

*A (sixth) list of new mineral names.<sup>1</sup>*

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

Assistant in the Mineral Department of the British Museum.

[Communicated March 11, 1913.]

**Achiardite.** (R. Koechlin, *Mineralogisches Taschenbuch der Wiener Mineralogischen Gesellschaft*, 1911, pp. 12, 62; *Min. Petr. Mitt.*, 1912, vol. xxxi, p. 91 (Achiardit).) Synonym of Dachiardite (G. D'Achiardi, 1906; 4th list).

**Achlussite.** W. F. Petterd, 1910. *Catalogue of the Minerals of Tasmania*, 3rd edit., Hobart, 1910, p. 191; *Papers Roy. Soc. Tasmania*, 1910, p. 191. A green alteration product of topaz resembling steatite in appearance, but near soda-mica in composition. Derivation not stated, but no doubt from ἀχλύς, mist, alluding to the cloudy alteration of the clear topaz.

**Acmite-augite.** F. Zambonini, 1910. *Mineralogia Vesuviana. Mem. Accad. Sci. Fis. Mat. Napoli*, vol. xiv, pp. 153, 155 (acmiteaugite). The same as aegirine-augite (H. Rosenbusch, 1902; 2nd List), but brown in colour.

**Aegerite.** (Mineral Resources U.S. Geol. Survey, for 1910, 1911, part ii, p. 836.) Trade-name for a bitumen allied to elaterite.

**Aeonite.** (Mineral Resources U.S. Geol. Survey, for 1909, 1911, part ii, p. 733.) Trade-name for a bitumen very similar to elaterite.

**Albanite.** C. I. Istrati and M. A. Mihailescu, 1912. *Bul. Soc. Române Şti.*, vol. xx, p. 626. A bituminous material from Albania.

**Allcharite.** B. Ježek, 1912. *Zeits. Kryst. Min.*, vol. li, p. 275 (Allcharit). Small, acicular, orthorhombic crystals, resembling stibnite in appearance, found with vrbaite (q.v.) on specimens of realgar and

<sup>1</sup> Previous lists of this series have been given at the ends of vols. xi-xv (1897-1910) of this Magazine. In addition to new names, a few older names, not mentioned in Dana's 'System of Mineralogy' (6th edit., 1892) or A. H. Chester's 'Dictionary of the names of minerals' (1896), are here included. Bibliographical references to some of these have been kindly supplied to me by Dr. R. Koechlin of Vienna.

orpiment from Allchar, Macedonia. Chemical composition not determined. Named after the locality.

**Allophanoids.** S. J. Thugutt, 1911. *Spraw. Tow. Nauk. Warszawa*, 1911, vol. iv, p. 222 (alofanoid); *Centralblatt Min.*, 1912, 85 (Allophanoide). Clays of the allophane, halloysite, and montmorillonite groups.

**Almeriite.** S. Calderón, 1910. *Los Minerales de España*, vol. ii, p. 206 (Almeriita). A hydrated basic sulphate of aluminium and sodium,  $Al_2(SO_4)_2 \cdot Na_2SO_4 \cdot 5Al(OH)_3 \cdot H_2O$ , the formula being the same as that of calafatite (q.v.) with sodium in place of potassium. A compact, white material, resembling halloysite in appearance, from Almeria.

**Ampangabeite.** A. Lacroix, 1912. *Compt. Rend. Acad. Sci. Paris*, cliv, p. 1044; *Bull. Soc. franç. Min.*, 1912, vol. xxxv, p. 194 (ampanga-beite). A tantalum-niobate (containing but little titanium) of uranium, iron, yttrium, &c., occurring as large rectangular (tetragonal or orthorhombic) prisms in pegmatite at Ampangabe, Madagascar. It approximates in composition to the heterogeneous ännerrödite.

**Angelardite.** A. Lacroix, *Minéralogie de la France*, 1910, vol. iv, p. 524. The correct form of anglarite (of F. von Kobell, 1831); so named after the locality, Angelard (not Anglar), in the commune of Compreignac, Haute-Vienne, France. A blue, hydrated phosphate of iron usually identified with vivianite, but regarded by Lacroix as representing a distinct species, near to ludlamite.

**Angleso-barite.** See Hokutolite.

**Arduinite.** E. Billows, 1912. Two pamphlets both dated Padova, 1912, and entitled 'Analisi di alcuni minerali del Veneto, Nota I, Arduinite, un nuovo minerale', but one of 11 pp. and the other of 14 pp. One of them is stated to be an extract from *Riv. Min. Crist. Ital.*, vol. xli, but the paper does not appear in that or in earlier volumes of that periodical. A red, radially fibrous zeolite,  $H_{16}Na_4CaAl_2Si_6O_{30}$ , from Val dei Zuccanti, Venetia. Named after the Venetian geologist Giovanni Arduino (1714-1795).

**Arsenoferrite.** H. Baumhauer, 1912. *Zeits. Kryst. Min.*, vol. li, p. 143 (Arsenoferrit). Cubic-dyakisdodecahedral iron arsenide,  $FeAs_2$ , isomorphous with iron-pyrites; but represented only by pseudomorphous crystals in the gneiss of the Binnenthal, Switzerland.

**Arsenomiarгыrite.** F. M. Jaeger and H. S. van Klooster, 1912. *Zeits. Anorg. Chem.*, vol. lxxviii, p. 265 (Arsenomiarгыrit). The arti-

ficially produced sulpharsenite of silver,  $\text{AgAsS}_2$ , corresponding with the sulphantimonite miargyrite. No doubt identical with the mineral smithite (R. H. Solly, 1905; 4th List)

**Bababudanite.** W. F. Smeeth, [1911?]. Rec. Mysore Geol. Dept., for 1907-8, vol. ix, p. 85. A soda-amphibole,  $2\text{NaFe}''(\text{SiO}_3)_2 \cdot \text{Fe}''\text{Mg}_3(\text{SiO}_3)_6$ , closely allied to riebeckite, but differing from this in the slightly greater angle of optical extinction ( $a : c' = 7-9^\circ$ ) and in the character of the pleochroism (a Prussian blue, b purple tending to violet, c yellow with tinge of green). Occurs with cummingtonite in quartz-magnetite-schists in the Bababudan Hills, Kadur district, Mysore.

**Baeumlerite.** O. Renner, 1912. Centralblatt Min., 1912, p. 106 (Baeumlerit). A colourless, highly deliquescent, and optically biaxial salt,  $\text{KCl} \cdot \text{CaCl}_2$ , occurring in the Prussian salt-deposits. Named after — Baeumler, General-Director of the Heldburg Salt Company. F. Zambonini (Centralblatt Min., 1912, 270) suggests that this is identical with the cubic chlorocalcite (of A. Scacchi, 1872) from Vesuvius.

**Barbierite.** W. T. Schaller, 1910. Amer. Journ. Sci., ser. 4, vol. xxx, p. 858; Bull. Soc. franç. Min., 1910, xxxiii, p. 320; Journ. Washington Acad. Sci., 1911, vol. i, p. 114; Zeits. Kryst. Min., 1912, vol. 1, p. 847; Bull. U.S. Geol. Survey, 1912, No. 509, p. 40. Monoclinic soda-felspar ( $\text{NaAlSi}_3\text{O}_8$ ) isomorphous with orthoclase and dimorphous with albite. The existence of this has been established by the analyses of soda-rich orthoclases (one from Kragerö, Norway, containing only 1.15 per cent.  $\text{K}_2\text{O}$ ) made by Philippe Barbier, Professor of Chemistry in the University of Lyons. Compare Cryptoclase.

**Bassanite.** F. Zambonini, 1910. Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli, ser. 2, vol. xiv, No. 7, p. 327. White, opaque crystals with the form of gypsum, found in blocks ejected in 1906 from Vesuvius. Anhydrous calcium sulphate ( $\text{CaSO}_4$ ), differing from anhydrite, and possibly identical with the hexagonal calcium sulphate produced by the artificial dehydration of gypsum. Named after Francesco Bassani, Professor of Geology in the University of Naples.

**Batchelorite.** W. F. Petterd, 1910. Catalogue of the Minerals of Tasmania, 3rd edit., Hobart, 1910, p. 22; Papers Roy. Soc. Tasmania, 1910, p. 22. A greenish, foliated mineral, from Mt. Lyell mine, Tasmania; it had previously been described as pyrophyllite, which it resembles in appearance, but it differs from this in containing more silica, the formula being approximately  $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot \text{H}_2\text{O}$ . Named in memory of the late Mr. W. T. Batchelor, formerly manager of the Mt. Lyell mine.

**Bauerite.** F. Rinne, 1911. Ber. k. sächs. Ges. Wiss., Leipzig, Math.-Physik. Kl., vol. lxxiii, p. 445 (Bauerit). The crystalline end-product, consisting mainly of hydrated silica, which results from the artificial or natural bleaching (baueritization) of biotite. It retains the form and optically uniaxial character of the original biotite. Named after Professor Max Bauer, of Marburg.

**Beaverite.** B. S. Butler and W. T. Schaller, 1911. Journ. Washington Acad. Sci., vol. i, p. 26; Amer. Journ. Sci., 1911, ser. iv, vol. xxxii, p. 418; Zeits. Kryst. Min., 1912, vol. 1, p. 114; Bull. U.S. Geol. Survey, 1912, No. 509, p. 77. Hydrrous sulphate of copper, lead, ferric iron (and aluminium),  $\text{CuO} \cdot \text{PbO} \cdot \text{Fe}_2\text{O}_3 \cdot 2\text{SO}_3 \cdot 4\text{H}_2\text{O}$ , occurring as canary-yellow, earthy and friable masses. Under the microscope it shows minute, six-sided plates. Named from the locality, Beaver County, Utah.

