma. Possibly the same as the pseudojadeite (q. v.) of A. W. G. Bleeck, 1908.

Joaquinite. G. D. Louderback, 1909. Bull. Dep. Geol. Univ. California, vol. v, p. 376. Honey-yellow, orthorhombic crystals found associated with benitoite (q. v.): they contain silicon, titanium, calcium, and some iron, but have not yet been completely determined. Named from the Joaquin ridge of the Diablo range, San Benito Co., California.

Jordisite. F. Cornu, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 190 (Jordisit). A black, powdery, colloidal form of molybdenum sulphide, considered to be distinct from the crystalline mineral molybdenite. It occurs in the Himmelsfürst mine, Freiberg, Saxony, and alters to ilsemannite.

Juddite. L. L. Fermor, 1908. Rec. Geol. Survey India, vol. xxxvii, p. 211; Mem. Geol. Survey India, 1909, vol. xxxvii, pp. lxxi, 159. A manganiferous amphibole associated with the manganiferous pyroxene blanfordite (L. L. Fermor, 1906; 4th list) in a braunite-albite rock at Kácharwáhi, Nágpur district, Central Provinces, India. The pleochroism (carmine, blue or green, and orange) is intense, and the optic axial plane is perpendicular to the plane of symmetry. Named after Professor John Wesley Judd, of London.

Karystiolite. J. W. Evans, 1909. Geol. Mag., dec. 5, vol. vi, p. 286. Compare Mineralogical Magazine, 1906, vol. xiv, p. 143. A modernized form of καρύστιος λίθος (Karystian stone), a mineral, identified with chrysotile, from Karystos in Euboea. Suggested as an alternative for chrysotile, owing to the confusion between this name and the name chrysolite.

Kliachite. F. Cornu, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 90 (Kliachit). Colloidal aluminium hydroxides, α-kliachite, $Al_2O_3 . H_2O$, and β-kliachite, $Al_2O_3 . 3H_2O$, forming, together with iron hydroxides and the crystalloids diaspore ($Al_2O_3 . H_2O$) and hydrargillite ($Al_2O_3 . 3H_2O$), the constituent minerals of bauxite.

Klinobronzit. W. Wahl, 1906. *See* Clinobronzite.

Klinoenstatit. W. Wahl, 1906. *See* Clinoenstatite.

Klinohypersthen. W. Wahl, 1906. *See* Clinohypersthene.

Leesbergite. L. Blum, 1908. Ann. Soc. géol. Belgique, vol. xxxiv, Bull. p. 118. W. Bruhns, Mitt. geol. Landesanst. Elsass-Lothringen, 1908, vol. vi, p. 303. A white, chalky, mineral forming a vein in iron-ore (oolitic minette) near Hayingen, Lorraine, and described as a hygroscopic carbonate of calcium and magnesium $Mg_2Ca(CO_3)_3$. Proved by W. Bruhns to be a mixture of hydromagnesite with calcite or dolomite. Named in memory of the late Mining-Captain F. X. H. Leesberg, of Esch on the Alzette, Luxemburg.

Lenad. W. Cross and others, 1903. Quantitative Classification of Igneous Rocks, Chicago, 1903, pp. 132, 271. J. P. Iddings, Igneous Rocks, New York, 1909, vol. i, p. 411. A contracted form of the names leucite and nephelite, suggested as an alternative group name for the felspathoid minerals.

Linosite. H. S. Washington, 1908. Amer. Journ. Sci., ser. 4, vol. xxvi, p. 210. A highly titaniferous basaltic hornblende, closely allied to kaersutite, found with anemousite (q. v.) as loose, monoclinic crystals in a volcanic tuff on the Island of Linosa, off the coast of Tunis.

Loaisite. R. L. Codazzi, 1905. Mineralizadores y minerales metálicos de Colombia. Trabajos de la Oficina de Historia Natural, Secc. Min. Geol., Bogota, 1905, p. 16 (Loaisita). Scorodite in very pale green, porous masses, from Loaysa, near Marmato, Colombia, analysed by J. B. Boussingault in 1829.

Lublinite. N. S. Watitsch (Vatič), 1908. Ann. Géol. Min. Russie, vol. ix, p. 239 (Люблинитъ), p. 241 (Lublinit). A form of calcite occurring as a mould-like encrustation on chalk-marl in govt. Lublin, Russian Poland. It consists of a matted aggregate of capillary or acicular crystals greatly elongated in the direction of an edge of the primary rhombohedron. Giving oblique optical extinction, these crystals

had been previously described as monoclinic or triclinic, and by one author are stated to be hydrated calcium carbonate (L. L. Ivanov, ibid., 1905, vol. viii, p. 23). *See* Pentahydrocalcite and Trihydrocalcite.

Luigite. L. Colomba, 1908. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xvii, sem. 2, p. 237. The same as aloisiite (q. v.), the latter name being preferred, since the Italian form luigite may be confused with lewisite.

Magnesium-axinite. J. Fromme, 1909. Min. Petr. Mitt. (Tschermak), vol. xxviii, p. 311 (Magnesiumaxinit). A hypothetical axinite with the composition $HMgCa_2BAl_2Si_4O_{16}$.

Magnesium-pectolite. E. Reuning, 1907. Centralblatt Min., p. 739 (Magnesiumpektolith). Pectolite containing some magnesium (MgO, $5\frac{1}{2}$ per cent.). Occurs in crevices in diabase at Burg, Hesse-Nassau.

Malthite. W. P. Blake, 1890. Trans. Amer. Inst. Mining Engin., vol. xviii, p. 582. The same as maltha. A group name to include the viscous bituminous hydrocarbons known as maltha, mineral tar, pitt-asphalt, brea (Spanish), chapapote (Cuban Spanish).

Manganaxinite. J. Fromme, 1909. Min. Petr. Mitt. (Tschermak), vol. xxviii, p. 311 (Manganaxinit). Axinite rich in manganese (MnO, 11·54 per cent.) from the Harz. $HMnCa_2BAl_2Si_4O_{16}$.

Mangan-grandite. L. L. Fermor, 1909. *See* Grandite.

Manganipurpurite. W. T. Schaller, 1907. *See* Ferripurpurite.

Manganoaxinite. W. T. Schaller, 1909. *See* Ferroaxinite.

Mercurammonite. W. F. Hillebrand and W. T. Schaller, 1909. Bull. United States Geol. Survey, No. 405, p. 18; Zeits. Kryst. Min., 1910, vol. xlvii, p. 444 (Merkurammonit). A name suggested by the chemical composition of the mineral previously called kleinite (A. Sachs, 1905; 4th list), but regarded by the authors as a synonym.

Metacristobalite. A. Lacroix, 1909. Minéralogie de la France, vol. iii, p. 806 (métacristobalite). The optically isotropic phase of cristobalite stable above 175° C.

Natrochalcite. C. Palache and C. H. Warren, 1908. Amer. Journ. Sci., ser. 4, vol. xxvi, p. 342; Zeits. Kryst. Min., vol. xlv, p. 534. Hydrous sulphate of copper and sodium, $Na_2SO_4 . Cu_4(OH)_2(SO_4)_3 . 2H_2O$, forming bright emerald-green, monoclinic crystals with an acute pyramidal

habit. It occurs with several other species of sulphates in copper-veins in the mining district of Chuquicamata, Antofagasta, Chile.

Natronsanidine. F. von Wolff, 1904. Centralblatt Min., 1904, p. 208 (Natronsanidin). A monoclinic felspar with the habit of sanidine, but containing much soda, the composition being $Or_1Ab_1 = K_2Na_2AlSi_3O_8$.

Nephritoid. J. Fromme, 1909. Min. Petr. Mitt. (Tschermak), vol. xxviii, p. 306. A nephrite-like mineral occurring as a vein in weathered harzburgite in the Radauthal, Harz. It is also similar to nephrite in chemical composition, but it differs, as seen under the microscope, in having the fibres parallel, instead of matted as in true nephrite; it may therefore be described as a compact actinolite.

Neslite. A. Leymerie, 1846. Statistique géologique et minéralogique du département de l'Aube, Troyes, 1846, pp. 73, 117, 669. A. Lacroix, Minéralogie de la France, 1901, vol. iii, p. 335. A variety of opal, closely resembling menilite, occurring as reniform nodules in marl at Nesle, dep. Marne.

Orthobromite. J. V. Samojlov, 1906. Materialien zur Geologie Russlands, vol. xxiii, p. 146 (Ортобромить); abstract in Neues Jahrb. Min., 1907, vol. ii, Ref. p. 194 (Orthobromid [*sic*]). A variety of embolite with the composition AgCl . AgBr, as distinct from A. Breithaupt's megabromite (4AgCl . 5AgBr), and microbromite (3AgCl . AgBr). From the Donetz Basin, South Russia.

Ostwaldite. F. Cornu, 1909. Zeits. Chem. Indust. Kolloide, vol. iv, p. 187 (Ostwaldit). The colloidal (hydrogel) form of silver chloride obtained by precipitation, and represented in nature by 'buttermilk silver', cerargyrite being the crystalloidal form. Named after Professor Wilhelm Ostwald, of Leipzig.

Oxykertschenite. S. P. Popov, 1907. Bull. Acad. Sci. Saint-Pétersbourg, ser. 6, vol. i, p. 138 (Оксикерченить). Hydrated ferric phosphate with small amounts of manganese, &c.,

$$(Mn,Mg,Ca)O . 4Fe_2O_3 . 3P_2O_5 . 21H_2O.$$

Occurs as a brown alteration product of paravivianite and kertschenite (S. P. Popov, 1906; 4th list) in the Kerch (German, Kertsch) peninsula, Crimea.

Paigeite. A. Knopf and W. T. Schaller, 1908. Amer. Journ. Sci., ser. 4, vol. xxv, p. 324. W. T. Schaller, in 2nd Appendix to Dana's System of Mineralogy, 1909, p. 78; Amer. Journ. Sci., 1910, ser. 4,

vol. xxix, p. 543. A. Knopf and W. T. Schaller, Zeits. Kryst. Min., 1910, vol. xlviii, p. 1. A coal-black, lustrous and opaque aggregate of matted fibres and long needles, with a foliated appearance, occurring in a contact-metamorphic limestone in connexion with the tin-ores of Alaska. Originally described as a hydrous borate of ferrous and ferric iron, but subsequently found to contain a considerable amount of tin, the probable formula being $30FeO . 5Fe_2O_3 . SnO_2 . 6B_2O_3 . 5H_2O$. It is suggested, however, that the mineral may possibly be a mixture of hulsite (q. v.) and an iron borate. Named after Sidney Paige, of the United States Geological Survey.

Parahopeite. L. J. Spencer, 1907. Nature, London, vol. lxxvii, p. 143; Mineralogical Magazine, 1908, vol. xv, p. 18. Hydrated zinc phosphate, $Zn_3P_2O_8 . 4H_2O$, dimorphous with hopeite, forming divergent groups of colourless, platy, anorthic crystals, resembling hemimorphite in appearance. It is found with tarbuttite ($Zn_3P_2O_8 . Zn(OH)_2$; L. J. Spencer, 1907; 4th list) at Broken Hill, North-Western Rhodesia.

Paramontmorillonite. A. Fersmann, 1908. Bull. Acad. Sci. Saint-Pétersbourg, ser. 6, vol. ii, p. 264 (Paramontmorillonit), p. 656 (Парамонтмориллонитъ). A fibrous mineral placed with pilolite ('mountain-leather') in the palygorskite group; its composition, $H_{12}Al_2Si_4O_{17}$, is near to that of montmorillonite.

Parasepiolite. A. Fersmann, 1908. Bull. Acad. Sci. Saint-Pétersbourg, ser. 6, vol. ii, p. 263 (Parasepiolit), p. 657 (Парасепіолитъ). A fibrous mineral placed in the palygorskite group; its composition, $H_8Mg_2Si_3O_{12}$, is near to that of sepiolite.