**Belmontite.** G. Küstel. R. Koechlin, Mineralogisches Taschenbuch der Wiener Mineralogischen Gesellschaft, 1911, p. 16 (Belmontit). A yellow mineral, said to be a silicate of lead, occurring with stetefeldtite at Belmont, Nevada. Named from the locality. A specimen so labelled was presented by Mr. Küstel in 1873 to the Royal Natural History Museum of Vienna.

**Betafite.** A. Lacroix, 1912. Compt. Rend. Acad. Sci. Paris, vol. cliv, p. 1042; Bull. Soc. franç. Min., 1912, vol. xxxv, pp. 88, 234. A member of a group of cubic minerals, niobo-tantalo-titanates of uranium, &c., including also blomstrandite (of G. Lindström, 1874) and samiresite (q.v.); they are closely allied to pyrochlore and hatchettolite, but differ from the former in containing only little lime and rare earths, and from the latter in containing titanium. Betafite is a hydrated niobate and titanate of uranium, and occurs in pegmatite near Betafo in Madagascar. Named after the locality.

**Binarite.** An obsolete synonym of marcasite. Named, no doubt, from the Latin binarius, since the crystals are usually twinned. The German form Binarkies, attributed to Weiss, appears in the textbooks of Glocker (1831, p. 452), Hartmann, and Quenstedt. The form Binarit is quoted by A. Frenzel, Mineralogisches Lexicon für das Königreich Sachsen, 1874, p. 197.

**Biopyribole.** A. Johannsen, 1911. Journ. Geol. Chicago, vol. xix, p. 319. A contraction of the words biotite, pyroxene, and amphibole, suggested for use as a group name. Similarly, Pyribole (q.v.).

**Broccchite.** A. Scacchi, 1840. *Annali Civili del Regno delle Due Sicilie*, Napoli, vol. xxiii, p. 15; *Mem. R. Accad. Sci. Napoli, Classe delle Sci. Nat.*, 1852, vol. vi, p. 268; *Ann. Chem. Phys. (Poggendorff)*, 1853, Erg.-Band iii, p. 183. A synonym of chondrodite. It was applied by Scacchi to his 'Type II' of humite. Named after Giovanni Battista Brocchi (1772-1826).

**Calafatite.** S. Calderón, 1910. *Los Minerales de España*, vol. ii, p. 205 (Calafatita). A hydrated basic sulphate of aluminium and potassium, containing rather more water than alunite: formula  $Al_2(SO_4)_3 \cdot K_2SO_4 \cdot 5Al(OH)_3 \cdot H_2O$ . As white compact masses it occurs abundantly in Almeria. Named after Mr. Juan Calafat León, of the Museum of Natural Sciences, Madrid.

**Calciocancrinite.** F. Zambonini, 1910. *Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli*, ser. 2, vol. xiv, No. 7, p. 202. Synonym of Kalkcancrinit (J. Lemberg, 1876) and lime-cancrinite (Dana, *System*, 1892, p. 428).

**Calciodialogite.** T. Nicolau, 1910. Synonym of Calciorhodochrosite (q.v.).

**Calciorhodochrosite.** T. Nicolau, 1910. *Anuarul Inst. Geol. României*, vol. iii, p. 39 (Calciorhodochrosită, Calciodialogită), p. 41 (Germ., Calziorhodochrosit, Calziodiallogit). Mixed carbonates of manganese and calcium, occurring intimately intermixed with rhodonite in manganese ore from Roumania.

**Canadium.** A. G. French, 1911. *Chem. News*, vol. civ, p. 283. An alleged new element of the platinum group, said to have been found as white crystalline grains in the Nelson district, British Columbia, Canada. Named after the country of origin. This reported discovery has not been confirmed (*Ann. Rep. Minister of Mines, British Columbia*, for 1911, 1912, pp. 157, 165; *Mining Journ. London*, 1913, vol. ci, p. 344).

**Catalinite.** (D. B. Sterrett, *Mineral Resources U. S. Geol. Survey* for 1910, 1911, part ii, p. 898.) Local trade-name for beach pebbles, used as gems, from Santa Catalina Island, California.

**Chizeuilite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, pp. 594, 905. A supposed new mineral afterwards identified with andalusite. Occurs as colourless prisms at Chizeuil, near Chalmoux, Saône-et-Loire.

**Chlor-spodiosite.** F. K. Cameron and W. J. McCaughey, 1911.

Journ. Physical Chem., Ithaca, N.Y., vol. xv, p. 464. The chlorine analogue,  $\text{Ca}_2(\text{PO}_4)_2 \cdot \text{CaCl}_2$ , of spodosite, prepared artificially as orthorhombic crystals. The natural mineral is distinguished as fluor-spodosite.

**Chlor-utahlite.** (D. B. Sterrett, Mineral Resources U.S. Geol. Survey, for 1908, 1909, part ii, p. 853.) The same as utahlite (G. F. Kunz, 1895; 1st List), the prefix being, no doubt, added because of the characteristic green colour of the stone. A synonym of variscite.

**Chrom-brugnatellite.** L. Hezner, 1912. Centralblatt Min., 1912, p. 570 (Chrom-Brugnatellit). A scaly, violet mineral occurring in serpentine at Dundas, Tasmania. In composition,  $2\text{MgCO}_3 \cdot 5\text{Mg}(\text{OH})_2 \cdot 2\text{Cr}(\text{OH})_3 \cdot 4\text{H}_2\text{O}$ , it is analogous to brugnatellite with chromium in place of iron. Possibly identical with stichtite (q.v.).

**Chromopicotite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 811. The same as Chrompicotite (T. Petersen, 1869). A member of the spinel group intermediate between chromite and picotite, the formula being  $(\text{Fe}, \text{Mg})(\text{Cr}, \text{Al})_2\text{O}_4$ .

**Cliachite.** J. F. A. Breithaupt, 1847. Handbuch d. Mineralogie, vol. iii, p. 896 (Picites Cliachites; Cliachit). A ferruginous bauxite from Cliache (= Kljake) in Dalmatia. F. Cornu in 1909 (5th list) used this name (Kliachite) for the colloidal aluminium hydroxides occurring in bauxite. See Kljakite and Sporogelite.

**Cobaltoadamite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 424. A variety of adamite from Cape Garonne, Var, of a pale rose-red to carmine colour, and containing some cobalt isomorphously replacing zinc (analysed by A. Damour, 1868).

**Cokeite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 648 (cokeïte). The same as carbonite. A native coke produced by the action of igneous intrusions or of earth movements on coal-seams, or by the spontaneous combustion of coal.

**Críptosa.** (S. Calderón, Los Minerales de España, 1910, vol. ii, p. 474.) Spanish form of Cryptoclase (q.v.).

**Cryptoclase.** V. Souza-Brandão, 1909. Communic. Comissão do Serviço Geologico de Portugal, vol. vii, p. 187 (Fr. cryptose; Germ. Kryptoklas). A variety of albite which by repeated twinning according to the albite-law simulates monoclinic symmetry. It bears the same relation to albite that orthoclase does to microcline. Anorthoclase belongs

to the isomorphous series of which orthoclase and cryptoclase are the end-members.

**Cuproadamite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 424. A variety of adamite from Cape Garonne, Var, of a sea-green colour and containing much copper (analysed by F. Pisani, 1870), thus forming a passage to the isomorphous mineral olivenite.

**Cuprocuprite.** V. I. Vernadsky, 1910. *Opyit opisatelnoĭ Mineralogii*, St. Petersburg, vol. i, part 3, p. 416 (купрокупритъ); *Centralblatt Min.*, 1912, p. 760 (Cuprocuprit). Native copper containing admixed or dissolved cuprous oxide (Cu + Cu<sub>2</sub>O).

**Delatynite.** J. Niedźwiedzki, 1908. *Kosmos*, Lemberg, vol. xxxiii, p. 531 (delatynit), p. 535 (Delatinit). A variety of amber from Delatyn in the Galician Carpathians, differing from succinite in containing rather more carbon (79.93 per cent.), less succinic acid (0.74–1.67 per cent.), and no sulphur.

**Diocroma.** A. Scacchi (unpublished note read at Accad. Sci. Naples, April 27, 1841). F. Zambonini, *Mineralogia Vesuviana*. *Mem. R. Accad. Sci. Fis. Mat. Napoli*, 1910, ser. 2, vol. xiv, No. 7, pp. 270, 271 (diocroma). A name applied to the small crystals of zircon from Monte Somma which change in colour, when heated, from sky-blue to orange-yellow.

**Egueiite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 536 (égueïite). G. Garde, *Description géologique des régions situées entre le Niger et le Tchad*, Paris, 1911, p. 263 (Egueiite), p. 264 (égueiite). Described without name by G. Garde, *Compt. Rend. Acad. Sci. Paris*, 1909, vol. cxlviii, p. 1618. A hydrated basic phosphate of ferric iron with a little calcium and aluminium, occurring as small nodules, with a fibro-lamellar internal structure, embedded in clay in Eguei, Sudan. It is allied to borickite and fouchерite (q.v.), and is probably an altered vivianite.