Paratooite. D. Mawson and W. T. Cooke, 1907. Trans. Roy. Soc. South Australia, vol. xxxi, p. 68. An insoluble residue of bird-guano, consisting mainly of hydrated aluminium and ferric phosphate, but of variable and indefinite composition. Found on the top of an isolated rock near Paratoo railway siding in South Australia.

Pentahydrocalcite. P. N. Čirvinskij (Tschirwinsky), 1906. Ann. Géol. Min. Russie, vol. viii, p. 241 (Пентагидрокальцитъ), p. 245 (Pentahydrocalcit). Hydrated calcium carbonate, $CaCO_3 . 5H_2O$, occurring as a mould-like encrustation on chalk-marl near Nova-Alexandria, govt. Lublin, Russian Poland. *See* Lublinite and Trihydrocalcite.

Plancheite. A. Lacroix, 1908. Compt. Rend. Acad. Sci. Paris, vol. cxlvi, p. 724; Bull. Soc. franç. Min., vol. xxxi, p. 250 (planchéite).

A blue, fibrous copper silicate, $H_{10}Cu_{15}Si_{12}O_{44}$ or $H_2(CuOH)_8Cu_7(SiO_3)_{12}$ occurring with dioptase as botryoidal masses or fibrous veins in limestone at Mindouli, French Congo. Named after Mr. — Planche.

Plumboniobite. O. Hauser and L. Finckh, 1909. Ber. Deutsch. Chem. Ges., xlii, p. 2270; O. Hauser, ibid., 1910, xliii, p. 417 (Plumboniobit). A niobate resembling samarskite in composition, but containing some lead (PbO, 7·55 per cent.): formula $R''_2Nb_2O_7 . R'''_4(Nb_2O_7)_3$, where $R'' = Fe,Pb,UO,Ca$, and $R''' = Gd,Sm,Y,Al$. Occurs as dark brown to black, imperfectly crystalline (optically isotropic) masses, associated with pitchblende, in the mica mines at Morogoro, Uluguru Mountains, German East Africa.

Potash-oligoclase. J. P. Iddings, 1906. Rock Minerals, New York, p. 232. A lime-soda-microcline (anorthoclase) in which lime appears to form part of the potash-soda-felspar, the composition being nearly that of oligoclase with part of the soda replaced by potash. Occurs in the rhomb-porphyry of southern Norway and in the kenyte of Kilimanjaro, East Africa.

Pseudodeweylite. F. Zambonini, 1908. Atti R. Accad. Sci. Fis. Mat. Napoli, ser. 2, vol. xiv, No. 1, p. 84; Rend. R. Accad. Sci. Fis. Mat. Napoli, ser. 3, vol. xiv, p. 148. A hydrated magnesium silicate, $Mg_3Si_2O_7 . 3H_2O$, from Chester Co., Pennsylvania, closely resembling deweylite, but differing slightly in composition (deweylite being $Mg_4Si_3O_{10} . 6H_2O$).

Pseudojadeite. A. W. G. Bleeck, 1907. Zeits. prakt. Geol., Jahrg. xv, p. 353; Rec. Geol. Survey India, 1908, vol. xxxvi, p. 267. Some of the material collected as jadeite from the jadeite quarry in Upper Burma was afterwards found on examination to be albite. Compare Jadeolite.

Pseudo-pirssonite. E. Stolley, 1909. Medd. Dansk Geol. For., No. 15, p. 361 (Pseudo-Pirssonit). Pseudomorphs, resembling pseudogaylussite, found in the alum-shales of Cambrian age on the island of Bornholm, Denmark. In a postscript (p. 368) it is suggested that the original mineral of these pseudomorphs may have been struvite rather than pirssonite, and the name pseudo-struvite (Pseudo-Struvit) is added.

Pseudo-struvite. E. Stolley, 1909. *See* Pseudo-pirssonite.

Pulleite. J. W. H. Adam, 1909. Zeits. prakt. Geol., Jahrg. xvii, p. 500 (Pulleit). Apatite in violet crystals of peculiar habit resembling

sheaf-like crystals of stilbite; from the pegmatite-veins at San Piero in Campo, Elba. Earlier described as a variety of apatite by R. Görgey (Centralblatt Min., 1909, p. 337). Named after Count J. G. Pullé of Elba.

Pyroxene-perthite, Pyroxene-microperthite, Pyroxene-cryptoperthite. W. Wahl, 1908. Öfvers. Finska Vet. Soc. Förh., 1906-7, No. 2, p. 19 (Pyroxenperthite, Pyroxenmikroperthite, Pyroxenkryptoperthite, plur.). Lamellar intergrowths of pyroxenes of different kinds, as with the felspars.

Quisqueite. D. F. Hewett, 1907. Quoted by W. F. Hillebrand, Amer. Journ. Sci., 1907, ser. 4, vol. xxiv, p. 141; Journ. Amer. Chem. Soc., 1907, vol. xxix, p. 1019. D. F. Hewett, Trans. Amer. Inst. Min. Engin., 1910, vol. xl, p. 286. A lustrous, black, brittle substance very like asphaltum in appearance, but containing much sulphur (S, 46½ per cent. with C, 43 per cent.) and only little hydrogen. It occurs with vanadium-ore (patronite) in the Quisque district, near Cerro de Pasco, Peru.

Rhönite. J. Soellner, 1907. Neues Jahrb. Min., Beil.-Bd. xxiv, p. 475 (Rhönit). X. Galkin, ibid., 1910, Beil.-Bd. xxix, p. 715. A dark brown, triclinic amphibole resembling aenigmatite in its microscopical characters, but differing from this in chemical composition, $(Ca,Na_2,K_2)_3Mg_4Fe''_2Fe'''_2Al_4(Si,Ti)_8O_{30}$. Occurs as a constituent of basaltic rocks in the Rhön Mountains and other localities. A. Lacroix (Bull. Soc. franç. Min., 1909, vol. xxxii, p. 325) describes an amphibole of the same kind, occurring in doleritic nephelinite at Puy de Barneire, Puy-de-Dôme, for which he gives the formula

$$(Na,K,H)_2Ca_8(Fe,Mg)_{15}(Al,Fe)_{16}(Si,Ti)_{21}O_{90}.$$

Rhomboclase. J. A. Krenner, 1891. Akadémiai Értesítő, Budapest, vol. ii, p. 96 (rhomboklas); Földtani Közlöny, Budapest, 1907, vol. xxxvii, pp. 204, 205; private letter from Professor Krenner, 1910. Hydrated acid ferric sulphate, $Fe_2O_3 . 4SO_3 . 9H_2O$, forming colourless rhombic plates with basal cleavage (hence the name, from ῥόμβος and κλάω), and occurring together with szomolnokite (q. v.) and other iron sulphates (kornelite, copiapite, coquimbite, &c.) at Szomolnok, Hungary.

The same compound, $(HO)_6Fe'''_2S_4O_{12} . 6H_2O$, has been prepared artificially by R. Scharizer, Zeits. Kryst. Min., 1901, vol. xxxv, p. 345; 1907, vol. xliii, p. 113.

Ricolite. A trade name for an impure serpentinous rock from New Mexico. Named from *rico* (Spanish), rich, in allusion to its rich green

colour. (G. P. Merrill, Stones for Building and Decoration, 2nd edit., 1897, p. 64.)

Rinneite. H. E. Boeke, 1908. Chemiker-Zeitung, Jahrg. xxxii, p. 1228; Centralblatt Min., 1909, p. 72; Neues Jahrb. Min., 1909, vol. ii, p. 19; Sitzungsber. Akad. Wiss. Berlin, 1909, p. 632 (Rinneit). O. Schneider, Centralblatt Min., 1909, p. 503. An anhydrous chloride of ferrous iron, potassium, and sodium, $FeCl_2 . 3KCl . NaCl$, occurring as large, lenticular masses in the Prussian salt deposits at Nordhausen and Hildesheim. It is clear and colourless, but quickly becomes yellow on exposure to the air. Rhombohedral crystals are occasionally found in the coarsely granular aggregates, and have also been prepared artificially. Named after Professor Fritz Rinne, of Kiel.

Risörite. O. Hauser, 1908. Zeits. Anorg. Chem., vol. lx, p. 230 (Risörit). A preliminary description was given in Ber. Deutsch. Chem. Ges., 1907, vol. xl, p. 3118. A niobate (and titanate) of yttrium, occurring as glassy, optically isotropic masses at Risör, Norway.

Rizopatronite. J. J. Bravo, 1906. [Informaciones y Memorias Soc. Ingen. Lima, vol. viii, p. 171; Bol. Soc. Ingen. Lima, August 1906], quoted by W. F. Hillebrand, Amer. Journ. Sci., 1907, ser. 4, vol. xxiv, p. 144; Journ. Amer. Chem. Soc., 1907, vol. xxix, p. 1022 (Rizo-Patronita). A synonym of patronite (D. F. Hewett, 1906; 4th list). A dark greenish-black vanadium sulphide, VS_4 or V_2S_9, occurring in vanadium-ore at Minasragra, near Cerro de Pasco, Peru. D. F. Hewett (Trans. Amer. Inst. Min. Engin., 1910, vol. xl, p. 287) suggests the formula $V_2S_5 + nS$. Named after Antenor Rizo Patrón, of the Huaraucaca smelting works near Cerro de Pasco.

Romanite. The same as rumänite (O. Helm, 1891), rumanite, roumanite (2nd list). An amber-like resin from Roumania (or Rumania; in Roumanian, România). (G. Munteanu-Murgoci, Gisements du succin de Roumanie, Asoc. Română Sci. Mem. Congres., Bucarest, 1903.)

Rosasite. D. Lovisato, 1908. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xvii, sem. 2, p. 723. A fibrous, pale green, basic carbonate of zinc and copper, $5ZnCO_3 . 3CuCO_3 . 2CuO$, resembling aurichalcite, but differing from this in composition. From Rosas, Sardinia.

Samsonite. — Werner and — Fraatz, 1910. Centralblatt Min., 1910, p. 331 (Samsonit). Steel-black (red by transmitted light), 'monoclinic' crystals resembling miargyrite in appearance. In composition, $2Ag_2S . MnS . Sb_2S_3$, resembles pyrargyrite with part of the silver

replaced by manganese (Mn, 5·86 per cent.). Found with pyrargyrite and pyrolusite in the Samson mine, St. Andreasberg, Harz. The name samsonite has been used for a mining explosive.

Satelite. Trade-name for a serpentine cat's-eye from Tulare Co., California. Resembles chrysotile, but is harder and has a coarse splintery fracture. (D. B. Sterrett, Mineral Resources of the United States, for 1908, 1909, part ii, p. 839.)

Sefströmite. D. Mawson. Although unpublished by the author, the name appeared in 1907 on the labels and lists of dealers, being incorrectly spelt seffstromite. Supposed to be a vanadiferous variety of ilmenite. T. Crook (Mineralogical Magazine, 1910, vol. xv, p. 281) proves 'sefströmite' and 'davidite' (D. Mawson, 1906; 4th list) to be merely mixtures. Named after Nils Gabriel Sefström (1787–1845), the discoverer of vanadium.

Sitaparite. L. L. Fermor, 1908. Rec. Geol. Survey India, vol. xxxvii, p. 207; Mem. Geol. Survey India, 1909, vol. xxxvii, pp. lxvii, 49. A dark bronze-grey, crystalline, and cleavable mineral resembling vredenburgite (q. v.) in appearance, but differing from this in being only slightly magnetic. Formula perhaps $9Mn_2O_3 . 4Fe_2O_3 . MnO_2 . 3CaO$. Occurs with manganese-ores at Sitapár, Chhindwára district, Central Provinces, India.