**Eichbergite.** O. Grosspietsch, 1911. *Centralblatt Min.*, 1911, p. 433 (Eichbergit). A massive iron-grey mineral, (Cu,Fe)<sub>2</sub>S. 3(Bi,Sb)<sub>2</sub>S<sub>3</sub>, from the magnesite deposits of Eichberg, Semmering Pass, Austrian Alps.

**Epinatrolite.** S. J. Thuggutt, 1911. *Centralblatt Min.*, 1911, p. 408 (Epinatrolith). A less stable form of natrolite which loses its water at a lower temperature, but is otherwise identical in morphological and optical characters and chemical composition with normal natrolite. The dis-

tion is based on the micro-chemical colouring reactions with the partially dehydrated material.

In the slightly earlier Polish publications (Spraw. Tow. Nauk. Warszawa, 1910, vol. iii, p. 414; 1911, vol. iv, p. 77) the author used the term *metanatroilite* for this modification; but as this name had been previously used by F. Rinne in 1890 for partially dehydrated natrolite, he renamed it epinatrolite.

**Estramadurite.** (H. E. Roscoe and C. Schorlemmer, Treatise on Chemistry, 1877, vol. i, p. 459 (estramadourite); 1878, vol. ii, part 1, p. 205 (estramadurite). T. E. Thorpe, Dictionary of Applied Chemistry, 1890, vol. i, p. 402; vol. iii, p. 184.) 'Phosphorite and estramadurite are massive varieties of apatite which occur in Estramadura [i.e. Estremadura or Extremadura], in Spain' (Roscoe and Schorlemmer, 1878).

**Fasernephrit.** J. Uhlig, 1910. Neues Jahrb. Min., 1910, vol. ii, p. 91. The nephrite of this newly discovered occurrence in the Radautal, Harz, shows in part a fibrous structure owing to the parallel, rather than matted, aggregation of the actinolite fibres. This material has already been described under the name nephritoid (J. Fromme, 1909; 5th List).

**Ferrite.** H. M. Howe, 1890. The Metallurgy of Steel, New York, vol. i, pp. 164, 165. Pure or nearly pure metallic iron detected under the microscope as a crystalline constituent of manufactured iron and steel. The same term has been applied by V. I. Vernadsky (Opuit opisatelnoi Mineralogii, St. Petersburg, 1908, vol. i, pp. 156, 162 (Феррит); Centralblatt Min., 1912, 759 (Ferrit)) to native iron; for example, the terrestrial iron from Uifak, Disko Island, Greenland.

Unfortunately, however, the name ferrite had been earlier used in different senses. Chemically, it signifies a salt in which ferric oxide plays the part of an acid; for example, barium ferrite,  $\text{BaFe}_2\text{O}_4$ . Mineralogically, it was used by H. Vogelsang in 1872 for an amorphous iron hydroxide of unknown composition occurring as red and yellow patches in decomposed igneous rocks; and by M. F. Heddle in 1882 for ferruginous pseudomorphs after olivine.

**Ferritungstite.** W. T. Schaller, 1911. Journ. Washington Acad. Sci., vol. i, p. 24; Amer. Journ. Sci., 1911, ser. 4, vol. xxxii, p. 161; Zeits. Kryst. Min., 1912, vol. 1, p. 112; Bull. U.S. Geol. Survey, 1912, No. 509, p. 83. A yellow ochre closely resembling tungstite (tungstic-ochre), but consisting of hydrated ferric tungstate,  $\text{Fe}_2\text{O}_3 \cdot \text{WO}_3 \cdot 6\text{H}_2\text{O}$ .



Under the microscope it shows minute hexagonal plates which are optically isotropic on the base. Occurs as an alteration-product of wolframite in the State of Washington.

**Ferrobrucite.** A. Lacroix, 1909. *Minéralogie de la France*, vol. iii, p. 402. Brucite ( $MgO_2H_2$ ) containing a small amount of ferrous oxide. The same as Eisenbrucit of F. von Sandberger, 1880.

**Ferronemalite.** A. Fersmann, 1911. *Bull. Acad. Sci. St.-Petersbourg*, ser. 6, vol. v, p. 551 (Ферронемалитъ). Abstract in *Chem. Zentralblatt*, 1911, vol. i, p. 1879 (Ferronemalith). A variety of nemalite from Caucasus containing some ferrous oxide ( $FeO$  5 per cent.). See Ferrobrucite.

**Ferropicotite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 806. A variety of spinel differing from picotite in containing ferric oxide in place of chromic oxide, the formula being  $(Fe,Mg)(Al,Fe)_2O_4$ .

**Ferroplatinum.** V. I. Vernadsky, *Opuit opisatelnoi Mineralogii*, St. Petersburg, 1908, vol. i, p. 156 (Ферроплатина); *Centralblatt Min.*, 1912, p. 759 (Ferroplatin). Synonym of Eisenplatin of Breithaupt (1832) = Iron-platinum (Dana, 1854).

**Flajolotite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 509. A compact or earthy mineral of a lemon-yellow colour occurring abundantly as large nodular masses at Hammam N'Bail, Constantine, Algeria. A hydrated antimonate of iron,  $4FeSbO_4 \cdot 3H_2O$ , analysed by — Flajolot in 1871.

**Fluocollophanite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 561 (fluocollophanite). A variety of collophanite containing fluorine, the formula being given as

$$\begin{cases} x [Ca_3(PO_4)_2] + y CaCO_3 + z H_2O \\ x (CaF)_2Ca_3(PO_4)_3 + y CaCO_3 + z H_2O \end{cases}$$

It is amorphous (colloidal) and optically isotropic, and is an important constituent of the calcium phosphates of sedimentary origin. Collophanite is an error for collophanite (Kollophan of F. von Sandberger, 1870), from κόλλα, glue (Fr. colle) and φαίνεσθαι, to appear. See Quercyite.

**Fluor-spodiosite.** F. K. Cameron and W. J. McCaughey, 1911. *Journ. Physical Chem.*, Ithaca, N.Y., vol. xv, p. 470. Synonym of spodiosite. See Chlor-spodiosite.

**Foucherite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 535 (fouchérite). The correct spelling of fucherite (A. Leymerie,

1867), an amorphous hydrated basic phosphate of ferric iron with some aluminium and calcium; from Fouchères, Aube, France. Possibly identical with borickite (J. D. Dana, 1868).

**Gageite.** A. H. Phillips, 1910. Amer. Journ. Sci., ser. 4, vol. xxx, p. 283. Radiating aggregates of colourless, acicular crystals, associated with leucophoenicite, zincite, willemite, and calcite at Franklin, New Jersey.  $8(\text{Mn,Mg,Zn})\text{O} \cdot 8\text{SiO}_2 \cdot 2\text{H}_2\text{O}$ ; related to leucophoenicite (S. L. Penfield and C. H. Warren, 1899). Named after Mr. R. B. Gage, of Trenton, New Jersey, who collected and analysed the material.

**Gajite.** F. Tućan, 1911. Centralblatt Min., 1911, p. 312 (Gajit). A snow-white, compact mineral from Croatia, resembling magnesite in appearance. It is a hydrated carbonate of calcium and magnesium, similar in composition to the rocks pencatite and predazzite (mixtures of calcite and hydromagnesite), but it is apparently homogeneous. Under the microscope it shows a finely granular texture with the cleavage and optical characters of the rhombohedral carbonates. Named after Ljudevit Gaj (1809–72), a Croatian leader.

**Glacialite.** (18th Ann. Rep. U.S. Geol. Survey for 1896–7, 1897, part v, p. 1354. G. P. Merrill, Rep. U.S. National Museum for 1899, 1901, p. 337.) Trade-name for a white clay from Enid, Oklahoma, put on the American market as a fuller's earth.

**Goldfieldite.** F. L. Ransome, 1909. United States Geol. Survey, Prof. Paper No. 66, p. 116; Economic Geology, 1910, vol. v, p. 453. A massive, dark lead-grey mineral occurring with marcasite, bismuthinite, famatinite, and native gold in the gold ores of Goldfield, Nevada. A cupric sulphantimonite in which part of the antimony is replaced by bismuth (and arsenic) and part of the sulphur by tellurium (17 per cent.);  $5\text{CuS} \cdot (\text{Sb,Bi})_2(\text{S,Te})_3$ . Named after the locality.

**Guadarramite.** J. Muñoz del Castillo, 1906. Bol. Soc. Española Hist. Nat., vol. vi, p. 479 (Guadarramita). S. Calderón, Los Minerales de España, 1910, vol. i, p. 328. A radioactive variety of ilmenite from the Sierra de Guadarrama, Castille, Spain.

**Haematogelite.** F. Tućan, 1913. Centralblatt Min., 1913, p. 68 (Hämatogelit). A colloidal form of ferric oxide ( $\text{Fe}_2\text{O}_3$ ), occurring as the colouring material of bauxite. See Sporogelite.

**Hatchite.** R. H. Solly and G. F. H. Smith, 1912. Mineralogical Magazine, vol. xvi, p. 287. Minute, lead-grey, anorthic crystals of undetermined composition (but suggested to be a sulpharsenite of lead)

from the crystalline dolomite of the Binnenthal, Switzerland. Named after Dr. Frederick Henry Hatch.

**Heliodor.** (E. Kaiser, *Centralblatt Min.*, 1912, p. 385.) Trade-name for a golden beryl of gem-quality from German South-West Africa.