Spurrite. F. E. Wright, 1908. Amer. Journ. Sci., ser. 4, vol. xxvi, p. 547. J. E. Spurr and G. H. Garrey, Economic Geology, vol. iii, p. 707. A silicate and carbonate of calcium, $2Ca_2SiO_4 . CaCO_3$, forming granular masses with glistening surfaces and resembling crystalline limestone in appearance. It effervesces in dilute hydrochloric acid with the separation of gelatinous silica. The optical characters suggest monoclinic symmetry. Occurs with hillebrandite (q. v.) in contact-metamorphic limestone at Valardeña, Durango, Mexico. Named after Josiah Edward Spurr, of New York.

Stellerite. J. A. Morozewicz, 1909. Bull. Intern. Acad. Sci. Cracovie, 1909, p. 344 (stellerycie, Stellerit). Calcium alumo-hepta-silicate, $CaAl_2Si_7O_{18} . 7H_2O$. An orthorhombic zeolite, resembling stilbite, found in diabase-tuff from the Komandor Islands, Bering Sea. Named after Georg Wilhelm Steller (1709–1746), the discoverer of the Komandor Islands.

Szomolnokite. J. A. Krenner, 1891. Akadémiai Értesítő, Budapest, vol. ii, p. 96 (szomolnokit); Földtani Közlöny, Budapest, 1907, vol.

xxxvii, pp. 204, 205; private letter from Professor Krenner, 1910. Hydrated ferrous sulphate, $FeSO_4 . H_2O$, forming yellowish or brownish, monoclinic pyramids isomorphous with kieserite ($MgSO_4 . H_2O$). Occurs with rhomboclase (q. v.) and other iron sulphates (kornelite, copiapite, coquimbite, &c.) at Szomolnok (German, Schmöllnitz), Hungary.

Tantalum. P. Walther, 1909. Nature, London, vol. lxxxi, p. 335. W. von John, ibid., 1910, vol. lxxxiii, p. 398. A bright, greyish-yellow crystalline powder from gold-washings in the Urals, containing Ta 98·5 per cent., Nb 1·5 per cent. The crystalline grains have been determined to be cubic by C. O. Trechmann. Found also in the Altai Mountains.

Taramellite. E. Tacconi, 1908. Rend. R. Accad. Lincei, Roma, ser. 5, vol. xvii, sem. 1, p. 810; Centralblatt Min., 1908, p. 506; Riv. Min. Crist. Italiana, 1909, vol. xxxix, p. 26. A basic meta-silicate, $Ba_4Fe''Fe'''_4Si_{10}O_{31}$ or $Ba_4Fe''(Fe'''O)Fe'''_3(SiO_3)_{10}$. Occurs as brownish-red, radially fibrous aggregates or as thin veins penetrating magnetite and iron-pyrites in the granular limestone of Candoglia, Piedmont. It is optically biaxial, strongly pleochroic, and probably orthorhombic. Named after Torquato Taramelli, professor of geology in the University of Pavia.

Tawmawite. A. W. G. Bleeck, 1907. Zeits. prakt. Geol., Jahrg. xv, p. 354 (Tawmawit); Rec. Geol. Survey India, 1908, vol. xxxvi, p. 269. A dark green, chromiferous (Cr_2O_3, 11·16 per cent.) variety of epidote, found as massive fragments in the jadeite quarry at Tawmaw in Upper Burma.

Trihydrocalcite. P. N. Čirvinskij (Tschirwinsky), 1906. Ann. Géol. Min. Russie, vol. viii, p. 241 (Тригидрокальцитъ), p. 245 (Trihydrocalcit). Hydrated calcium carbonate, $CaCO_3 . 3H_2O$, occurring as a mould-like encrustation on chalk-marl near Nova-Alexandria, govt. Lublin, Russian Poland. *See* Lublinite and Pentahydrocalcite.

Truffite. E. Dumas, 1876. Statistique géologique, minéralogique, &c., du Département du Gard, Paris, &c., 1876, vol. ii, pp. 431, 433 (not p. 491). A fibrous lignite which when struck emits an odour like that of truffles (French, truffe); it occurs as large, nodular masses, associated with ordinary lignite, in Cretaceous (Turonian) limestone at Pont-Saint-Esprit, dep. Gard. A. Lacroix (Minéralogie de la France, 1909, vol. iii, pp. 436, 509) describes it as a fetid, fibrous calcite.

Turanite. K. A. Nenadkevič, 1909. Bull. Acad. Sci. Saint-Petersbourg, ser. 6, vol. iii, p. 185 (Турашитъ). Hydrated copper vanadate,

$5CuO . V_2O_5 . 2H_2O$, forming compact, spongy, or radially fibrous aggregates and reniform crusts of an olive-green colour. Occurs with alaite (q. v.) in cavities in malachite and limestone near the Alai Mountains in the Turan district, Russian Central Asia.

Uhligite. O. Hauser, 1909. Zeits. Anorg. Chem., vol. lxiii, p. 342 (Uhligit). Bright, black octahedra, at first thought to be perovskite, but found to have the composition $5Ca(Zr,Ti)_2O_5 . Al_2TiO_5$; and thus regarded as an aluminous zirkelite with titanium predominating over zirconium: [zirkelite is, however, rhombohedral and not cubic]. Collected by Dr. Carl Uhlig from a metamorphosed nepheline-rock in the Great Rift Valley in German East Africa.

Vashegyite. K. Zimányi, 1909. Math. és természettudományi Értesítő, Budapest, vol. xxvii, p. 64 (Vashegyit); Zeits. Kryst. Min., xlvii, p. 53. A basic aluminium phosphate, $4Al_2O_3 . 3P_2O_5 . 30H_2O$, occurring as compact, dull white masses, resembling meerschaum in appearance, in the iron mine of Vashegy, comitat Gömör, Hungary.

Vedrite. Trade-name for an ornamental stone of a rich chrome-green colour, found as large blocks on the south bank of the North Kaap river, near Kaap Station, South Africa. The stone contains chrome-muscovite (fuchsite) and some argillaceous material. (G. F. Kunz, Mineral Industry, New York, for 1907, 1908, vol. xvi, p. 810.)

Villiaumite. A. Lacroix, 1908. Compt. Rend. Acad. Sci. Paris, vol. cxlvi, p. 215. Bull. Soc. franç. Min., vol. xxxi, p. 50. Sodium fluoride, occurring as a primary constituent in nepheline-syenite from the Los Islands, West Coast of Africa. The small crystals are tetragonal (pseudo-cubic) with three perfect cleavages at right angles, a deep carmine colour, and strong pleochroism. The mineral is soluble in water. Named after Mr. — Villiaume, who collected the material.

Vorobyevite. V. I. Vernadsky, 1908. Trav. Musée Géol. Pierre-le-Grand, St.-Pétersbourg, vol. ii, p. 81; Bull. Acad. Sci. St.-Pétersbourg, ser. 6, vol. ii, p. 975 (Воробьевить, vorobyevite); abstract in Neues Jahrb. Min., 1909, vol. ii, p. 21 (Worobieffit, Vorobyevite). A variety of beryl containing caesium (Cs_2O, 3·1 per cent., also Li_2O, 1·39 per cent.), in composition very like the beryl from Hebron, Maine, analysed by H. L. Wells (1892). White crystals of short prismatic habit from the Urals. Named in memory of Viktor Ivanovič Vorobyev (В. И. Воробьевъ) (1875–1906), by whom the material had been examined crystallographically. The name (worobewite) is also applied by A. Lacroix (Bull. Soc.

franç. Min., 1910, vol. xxxiii, p. 44) to tabular crystals of rose-coloured and colourless beryl, rich in alkalis, from Madagascar.

Vredenburgite. L. L. Fermor, 1908. Rec. Geol. Survey India, vol. xxxvii, p. 200; Mem. Geol. Survey India, 1909, vol. xxxvii, pp. lxvi, 42. A bronze-grey, crystalline, and cleavable mineral, which is strongly magnetic and sometimes with polarity. $3Mn_3O_4 . 2Fe_2O_3$. From the manganese-ore deposits of Central Provinces and Madras, India. Named after Ernest Watson Vredenburg, of the Geological Survey of India.

Worobieffite. *See* Vorobyevite.

SYSTEMATIC CLASSIFICATION OF NEW MINERALS.[1]

ELEMENT.

Tantalum.

SULPHIDES.

Bravoite, (Fe,Ni) S_2.
Jordisite, colloidal MoS_2.
Quisqueite, [C and S].

SULPH-ANTIMONITE.

Samsonite, $2Ag_2S . MnS . Sb_2S_3$.

HALOIDS.

Villiaumite, NaF.
Orthobromite, AgCl, AgBr.
Ostwaldite, colloidal AgCl.
Rinneite, $FeCl_2 . 3KCl . NaCl$.

OXIDES.

Metacristobalite, SiO_2.
Neslite, var. of opal.
Chromitite, $FeCrO_3$.
Vredenburgite, $3Mn_3O_4 . 2Fe_2O_3$.
Sitaparite, $9Mn_2O_3 . 4Fe_2O_3 . MnO_2 . 3CaO$.
Alaite, $V_2O_5 . H_2O$.
Ehrenwerthite, colloidal $Fe_2O_3 . H_2O$.
Kliachite, colloidal Al hydroxides.

MANGANATE.

Beldongrite, $6Mn_3O_5 . Fe_2O_3 . 8H_2O$.

CARBONATES.

Cobaltocalcite, var. of calcite.
Lublinite, „ „
Pentahydrocalcite, $CaCO_3 . 5H_2O$.
Trihydrocalcite, $CaCO_3 . 3H_2O$.
Rosasite, $5ZnCO_3 . 3CuCO_3 . 2CuO$.
Brugnatellite, $Mg_6FeCO_{20}H_{21}$.
Spurrite, $2Ca_2SiO_4 . CaCO_3$.

SULPHATES.

Natrochalcite, $Na_2SO_4 . Cu_4(OH)_2(SO_4)_3 . 2H_2O$.
Szomolnokite, $FeSO_4 . H_2O$.
Rhomboclase, $Fe_2O_3 . 4SO_3 . 9H_2O$.

PHOSPHATES, &c.

Pulleite, var. of apatite.
Fermorite, $(Ca,Sr)_5F(As,P)_3O_{12}$.

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

Georgiadesite, $Pb_3(AsO_4)_2 . 3PbCl_2$.
Parahopeite, $Zn_3P_2O_8 . 4H_2O$.
Turanite, $5CuO . V_2O_5 . 2H_2O$.
Ferganite, $U_3(VO_4)_2 . 6H_2O$.
Vashegyite, $4Al_2O_3.3P_2O_5 . 30H_2O$.
Oxykertschenite,
$(Mn,Mg,Ca)O.4Fe_2O_3.3P_2O_5.21H_2O$.

BORATES.

Hulsite, Hyd. borate, Fe,Sn.
Paigeite ,, ,, ,, ,,

TANTALATES, TITANATES, &c.

Arizonite, $Fe_2O_3 . 3TiO_2$.
Delorenzite,
$2FeO . UO_2 . 2Y_2O_3 . 24TiO_2$.
Plumboniobite,
$R''_2 Nb_2O_7 . R'''_4(Nb_2O_7)_3$.
Risörite, niobate (& Ti) of Y.
Uhligite, $5Ca(Zr,Ti)_2O_5 . Al_2TiO_5$.

SILICATES.