**Hexahydrite.** R. A. A. Johnston, 1911. *Summary Rep. Geol. Surv. Canada*, for 1910, p. 256. A hydrated magnesium sulphate containing less water (47.33 per cent.) than epsomite, and identical in composition with the artificially prepared hexahydrate  $MgSO_4 \cdot 6H_2O$ . As a white, columnar to fibrous material it forms seams in an altered rock in the Lillooet district, British Columbia.

**Hinsdalite.** E. S. Larsen, Junr. and W. T. Schaller, 1911. *Journ. Washington Acad. Sci.*, vol. i, p. 25; *Amer. Journ. Sci.*, ser. 4, vol. xxxii, p. 251; *Bull. U.S. Geol. Survey*, 1912, No. 509, p. 66; *Zeits. Kryst. Min.*, 1912, vol. 1, p. 101. Hydrous sulphate and phosphate of lead (and strontium) and aluminium,  $PbSO_4 \cdot AlPO_4 \cdot 2Al(OH)_3$ , isomorphous with svanbergite and beudantite. It forms dark-grey, granular masses, and colourless, rhombohedral crystals. Named from the locality, Hinsdale County, Colorado.

**Hokutolite.** K. Jimbō, 1913. *Bull. Soc. franç. Min.*, 1912 [i. e. 1913], vol. xxxv, p. 471; *Amer. Journ. Sci.*, 1913, ser. 4, vol. xxxv, p. 464. A mixture, in variable proportions, of lead sulphate and barium sulphate deposited as a crystalline crust by the Hokuto hot springs in Taiwan (= Formosa). It was described as a radioactive mineral by Y. Okamoto (first in Japanese, and afterwards in English in *Beiträge zur Mineralogie von Japan*, 1912, No. 4, p. 178), and again by M. Hayakawa and T. Nakano (*Zeits. Anorg. Chem.*, 1912, vol. lxxviii, p. 183), the latter authors applying to it the name *angleso-barite* (p. 183) and, in German, *Angleso-Baryt* (pp. 184, 190).

**Hydromelanothallite.** F. Zambonini, 1910. *Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli*, ser. 2, vol. xiv, No. 7, p. 57 (idromelanotallite). The black scales of melanothallite (A. Scacchi, 1870) change on exposure to the air to green, and for this alteration-product the name hydromelanothallite is proposed. Scacchi's analyses suggest that the former may be  $CuCl_2 \cdot CuO \cdot H_2O$  and the latter  $CuCl_2 \cdot CuO \cdot 2H_2O$ .

**Hydrotroilite.** M. Sidorenko, 1901. *Mém. Soc. Nat. Nouv.-Russ. Odessa*, vol. xxiv, part i, p. 119 (*гидротроилитъ*); Abstract in *Neues Jahrb. Min.*, 1902, vol. ii, Ref. p. 397 (Hydrotroilit). Hydrated iron sulphide,  $FeS \cdot H_2O$ , occurring in the black mud of inland seas.

**Hydroxyapatite.** W. T. Schaller, 1912. Bull. U.S. Geol. Survey, No. 509, p. 100. A hypothetical constituent of apatite,  $9\text{CaO} \cdot 3\text{P}_2\text{O}_5 \cdot \text{CaO} \cdot \text{H}_2\text{O}$ , corresponding with fluor-apatite  $9\text{CaO} \cdot 3\text{P}_2\text{O}_5 \cdot \text{CaF}_2$ . Compare Voelckerite.

**Hyposiderite.** A. Breithaupt, 1847. Handbuch der Mineralogie, vol. iii, p. 894 (Picites Hyposiderites; Hyposiderit). A black, shining variety of limonite differing from stilpnosiderite in its lower specific gravity (3.80–3.88) and higher percentage of water (20 per cent.). Named from *ὑπό*, less, and *σίδηρος*, iron.

**Idromelanotallite.** See Hydromelanothallite.

**Imerinite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 787. A soda-amphibole containing only a small amount of sesquioxides and so allied to soda-richterite. It occurs as colourless to blue needles, resembling tremolite in appearance, in crystalline limestone in the central province Imerina of Madagascar.

**Kinradite.** (D. B. Sterrett, Gems and precious stones in 1911, Mineral Resources of the United States, for 1911, 1912, p. 27 of advance copy.) Local trade-name for a spherulitic jasper-like quartz from California. Named after Mr. J. J. Kinrade, of San Francisco.

**Kljakite.** F. Tučan, Neues Jahrb. Min., 1912, Beil.-Bd. xxxiv, p. 411; M. Kišpatić, tom. cit., pp. 519, 534 (Kljakit). An alternative spelling of Cliachite (q.v.) and Kliachite (5th list). See Sporogelite.

**Kryptoklas.** See Cryptoclase.

**Lassolatite.** F. Gonnard, 1876. Minéralogie du département du Puy-de-Dôme, p. 9; A. Lacroix, Minéralogie de la France, 1901, vol. iii, p. 321. A fibrous, silky variety of opal, identical with fiorite. From the puy de Lassolas, Puy-de-Dôme.

**Lefkasbestos.** A. Zdarsky, 1910. Zeits. prakt. Geol., vol. xviii, p. 345 (Lefkasbest). A bleached chrysotile occurring in weathered serpentine at Mount Troodos, Cyprus. Named from *λευκός*, white, and *ἀσβεστος*.

**Losite.** A. Lacroix, 1911. Les syénites néphéliniques de l'archipel de Los et leurs minéraux. Nouv. Arch. Muséum, Paris, ser. 5, vol. iii, p. 37; Bull. Soc. franç. Min., 1912, vol. xxxv, p. 7. An undetermined mineral detected in thin sections of the nepheline-syenite of the Los Islands, West Coast of Africa. It is optically uniaxial and possibly related to cancrinite, but has a lower negative birefringence than this.

**Lublinite.** J. Morozewicz, 1907. Kosmos, Lemberg, vol. xxxii, p. 487; Centralblatt Min., 1911, p. 229. P. N. Čirvinskij (P. Tschirwinsky), Mitt. Ges. Naturf. Kiew, 1910, vol. xxi, p. 285; Doelter's Handbuch der Mineralchemie, 1911, vol. i, p. 360. (See 5th List, where the name is incorrectly attributed to another author.)

**Magnesiochromite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 311 (magnésiochromite). The same as magnochromite (G. M. Bock, 1868). A variety of chromite containing magnesium,  $(\text{Fe,Mg})\text{Cr}_2\text{O}_4$ .

**Manandonite.** A. Lacroix, 1912. Compt. Rend. Acad. Sci. Paris, vol. clv, p. 446; Bull. Soc. franç. Min., vol. xxxv, p. 228. A borosilicate,  $\text{H}_{24}\text{Li}_4\text{Al}_{14}\text{B}_4\text{Si}_6\text{O}_{88}$ , occurring as pearly six-sided scales with micaceous cleavage, in corrosion cavities with rubellite in pegmatite near the Manandona river, Madagascar.

**Manganobrucite.** A. Lacroix, 1909. Minéralogie de la France, vol. iii, p. 402. The same as manganbrucite (L. J. Igleström, 1882), a variety of brucite containing manganese.

**Maucherite.** F. Grünling, 1913. Centralblatt Min., 1913, p. 225 (Maucherit). A nickel arsenide,  $\text{Ni}_3\text{As}_2$ , forming reddish silver-white, platy crystals (tetragonal or orthorhombic?) resembling rammelsbergite. It occurs with niccolite in the Kupferschiefer of Eisleben, Thuringia. Named after Mr. Wilhelm Maucher of Munich.

**Mauleonite.** A. Leymerie, 1867. Cours de Minéralogie, 2nd edit., vol. ii, p. 243 (Mauléonite). A. Lacroix, Minéralogie de la France, 1895, vol. i, p. 383, 1910, vol. iv, p. 739. A white chlorite identical with the leuchtenbergite variety of clinocllore. From Mauléon, Basses-Pyrénées.

**Mellonite.** L. Palmieri, 1873. Rend. Accad. Sci. Fis. Mat. Napoli, Anno XII, p. 94. F. Zambonini, Mineralogia Vesuviana. Mem. Accad. Sci. Fis. Mat. Napoli, 1910, ser. 2, vol. xiv, No. 7, p. 50. Impure pseudocotunnite, or a mixture of chlorides and sulphates of sodium, potassium, copper, and lead. Named after Professor Macedonio Melloni (1798-1854) of Naples.

**Melnikovite.** B. Doss, 1911. Annuaire Géol. Min. Russie, vol. xiii, p. 130 (мельниковитъ), p. 139 (Melnikowit); Neues Jahrb. Min., 1912, Beil.-Bd. xxxiii, p. 683; Zeits. prakt. Geol., 1912, vol. xx, p. 453. A labile form of iron disulphide ( $\text{FeS}_2$ ) occurring as minute, black, magnetic grains in Miocene clay on the estates of the Brothers Melnikov in govt. Samara, Russia. It is more readily attacked by chemical reagents than

is iron-pyrites, and it is regarded as having been derived from a colloidal form of iron sulphide.

**Metanatroilite.** See Epinatrolite.

**Metathenardite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 32 (métathénardite). At temperatures above 200° C. thenardite ( $\text{Na}_2\text{SO}_4$ ) becomes transformed into one or more different crystalline modifications; the latter on cooling may exist in a metastable state for some days at the ordinary temperature. Clear crystals of metathenardite collected from the hot fumaroles of Mt. Pelée, Martinique, gradually became cloudy and white, with a change in their optical characters, due to the transformation into an aggregate of differently orientated crystals of thenardite.

**Millosevichite.** U. Panichi, 1913. *Rend. R. Accad. Lincei, Roma*, ser. 5, vol. xxii, sem. 1, p. 303. Normal ferric and aluminium sulphate occurring as an encrustation with a delicate violet colour and vitreous lustre in the Alum Grotto, on the Island of Vulcano, Lipari Islands. Named after Professor Federico Millosevich, of Florence.

**Minguetite.** A. Lacroix, 1910. *Bull. Soc. franç. Min.*, vol. xxxiii, p. 278; *Minéralogie de la France*, 1910, vol. iv, p. 788 (minguétite). A black micaceous mineral, previously described as biotite, from the Minguet iron-mine, near Segré (Maine-et-Loire). In composition,  $17\text{SiO}_2 \cdot 4(\text{Fe}, \text{Al})_2\text{O}_3 \cdot 8(\text{Fe}, \text{Mg})\text{O} \cdot (\text{K}, \text{Na})_2\text{O} \cdot 8\text{H}_2\text{O}$ , it is intermediate between the iron-mica lepidomelane and the iron-chlorite stilpnomelane.

**Molengraaffite.** H. A. Brouwer, 1911. *Centralblatt Min.*, p. 129 (Molengraaffit). A titanio-silicate of calcium, sodium, &c., forming yellowish-brown, monoclinic prisms with a perfect orthopinacoidal cleavage, and resembling astrophyllite in appearance. It occurs as a constituent of the rock lujaurite associated with the nepheline-syenites of the Pilandsberg, Transvaal. Named after Professor Gustaaf Adolf Frederik Molengraaff, of Delft, Holland.

**Molybdosodalite.** F. Zambonini, 1910. *Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli*, ser. 2, vol. xiv, No. 7, pp. 214, 358 (molibdosodalite). The green sodalite from Monte Somma was found by G. Freda in 1878 to contain molybdenum ( $\text{MoO}_3$ , 2.87 per cent.) and a deficiency of chlorine (2.28 per cent.).

**Morganite.** G. F. Kunz, 1911. *Amer. Journ. Sci.*, ser. 4, vol. xxxi, p. 81; *Mineral Industry*, for 1910, 1911, vol. xix, p. 588. Trade-name

for a rose-coloured beryl of gem-quality occurring with lithium-bearing minerals in the pegmatites of Madagascar and California. Named after John Pierpont Morgan (1837-1913) of New York City. The same name had earlier been used for the manufactured products of the Morgan Crucible Company in London. Further, the variety-name vorobyevite (5th list) had been previously applied to the pink alkali-bearing beryl from Madagascar.

**Mosesite.** F. A. Canfield, W. F. Hillebrand, and W. T. Schaller, 1910. *Amer. Journ. Sci.*, ser. 4, vol. xxx, p. 202; *Zeits. Kryst. Min.*, 1911, vol. xlix, p. 1; *Bull. U.S. Geol. Survey*, 1912, No. 509, p. 104; F. A. Canfield, *School of Mines Quart.*, New York, 1913, vol. xxxiv, p. 276. A mercurous-ammonium compound containing chlorine and sulphate. It was found at Terlingua, Texas, as minute, canary-yellow octahedra and spinel-twins; and is very similar in composition and appearance to kleinite (4th list; = mercurammonite, 5th list) from the same locality. Named after Professor Alfred Joseph Moses, of Columbia University, New York.

**Muthmannite.** F. Zambonini, 1911. *Zeits. Kryst. Min.*, vol. xlix, p. 246 (Muthmannit). C. Gastaldi, *Rend. Accad. Sci. Fis. Mat. Napoli*, 1911, ser. 8, vol. xvii, p. 26. Monotelluride of silver and gold, (Ag,Au)Te, hitherto confused with krennerite (a ditelluride, AuTe<sub>2</sub>, containing but little silver). Named after Dr. Wilhelm Muthmann, Professor of Inorganic Chemistry in the Technical High School at Munich.

**Myrickite.** (D. B. Sterrett, *Gems and precious stones in 1911, Mineral Resources of the United States, for 1911, 1912, p. 7 of advance copy.*) Local trade-name for a variety of chalcedony from San Bernardino Co., California. It shows red spots on a grey ground and resembles 'St. Stephen's stone'. Named after Mr. F. M. Myrick, of Randsburg, California.

**Naphthine**, Naphteine, or Naphtine. A. N. Desvaux, 1834. *Mém. Soc. Agric. Sci. & Arts, Angers*, 1834, vol. ii, p. 139 (Naphtéine); *Bull. Soc. Géol. France*, 1835, vol. vi, p. 139 (Naphthine). A. Lacroix, *Minéralogie de la France*, 1910, vol. iv, p. 619 (Naphtine). A mineral-wax, identical with hatchettite, found in cavities in limestone at Beaulieu, dép. Maine-et-Loire. So named because it has an odour like that of naphtha.

**Napoleonite.** An obsolete synonym of orthoclase. The name appears in T. Thomson's *Outlines of Mineralogy*, 1836, vol. i, p. 291, and in the

first to fourth editions (1837-54) of Dana's System of Mineralogy. The same name was later applied to the orbicular diorite, or corsite, of Corsica. In T. Egleston's Catalogue of Minerals and Synonyms, 1892, it appears as a synonym of amphibole.

**Natramblygonite.** W. T. Schaller, 1911. Amer. J. Sci., ser. 4, vol. xxxi, p. 48; Zeits. Kryst. Min., 1911, vol. xlix, p. 233; 1912, vol. li, p. 246 (Natronamblygonit); Bull. U.S. Geol. Survey, 1912, No. 509, p. 101. A soda-amblygonite occurring as greyish-white cleavage-masses in pegmatite near Canyon City, Colorado. It differs from ordinary amblygonite in that the lithium is largely replaced by sodium ( $\text{Na}_2\text{O}$ , 11.23 per cent.), the formula being  $(\text{Na},\text{Li})\text{Al}(\text{OH},\text{F})\text{PO}_4$ .

**Natrodavyne.** F. Zambonini, 1910. Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli, ser. 2, vol. xiv, No. 7, p. 188 (natrodavyne). Hexagonal crystals, rich in faces, hitherto referred to nepheline or to davyne, but on analysis found to differ from the members of the davyne-microsommit group in containing no potassium and much carbon dioxide.

**Natronamblygonit.** See Natramblygonite.

**Natronmelilith.** W. C. Brögger, 1898. Die Eruptivgesteine des Kristianiagebietes, III. Vidensk.-Selsk. Skrifter, Math.-Naturv. Kl., Kristiania, for 1897, No. 6, p. 69. A melilite-like mineral occurring in the rock farrisite; afterwards (loc. cit., p. 367) suggested to belong to the scapolite group.

**Neocolemanite.** A. S. Eakle, 1911. Bull. Dep. Geol. Univ. California, vol. vi, No. 9, p. 179. Described as a variety of colemanite,  $2\text{CaO} \cdot 3\text{B}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$ , differing slightly in the angles of the crystals and in optical orientation; but proved by A. Hutchinson (Mineralogical Magazine, 1912, vol. xvi, p. 239) to be identical with colemanite.

**Nicholsonite.** G. M. Butler, 1913. Economic Geology, vol. viii, p. 8. A variety of aragonite containing up to 10 per cent. of zinc, from Leadville, Colorado. Named after Mr. S. D. Nicholson of the Western Mining Company.

**Orthomimic Felspars.** V. Souza-Brandão, 1909. Comunic. Comissão do Serviço Geologico de Portugal, vol. vii, p. 136 (feldspaths orthomimiques). Triclinic felspars which by repeated twinning (orthomimie, orthomimicry) simulate a higher degree of symmetry with rectangular cleavages. They include orthoclase, anorthoclase, and cryptoclase (q.v.).



**Oxy-apatite.** A. F. Rogers, 1912. *See* Voelckerite.

**Palaeo-albite, &c.** T. Scheerer, 1854. *Ann. Phys. Chem.* (Poggendorff), vol. xci, p. 379 (Paläo-Albit). Following Haidinger (*see* Palaeo-amphibole), the following additional names are given for the original minerals of what were believed to be paramorphs: Paläo-Albit, Paläo-Oligoklas-Albit (p. 379), Paläo-Krokydolith (p. 383), Paläo-Epidot (p. 387). Scheerer regarded albite and scapolite as dimorphous, and the pseudomorphous crystals from Norway as paramorphs of albite after scapolite. His palaeo-albite is therefore a synonym of scapolite. V. M. Goldschmidt (*Vidensk.-Selsk. Skrifter, Math.-Naturv. Kl., Kristiania*, 1911, No. 1, pp. 309, 312) incorrectly applies the name 'Paläocalbit' to the pseudomorphous crystals themselves.

**Palaeo-amphibole, &c.** W. Haidinger, 1854. *Sitzungsber. Akad. Wiss. Wien*, vol. xi (Jahrg. 1853), p. 399 (Paläo-Amphibol). This and other similar names (Paläo-Krystalle (p. 397), Paläo-Natrolith (p. 398), Paläo-Calcit (p. 399), Paläo-Uralit (p. 399)) are suggested for the original minerals of paramorphs; palaeo-amphibole and palaeo-calcite are therefore synonyms of pyroxene and aragonite, respectively.