Aglaurite, var. of orthoclase.
Natronsanidine, ,,
Isomicrocline, var. of microcline.
Potash-oligoclase.
Carnegieite, or soda-anorthite.
Anemousite, var. of plagioclase.
Anophorite, var. of amphibole.
Juddite, ,, ,,
Linosite, ,, ,,
Nephritoid, ,, ,,
Rhönite, ,, ,,
Enstatite-augite.
Clinoenstatite, &c.
Pyroxene-perthite.
Alamosite, $PbSiO_3$.
Magnesium-pectolite.
Vorobyevite, var. of beryl with Cs.
Hawaiite, var. of olivine.
Tawmawite, var. of epidote with Cr.
Taramellite, $Ba_4Fe''Fe'''_4Si_{10}O_{31}$.
Didymolite, $2CaO . 3Al_2O_3 . 9SiO_2$.
Benitoite, $BaTiSi_3O_9$.
Joaquinite, sil. & tit. Ca,Fe.
Spurrite, $2Ca_2SiO_4 . CaCO_3$.
Hallerite, var. of paragonite.
Bityite, $8Al_2O_3 . 5\frac{1}{2}(Ca,Be)O .$
$1\frac{1}{2}Li_2O . 10SiO_2 . 7H_2O$.
Aloisiite, $(H_2,Na_2,Ca,Fe,Mg)_4SiO_6$.
Hillebrandite, $Ca_2SiO_4 . H_2O$.
Plancheite, $H_{10}Cu_{15}Si_{12}O_{44}$.
Paramontmorillonite, $H_{12}Al_2Si_4O_{17}$.
Parasepiolite, $H_8Mg_2Si_3O_{12}$.
Pseudodeweylite, $Mg_3Si_2O_7 . 3H_2O$.
Hydrothomsonite,
$(H_2,Na_2,Ca)Al_2Si_2O_8 . 5H_2O$.
Stellerite, $CaAl_2Si_7O_{18} . 7H_2O$.

HYDROCARBONS.

Asphaltite.
Impsonite.
Malthite.

INDEX TO THE AUTHORS OF MINERAL NAMES.

This index supplements and brings up to date the very useful index given at the end of A. H. Chester's 'A Dictionary of the names of minerals' (New York, 1896). It serves, at the same time, as an index to the series of five lists of new mineral names published in this Magazine (1897–1910), with the exception, however, that names already in Chester are omitted. On the other hand, a few earlier names omitted from Dana's 'System of Mineralogy' (6th edit., 1892) and Chester's 'Dictionary' are included.

GAUBERT (P.)
Metaautunite (1904)
Metachalcophyllite (1904)
Metauranocircite(1904)
GEMBÖCK (H.)
Cordierite-pinite(1898)
GILES (W. B.)
Bakerite (1903)
GLASSER (E.)
Nepouite (1906)
GLINKA (K. D.)
Hydrothomsonite (1906)
GLINKA (S. F.) and ANTIPOV (I. A.)
Plumbomalachite (1901)
GMELIN (L.) [1788–1853]
Kali-harmotom (1825)
GOMES (J. P.)
Libollite (1898)
GOYDER (G. A.)
Stibiotantalite (1893)
Sulvanite (1900)
GRATON (L. C.) and SCHALLER (W. T.)
Purpurite (1905)
GROSSOUVRE (A. de)
Vierzonite (1901)
GROTH (P. v.)
Blätterserpentin(1898)
Faserserpentin (1898)
Picroilmenite (1898)

HACKMAN (V.)
v. RAMSAY (W.)
HANDMANN (R.)
Aglaurite (1907)
HARRINGTON(B. J.) [1848–1907] *v.* ADAMS (F. D.)
HATLE (E.)
Erzbergite (1892)
HAUSER (O.)
Risörite (1908)
Uhligite (1909)
—— and FINCKH (L.)
Plumboniobite (1909)
HEADDEN (W. P.)
Doughtyite (1905)
HEBERDEY (P. P.)
Bleizinkcrysolith(1892)
HEDDLE (M. F.) [1828–1897]
Discachatae (1901)
Haemachatae (1901)
Haema-ovoid-agates (1901)
Oonachatae (1901)
HERMANN (H. R.) [1805–1879]
Osmite (1836)
Uranelain (1832)
HERZ (W.)
Salvadorite (1896)
HEWETT (D. F.)
Patronite (1906)
Quisqueite (1907)
HIDDEN (W. E.) and PRATT (J. H.)
Rhodolite (1898)
—— and WARREN (C. H.)
Yttrocrasite (1906)
HILLEBRAND (W. F.)
Bravoite (1907)
—— and PENFIELD (S. L.)
Natroalunite (1902)
Natrojarosite (1902)
Plumbojarosite (1902)
——and SCHALLER (W. T.)
Mercurammonite(1909)
v. LINDGREN (W.)
HINTZE (C.)
Analcidite (1897)
HLAWATSCH (C.)
Osannite (1906)
Raspite (1897)
HOBBS (W. H.)
Goldschmidtite (1899)
HOFFMANN (G. C.)
Baddeckite (1898)
Souesite (1905)
HOLMQUIST (P. J.)
Knopite (1894)
HOLROYD (W. F.)
v. BARNES (J.)
How (H.) [1827–1879]
Raphite
Stiberite
HUNT (T. S.) [1826–1892]
Hamelite (1886)
Keramite (1886)
HUSSAK (E.)
Chalmersite (1902)
Gorceixite (1906)
Harttite (1906)
—— and PRIOR (G. T.)
Derbylite (1897)
Florencite (1899)
Lewisite (1895)
Senaite (1898)
Tripuhyite (1897)
HUTCHINSON (A.)
Stokesite (1899)

IDDINGS (J. P.)
Potash-oligoclase (1906)
IGELSTRÖM (L. J.) [1822–1897]
Bliabergite (1897)
Dicksbergite (1896)
Gersbyite (1897)
Manganberzeliite (1894)
Munkforssite (1897)
Munkrudite (1897)
Ransätite (1896)
Rhodophosphite (1895)
Talkknebelite (1890)
Tetragophosphite (1895)
ISTRATI (C.)
Moldovite (1897)
Pietricikite (1897)
Roumanite (1895)