**Palaitite.** W. T. Schaller, 1912. *Journ. Washington Acad. Sci.*, vol. ii, p. 144. A flesh-coloured hydrous manganese phosphate,  $5\text{MnO} \cdot 2\text{P}_2\text{O}_5 \cdot 4\text{H}_2\text{O}$ , probably monoclinic; resulting from the alteration of lithiophilite in the gem-tourmaline mines at Pala, San Diego Co., California. Named after the locality.

**Para-orthose.** (V. Souza-Brandão, *Communic. Comissão do Serviço Geologico de Portugal*, 1909, vol. vii, p. 136.) A French form of par-orthoclase (German, Parorthoklas, F. Zirkel, 1893; 2nd List). A synonym of anorthoclase (French, anorthose).

**Permutite.** (*Chem. Zentralblatt*, 1907, vol. ii, pp. 363, 1664; 1908, vol. ii, p. 988; 1909, vol. i, p. 2031, &c.) Trade-name for an artificial zeolite-like substance approximating to  $\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 6\text{H}_2\text{O}$  in composition; employed in water purification and sugar refining. Evidently named from the Latin *permuto*, to change completely.

**Pilbarite.** E. S. Simpson, 1910. *Chem. News*, vol. cii, p. 283; *Journ. Nat. Hist. Sci. Soc. Western Australia*, 1911, vol. iii, p. 130. A canary-yellow, amorphous (and pseudomorphous) mineral consisting of hydrated silicate of thorium, uranium, and lead,  $\text{ThO}_2 \cdot \text{UO}_3 \cdot \text{PbO} \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O} + 2\text{H}_2\text{O}$ , and differing from thorigum-mite and mackintoshite in the relative proportions of these consti-

tuent. It is found as earthy nodules in the Pilbara goldfield, Western Australia.

**Platynite.** G. Flink, 1910. *Arkiv Kemi, Min. Geol.*, vol. iii, No. 85 (Bidrag till Sveriges mineralogi), p. 5 (Platynit). An iron-black metallic mineral found as thin plates at Falun, Sweden. It shows basal and rhombohedral cleavages. Formula  $PbS \cdot Bi_4S_2$ . Named from *πλατύνειν*, to flatten.

**Poechite.** F. Katzer, 1911. *Oesterreich. Zeits. Berg- und Hüttenwesen*, vol. lix, p. 229 (Poechit). A massive, reddish-brown manganese-iron-ore from Vareš, Bosnia. Analysis gives the formula— $H_{16}Fe_3Mn_2Si_2O_{28}$  or  $(MnO)_2SiO_3 \cdot 2(FeO)_2SiO_3 \cdot 5H_2O + 2Fe_2O_3 \cdot 3H_2O$ . Named after Franz Poech, Chief of the Department of Mines of Bosnia-Herzegovina.

**Poliopyrites.** E. F. Glocker, 1839. *Grundriss der Mineralogie*, 1839, p. 321. An obsolete synonym of marcasite. Named from *πολιός*, grey, and pyrites; German, Graueisenkies.

**Ponite.** V. C. Buțureanu, 1912. *Ann. Sci. Univ. Jassy*, vol. vii, p. 185. A ferriferous variety of rhodochrosite,  $5MnCO_3 \cdot FeCO_3$ , from Roumania. Named after Petru Poni, Professor of Chemistry at Jassy.

**Pouzacite.** — Frossard, 1890. [*Bull. Soc. Ramond, Bagnères-de-Bigorre.*] A. Lacroix, *Minéralogie de la France*, 1895, vol. i, pp. 383, 384. A variety of clinocllore, identical with leuchtenbergite, occurring in metamorphic limestones at Pouzac, Hautes-Pyrénées.

**Preslite.** V. Rosický, 1912. *Zeits. Kryst. Min.*, vol. li, p. 521 (Preslit). Synonym of Tsumebite (q. v.). Named in memory of the Bohemian naturalist Jan Swatopluk Presl (1791–1849).

**Pseudo-crocidolite.** (F. W. Rudler, in T. E. Thorpe's *Dictionary of Applied Chemistry*, 1890, vol. i, p. 620. L. J. Spencer, *The World's Minerals*, London and Edinburgh, 1911, p. 156, New York, 1911, p. 202.) Quartz pseudomorphous after crocidolite: the well-known 'tiger-eye' and 'hawk's-eye', from the Asbestos Mountains, Orange River, South Africa, used for ornamental purposes. To replace the misleading trade-name 'crocidolite' often applied to this material.

**Pseudoheterosite.** Á. Lacroix, 1910. *Minéralogie de la France*, vol. iv, p. 469 (pseudohétérosite). Probably represents a stage in the alteration of triphylite ( $Li[Fe, Mn]PO_4$ ) to heterosite ( $[Fe, Mn]PO_4 + H_2O$  (?)). It occurs as a zone between these two minerals, and is detected only by

the difference in optical character as shown in thin sections. From Huréaux, Haute-Vienne.

**Pseudo-laumontite.** F. F. Grout, 1910. Journ. Geol. Chicago, vol. xviii, p. 654. Hydrous silicate of aluminium, iron, magnesium, and potassium, forming green pseudomorphs after red laumontite in the amygdaloidal diabase of the Keweenaw area, Minnesota.

**Pseudo-lâvenite.** A. Lacroix, 1911. Les syénites néphéliniques de l'archipel de Los et leurs minéraux. Nouv. Arch. Muséum, Paris, ser. 5, vol. iii, p. 60 (Pseudo-lâvénite). An undetermined mineral detected in a thin section of the nepheline-syenite of the Los Islands, West Coast of Africa. It resembles lâvenite, but differs from this in its optical orientation.

**Pseudo-manganite.** L. L. Fermor, 1909. Mem. Geol. Survey India, vol. xxxvii, p. lxxviii (pseudomanganite), p. 84 (pseudo-manganite). Crystals of manganite altered wholly or partially to pyrolusite.

**Pseudo-topaz.** A. Sachs, 1910. Centralblatt Min., 1910, p. 498 (Pseudotopas). A crystal from the granite of Striegau, Silesia, which had been described by A. Sachs (ibid., 1909, p. 438) as topaz, was proved by V. Goldschmidt to be merely quartz with a prismatic habit in the direction of one of the horizontal axes. As so orientated there is a remarkable agreement between the interfacial angles of quartz and topaz. In correcting his error, the author adds to the confusion by using the above name.

**Pyribole.** A. Johannsen, 1911. Journ. Geol. Chicago, vol. xix, p. 319. A contraction of the words pyroxene and amphibole. See Biopyribole.

**Quercyite.** A. Lacroix, 1910. Compt. Rend. Acad. Sci. Paris, vol. cl, pp. 1217, 1388; Minéralogie de la France, vol. iv, p. 579. W. T. Schaller, Bull. U.S. Geol. Survey, 1912, No. 509, p. 92. A type of phosphorite consisting of an intimate interbanded mixture of amorphous (colloidal), optically isotropic collophanite (see Fluocollophanite), and a finely fibrous constituent which is optically uniaxial or nearly so. When the crystalline element is optically negative the mixture is called quercyite  $\alpha$ , and when optically positive quercyite  $\beta$ . The optically negative constituent corresponds with dahllite ( $2\text{Ca}_3(\text{PO}_4)_2 \cdot \text{CaCO}_3 \cdot \frac{1}{2}\text{H}_2\text{O}$ ) and staffelite ( $(\text{CaF})_2\text{Ca}_3(\text{PO}_4)_6 \cdot \text{CaCO}_3 \cdot \text{H}_2\text{O}$ ), but the optically positive constituent does not correspond with any known species. The name quercyite, from Quercy, an ancient district in France noted for its

deposits of phosphorite, is thus a rock name rather than a mineral name. Not to be confused with quercite, the chemical name for 'sugar of acorns'.

**Reaumurite.** A. Lacroix, 1908. *La Montagne Pelée après ses éruptions*, Paris, 1908, p. 134; *Minéralogie de la France*, 1910, vol. iv, p. 778 (réaumurite). Glass when kept for some time at the softening temperature becomes converted into an opaque, white material, the 'porcelain of Réaumur' (René Antoine Ferchault de Réaumur, 1688-1757). This fibrous crystalline material is shown by its optical characters to be orthorhombic, and it has nearly the same composition as glass (approximately  $(Ca,Na_2)O \cdot 3SiO_2$ ). The same substance has been produced under partly natural conditions by the action of volcanic heat on glass vessels in the houses at St. Pierre, Martinique (eruption of Mt. Pelée, 1902), and at Boscotrecase (eruption of Vesuvius, 1906).

**Rivaite.** F. Zambonini, 1912. *Rend. Accad. Sci. Fis. Mat. Napoli*, ser. 3, vol. xviii, p. 223; *Riv. Min. Crist. Ital.*, xli, p. 94. A Vesuvian mineral with the formula  $(Ca,Na_2)Si_2O_6$ . Named after the mineralogist, Dr. Carlo Riva (1872-1902) of Pavia.

**Rosieresite.** A. Lacroix, 1910. *Minéralogie de la France*, vol. iv, pp. 582, 399 (rosiérésite). A hydrated phosphate of aluminium containing some lead (PbO 10 per cent.) and copper (CuO 3 per cent.), analysed by P. Berthier in 1841. Found as stalactites in the Rosières copper-mine near Carmaux, Tarn.