JAMIESON (G. S.)
v. PENFIELD (S. L.)
JEREMÉEFF *v.* EREMYEEV
JOHNSTON-LAVIS (H. J.)
Chlormanganokalite (1906)
Chlornatrokalite (1906)
JOVITSCHITSCH (M. Z.)
Chromitite (1908)

KARNOJITZKY (A.)
Alexjejewite (1895)
KATZER (F.)
Hoeferite (1895)
KELLY (A.)
Conchite (1900)
KINAHAN (G. H.) [1829–1908]
Alumyte (1889)
KLEBS (R.)
Cedarite (1897)
KLEIN (C.) [1842–1907]
Chromocyclite (1892)
Stoffertite (1901)
KLOCKMANN (F.)
Mangankiesel (1895)
KNETT (J.)
Radiobaryt (1904)
KNIGHT (W. C.)
Bentonite (1898)
Taylorite (1897)
KNOP (A.) [1828–1893]
Titanaugite (1892)
Titanmelanite (1892)
KNOPF (A.) and SCHALLER (W. T.)
Hulsite (1908)
Paigeite (1908)
KOECHLIN (R.)
Natronkalisimonyit (1902)

PALMER (C.)
Arizonite (1909)
PANTZ ( )
Zeyringite (1811)
PAUL (M.) *v.* CALDERÓN (S.)
PEARCE (F.) *v.* DUPARC (L.)
PECKHAM (S. F.)
Mayberyite (1895)
Parianite (1895)
PELIKAN (A.)
Zeophyllite (1902)
PENFIELD (S. L.) [1856–1906]
Arsenpolybasite (1896)
Fluor-herderite (1894)
Graftonite (1900)
Hydro-fluor-herderite (1894)
Pearceite (1896)
—— and FOOTE (H. W.)
Bixbyite (1897)
Clinohedrite (1898)
Rœblingite (1897)
—— and JAMIESON (G. S.)
Tychite (1905)
—— and WARREN (C. H.)
Glaucochroite (1899)
Hancockite (1899)
Leucophœnicite (1899)
Nasonite (1899)
v. HILLEBRAND (W. F.)
PETERSON (C. A.)
Nigrite (1899)
PETTERD (W. F.)
Bellite (1905)
Dundasite (1893)
Heazlewoodite (1896)
Histrixite (1902)
Pelionite (1894)
Sclerospathite (1902)
PICHLER (A.)
Kochenite (1868)
PIESZCZEK (E.)
Beckerite (1880)
Stantienite (1880)
PITTMAN (E. F.)
Kalgoorlite (1898)
Willyamite (1893)
PONI (P.)
Badenite (1900)
Brostenite (1900)
Moldavite (1900)
POPOV (S. P.)
Kertschenite (1906)
Oxykertschenite (1907)
Paravivianite (1906)
Tamanite (1903)
POTONIÉ (H.)
Denhardtite (1905)

PRATT (J. H.)
Mitchellite (1889)
Pirssonite (1896)
—— and FOOTE (H. W.)
Wellsite (1897)
v. HIDDEN (W. E.)
PRIOR (G. T.)
Teallite (1904)
—— and COOMARASWAMY (A. K.)
Serendibite (1902)
—— and SMITH (G. F. H.)
Fermorite (1910)
—— and SPENCER (L. J.)
Iodembolite (1902)
v. HUSSAK (E.)
PRITCHARD (G. B.)
Mooraboolite (1901)

RAMSAY (W.)
Wiikite
—— and HACKMAN (V.)
Lamprophyllite (1894)
REINISCH (R.)
Astrolite (1904)
REITINGER (J.)
v. KRAUS (E. H.)
RENAULT (B.) *v.* BERTRAND
REUNING (E.)
Magnesium-pectolite (1907)
RICHARDS (J. W.)
Ledouxite (1901)
RICHMOND (H. D.) and OFF (H.)
Johnsonite (1892)
Masrite (1892)
RINNE (F.)
Arsensulfurite (1902)
Klinoaugite (1900)
Koenenite (1902)
Metadesmine (1897)
Metaheulandite (1899)
Metakalkuranit (1901)
Metakoenenite (1902)
Metakupferuranit (1901)
Metascolezite (1894)
Orthoaugite (1900)
Sulfurite (1902)
ROE (A. D.)
Hampdenite (1906)
ROGERS (A. F.)
Cuprogoslarite (1899)
ROSENBUSCH (H.)
Aegirine-augite (1892)
Beryllium-humite (1905)
Cerepidote (1905)
Glaucamphibole (1898)
Ilmenitglimmer (1905)
Magnesium-diopside (1905)
Palaeoleucite (1905)
Pseudomeionite (1902)
Titaneisenglimmer (1885)
RUSKIN (J.) [1819–1900]
Greenite (1884)

SACHS (A.)
Anapaite (1902)
Kleinite (1905)
SAMOJLOV (J. V.)
Beresowite (1897)
Orthobromite (1906)
SCACCHI (A.) [1810–1893]
Euchlorine (1884)
SCHALLER (W. T.)
Boothite (1903)
Ferripurpurite (1907)
Ferroaxinite (1909)
Manganipurpurite (1907)
Manganoaxinite (1909)
v. GRATON (L. C.)
HILLEBRAND (W. F.)
KNOPF (A.)
SCHARIZER (R.)
Ferropallidite (1903)
Ferrorömerite (1903)
Zinc-römerite (1903)
SCHNEIDER (O.)
Otavite (1906)
SCHNEIDER (R.)
Barracanite (1895)
Cupropyrite (1895)
SCHRÖDER (E.)
v. MUTHMANN (W.)
SCHULTEN (A. de)
v. LACROIX (A.)
SCHULZE (E.)
Pilite (1895)
SCHULZE (H. O.) [1853–1891]
Cuproiodargyrite(1892)
SEDERHOLM (J. J.)
Maltesite (1896)
SJÖGREN (H.)
Celsian (1895)
Mauzeliite (1895)
Natron-richterite (1892)
Potash-richterite (1895)
Soda-berzeliite (1895)
Soda-richterite (1892)
Tilasite (1895)