**Salmonsite.** W. T. Schaller, 1912. *Journ. Washington Acad. Sci.*, vol. ii, p. 144. Hydrous manganese and iron phosphate,  $Fe_2O_3 \cdot 9MnO \cdot 4P_2O_5 \cdot 14H_2O$ , forming buff-coloured cleavable masses, and resulting from the alteration of hureaulite. From the gem-tourmaline mines at Pala, San Diego Co., California. Named after Mr. Frank A. Salmons, formerly of Pala.

**Samiresite.** A. Lacroix, 1912. *Compt. Rend. Acad. Sci. Paris*, vol. cliv, p. 1042 (samiresite); *Bull. Soc. franç. Min.*, 1912, vol. xxxv, p. 89 (samirésite). Titano-niobate of uranium, lead, &c., occurring as yellow (altered and hydrated) octahedra in pegmatite at the hill of Samiresy, near Antsirabe, Madagascar. Named after the locality. *See* Betafite.

**Shanyavskite.** T. A. Nikolaevskij, 1912. *Bull. Acad. Sci. St.-Pétersbourg*, ser. 6, vol. vi, pp. 717, 724 (Шанявскитъ). Abstract in *Chem. Zentralblatt*, 1912, vol. ii, p. 630 (Schaniawskit). A transparent, amorphous, glassy material consisting of almost pure hydrated alumina

( $\text{Al}_2\text{O}_3 \cdot 4\text{H}_2\text{O}$ ), occurring with allophanoid minerals in crevices in dolomite near Moscow. Named after A. L. Shanyavskij, of the University of Moscow.

**Sheridanite.** J. E. Wolff, 1912. Amer. Journ. Sci., ser. 4, vol. xxxiv, p. 476. A pale greenish, talc-like chlorite (near to leuchtenbergite) containing much alumina and very little iron,  $\text{H}_2\text{Mg}_2\text{Al}_2\text{Si}_2\text{O}_{13}$ . It occurs as foliated masses in Sheridan Co., Wyoming.

**Sicklerite.** W. T. Schaller, 1912. Journ. Washington Acad. Sci., vol. ii, p. 145. Hydrous manganese and iron phosphate,  $\text{Fe}_2\text{O}_3 \cdot 6\text{MnO} \cdot 4\text{P}_2\text{O}_5 \cdot 3(\text{Li},\text{H})_2\text{O}$ , forming dark brown cleavable masses, and resulting from the alteration of lithiophilite. From the gem-tourmaline mines at Pala, San Diego Co., California. Named after the Sickler family, formerly of Pala.

**Soda-amblygonite.** See Natramblygonite.

**Soumansite.** A. Lacroix, 1910. Minéralogie de la France, vol. iv, p. 541. A fluo-phosphate of aluminium and sodium with some water or hydroxyl; found in small amount as colourless tetragonal crystals on corroded amblygonite from Montebbras in Soumans, Creuse.

**Sporogelite.** M. Kišpatić, 1912. Neues Jahrb. Min., Beil.-Bd. xxxiv, p. 519; F. Tučan, tom. cit., p. 411 (Sporogelit). C. Doelter and E. Dittler, Centralblatt Min., 1918, p. 198. To replace F. Cornu's name  $\alpha$ -klichite (5th list) for the colloidal form of  $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$ , which occurs as a constituent of bauxite and 'terra rossa'. So named as being the gel corresponding with the crystalloid diaspore. See Cliachite and Kljakite.

**Stewartite.** J. R. Sutton, 1911. Nature, London, vol. lxxxvii, p. 550. A variety of bort, or iron-bort, possessing magnetic properties; from the diamond mines of Kimberley, South Africa. Named after Mr. James Stewart, the manager of the pulsator at the diamond mines.

— W. T. Schaller, 1912. Journ. Washington Acad. Sci., vol. ii, p. 144. A hydrous manganese phosphate, probably triclinic, occurring as an alteration-product of lithiophilite in the Stewart gem-tourmaline mine, Pala, San Diego Co., California. Named after the locality.

**Stichtite.** W. F. Petterd, 1910. Catalogue of the Minerals of Tasmania, 3rd edit., Hobart, 1910, p. 167; Papers Roy. Soc. Tasmania, 1910, p. 167. A foliated mineral of a bright lilac colour, which previous to analysis had been mistaken for kaemmererite. A hydrated carbonate

of magnesium, chromium, and iron,  $(\text{Cr,Fe})_2\text{O}_3 \cdot 6\text{MgO} \cdot \text{CO}_2 \cdot 13\text{H}_2\text{O}$ . It occurs with chromite as spots and veins in serpentine at Dundas, Tasmania. Named after Mr. Robert Sticht, of Tasmania. Compare chrom-brugnatellite.

**Sylvinite.** (C. Hintze, *Handbuch der Mineralogie*, 1911, vol. i, p. 2155 (Sylvinit).) A mining term for the mixtures of sylvite and rock-salt occurring in the Prussian salt-deposits.

**Tabbyite.** (Mineral Resources, U.S. Geol. Survey, for 1907, 1908, part ii, p. 726.) Trade-name for a solid elastic bitumen from the Uinta basin, Utah. It is closely related to wurtzilite and elaterite.

**Tartufite.** Venetian mineralogists, before 1812. T. A. Catullo, *Manuale Mineralogico*, Belluno, 1812, p. 19 (Tartufite). J. Desnoyers, *Mém. Soc. Hist. Nat. Paris*, 1823, vol. i, p. 179; *Ann. Sci. Nat. Paris*, 1824, vol. i, p. 58 (Tartuffite). R. Koechlin, *Mineralogisches Taschenbuch der Wiener Mineralogischen Gesellschaft*, 1911, p. 56 (Tartuffit). A fetid, fibrous calcite from Monte Viale, Venetia, which when struck emits an odour like that of truffles (Italian, tartufo). See Truffite (5th List).

**Terpitzite.** — Dürr [Pastor Dürr died in 1828; this name had been used by him since 1811, but apparently not published]. J. C. Freiesleben, *Magazin für die Oryktographie von Sachsen*, 1829, Heft iii, p. 168 (Terpizit). A. Frenzel, *Mineralogisches Lexicon für das Königreich Sachsen*, 1874, p. 274 (Terpizit). A siliceous sinter (Kieselsinter) passing into hornstone or chalcedony, occurring in crevices in porphyry at Terpitz, Saxony.

**Thortveitite.** J. Schetelig, 1911. *Centralblatt Min.*, 1911, p. 721 (Thortveitit). Silicate of scandium (yttrium, dysprosium, and erbium),  $(\text{Sc,Y})_2\text{O}_3 \cdot 2\text{SiO}_2$ , occurring as long, greyish-green, orthorhombic crystals, somewhat resembling epidote in appearance, in pegmatite near Iveland, Sætersdalen, Norway. Named after Mr. Olaus Thortveit, of Iveland, who sent the material for determination. Remarkable in being the only mineral containing scandium in large amount.

**Tolypite.** A. Uhlemann, 1909. *Min. Petr. Mitt.* (Tschermak), vol. xxviii, p. 461 (Tolypit). A name applied to a peculiar structure shown by chlorite from Saxon Vogtland. The mineral has the form of small balls which are built up of irregularly arranged fibres. Named from  $\tau\omicron\lambda\upsilon\pi\eta$ , a ball of thread.

**Tsumebite.** K. Busz, 1912. *Festschrift Gesell. Deutsch. Naturf.*

u. Aerzte, Münster, p. 182 (Tsumebit). Hydrated basic phosphate of lead and copper,  $5(\text{Pb,Cu})\text{O} \cdot \text{P}_2\text{O}_5 \cdot 8\text{H}_2\text{O}$ , found as small, emerald-green, monoclinic crystals on white calamine at Tsumeb, Otavi, German South-West Africa. *See* Preslite.

**Tyuyamunite.** K. A. Nenadkevič, 1912. Bull. Acad. Sci. St.-Pétersbourg, ser. 6, vol. vi, p. 945 (ТЮЯМУНИТЬ. The French translation of the title on the wrapper gives the form Tyujamunite). Abstract in Chem. Zentralblatt, 1913, vol. i, p. 326 (Tjuiamunit). A hydrated urano-vanadate of calcium,  $\text{V}_2\text{O}_5 \cdot 2\text{UO}_3 \cdot \text{CaO} \cdot 4\text{H}_2\text{O}$ , occurring with ferganite and turanite (5th list) at Tyuya-Muyun, Fergana, Russian Central Asia. W. F. Hillebrand (Amer. Journ. Sci., 1913, ser. 4, vol. xxxv, p. 440) suggests that it is a calcium carnotite; he spells the name tuyamunite.

**Uranopissite.** E. F. Glocker, 1847. Generum et specierum mineralium synopsis, p. 74 (Uranopissites, Uranopissit). An obsolete synonym of uraninite or pitchblende. Named from uranium and *πίσσα*, pitch.

**Vaterite.** W. Meigen, 1911. Verh. Ges. Deutsch. Naturforscher u. Ärzte, 82. Versamml. zu Königsberg, 1910, II. Teil, 1. Hälfte, p. 124 (Vaterit). W. Diesel, Zeits. Kryst. Min., 1911, vol. xlix, p. 272. G. Linck, Doelter's Handbuch der Mineralchemie, 1911, vol. i, p. 113. Vater's third modification of calcium carbonate prepared artificially in the form of minute spherules with specific gravity 2.6 and less stable than aragonite and calcite. Named after Professor Heinrich Vater, of Tharandt, Saxony.

**Verdite.** Incorrectly given as Vedrite in 5th List.

**Vernadskite.** F. Zambonini, 1910. Mineralogia Vesuviana. Mem. R. Accad. Sci. Fis. Mat. Napoli, ser. 2, vol. xiv, No. 7, p. 337 (Vernadskijte, Vernadskyte). A green, basic sulphate of copper,  $4\text{CuO} \cdot 3\text{SO}_3 \cdot 5\text{H}_2\text{O}$ , produced by the action of acid vapours from fumaroles on dolerophanite ( $\text{Cu}_2\text{SO}_5$ ). Named after Professor Vladimir Ivanovič Vernadsky, of St. Petersburg.

**Vilateite.** A. Lacroix, 1910. Minéralogie de France, vol. iv, pp. 477, 501 (vilatéite). The violet crystals described by A. Des Cloizeaux (1858) as type I of hureaulite are shown to differ essentially from that species: they give the same qualitative chemical reactions as strengite (hydrated phosphate of iron) with a little manganese. From La Vilate, near Chanteloube, Haute-Vienne.

**Viridine.** G. Klemm, 1912. [Notizblatt Ver. Erdkunde, Darm-

stadt, for 1911, p. 4]; abstract in Chem. Zentralblatt, 1913, vol. i, p. 54 (Viridin). A green variety of andalusite containing some iron ( $\text{Fe}_2\text{O}_3$ , 4.16 per cent.) and manganese ( $\text{Mn}_2\text{O}_3$ , 4.77 per cent.) replacing aluminium. It occurs as small grains in a contact-hornfels near Darmstadt. Compare manganandalusite (H. Bäckström, 1896; 1st List). The name viridin has been previously used for chlorophyll; viridine for a coal-tar colour, and viridite for a mineral.

**Voelckerite.** A. F. Rogers, 1912. Amer. Journ. Sci., ser. 4, vol. xxxiii, p. 479 (Voelckerite); Zeits. Kryst. Min., 1913, vol. lii, p. 209 (Voelckerit). A basic calcium phosphate,  $3\text{Ca}_3(\text{PO}_4)_2 \cdot \text{CaO}$ , or oxyapatite, being a hypothetical member of the apatite group. Named after John Augustus Voelcker, agricultural chemist, whose analyses of Norwegian apatite led him, in 1883, to the formula  $3\text{Ca}_3(\text{PO}_4)_2 \cdot \text{Ca}(\text{F}_2, \text{Cl}_2, \text{O})$ .

**Vrbaite.** B. Ježek, 1912. Rozpravy České Akad., vol. xxi, No. 26; Bull. Intern. Acad. Sci. Prague, vol. xvii, p. 130; Zeits. Kryst. Min., vol. li, p. 364 (Vrbait). A thallium sulpho-salt,  $\text{TlAs}_2\text{SbS}_6$ , found as small orthorhombic crystals embedded in realgar and orpiment from Allchar, Macedonia. Named after Professor Karel Vrba, of Prague.

**Weibullite.** G. Flink, 1910. Arkiv Kemi, Min. Geol., vol. iii, No. 35 (Bidrag till Sveriges mineralogi), p. 4 (Weibullit). This mineral, from Falun, Sweden, was described by M. Weibull in 1885 as a seleniferous variety of galenobismutite,  $2\text{PbS} \cdot \text{Bi}_2\text{S}_3 \cdot \text{Bi}_2\text{Se}_3$ . It differs from galenobismutite in possessing distinct cleavages. Named after Professor Mats Weibull, of Alnarp, Sweden.

**Wiedgerite.** (Mineral Resources, U.S. Geol. Survey, for 1909, 1911, part ii, p. 733; for 1910, 1911, part ii, p. 836 (wiedgerite); Mineral Industry, for 1910, 1911, vol. xix, p. 56 (weidgerite).) Trade-name for a soft bitumen resembling elaterite, but containing much sulphur and water.

**Wiltshireite.** W. J. Lewis, 1910. Nature, London, vol. lxxxiv, p. 203; Phil. Mag., 1910, ser. 6, vol. xx, p. 474; Zeits. Kryst. Min., 1910, vol. xlviii, p. 514; Mineralogical Magazine, 1912, vol. xvi, p. 197. R. H. Solly, Mineralogical Magazine, 1911, vol. xvi, p. 121. An incompletely determined mineral occurring as small, lead-grey, monoclinic crystals in the crystalline dolomite of the Binnenthal, Switzerland. Probably identical with the rathite of H. Baumhauer (1896). Named in memory of the Rev. Dr. Thomas Wiltshire (1826-1902), formerly Professor of Geology and Mineralogy in King's College, London.



**Wolfonite.** G. M. Butler, 1913. *Economic Geology*, vol. viii, p. 8. An oxide of manganese and zinc from the Wolfstone mine at Leadville, Colorado. Identical with hetaerolite,  $2\text{ZnO} \cdot 2\text{Mn}_2\text{O}_3 \cdot \text{H}_2\text{O}$  (W. E. Ford and W. M. Bradley, *Amer. Journ. Sci.*, 1913, ser. 4, vol. xxxv, p. 600).

**Yttriofluorite.** T. Vogt, 1911. *Centralblatt Min.*, 1911, p. 373 (Yttriofluorit). A variety of fluorite containing yttrium earths (17 per cent.); formula  $(\text{Ca}_3, \text{Y}_2)\text{F}_6$ . Occurs in pegmatite in northern Norway.

**Zamboninite.** M. Bauer, 1901. *Neues Jahrb. Min.*, 1901, vol. i, Ref. p. 200 (Zamboninit). Synonym of the müllerite of F. Zambonini (1899; 2nd List). The name müllerite (also müllerine and millerite) being preoccupied, the alternative name zamboninite is proposed in an abstract of F. Zambonini's paper.

**Zincorhodochrosite.** E. Manasse, 1911. *Mem. Soc. Toscana Sci. Nat.*, vol. xxvii, p. 79 (zincorodocroisite). A variety of rhodochrosite containing much zinc (ZnO 31.03 per cent.). From Elba.

**Zircon-pyroxenes.** W. C. Brögger, 1890. *Zeits. Kryst. Min.*, vol. xvi, p. 363 (Zirkonpyroxene). C. Hintze, *Handbuch d. Mineralogie*, 1894, vol. ii, pp. 1140, 1176 (Zirkon-Pyroxene, *plur.*). A group-name for the zircono-silicates rosenbuschite, lävenite, wöhlerite, hiortdahlite, &c. Following Brögger, these minerals are usually classified with the pyroxenes, although they do not exhibit prismatic cleavages.

**Zittavite.** F. Glöckner, 1912. *Zeits. Deutsch. Geol. Ges.*, vol. lxxiii, Monatsber., p. 418 (Zittavit). A black, lustrous variety of lignite resembling dopplerite, but more brittle and harder than this. It occurs in the lignite deposits of Zittau, Saxony.

**Zoesite.** S. Meunier, 1911. *Compt. Rend. Acad. Sci. Paris*, vol. clii, p. 1879 (zoésite). A variety of fibrous silica (sp. gr. 2.59) isolated by dissolving in acid the fossil shells from the Chalk formation. It differs in its optical orientation from the other forms of fibrous silica (*viz.* chalcedonite, quartzine, and lutecite). Named from ζωή, life, in allusion to the influence of the living organism in producing the fibrous structure. Not to be confused with zoisite.

SYSTEMATIC CLASSIFICATION OF NEW MINERALS.<sup>1</sup>

## SULPHIDES, ETC.

Arsenoferrite,  $\text{FeAs}_2$ .  
 Melnikovite,  $\text{FeS}_2$ .  
 Hydrotroilite,  $\text{FeS} \cdot \text{H}_2\text{O}$ .  
 Muthmannite,  $(\text{Ag}, \text{Au})\text{Te}$ .  
 Maucherite,  $\text{Ni}_3\text{As}_2$ .

## SULPHARSENITES, ETC.

Vrbaitite,  $11\text{As}_2\text{SbS}_5$ .  
 Platynite,  $\text{PbS} \cdot \text{Bi}_2\text{S}_3$ .  
 Weibullite,  $2\text{PbS} \cdot \text{Bi}_4\text{S}_3 \cdot \text{Bi}_2\text{Se}_3$ .  
 Eichbergite,  
 $(\text{Cu}, \text{Fe})_3\text{S} \cdot 3(\text{Bi}, \text{Sb})_2\text{S}_3$ .  
 Goldfieldite,  
 $5\text{CuS} \cdot (\text{Sb}, \text{Bi})_2(\text{S}, \text{Te})_3$ .

## HALOIDS.

Baemlerite,  $\text{KCl} \cdot \text{CaCl}_2$ .  
 Hydromelanothallite,  
 $\text{CuCl}_2 \cdot \text{CuO} \cdot 2\text{H}_2\text{O}$ .  
 Yttrifluorite,  $(\text{Ca}_3, \text{Y}_2)\text{F}_6$ .  
 Mosesite.

## OXIDES.

Zoesite,  $\text{SiO}_2$ .  
 Haematogelinite, colloidal  $\text{Fe}_2\text{O}_3$ .  
 Guadarramite, var. of ilmenite.  
 Ferropicotite,  $(\text{Fe}, \text{Mg})(\text{Al}, \text{Fe})_2\text{O}_4$ .  
 Ferrobrucite, var. of brucite.  
 Manganobrucite, ,, ,,  
 Ferronemalite, ,, ,,  
 Sporogelinite, colloidal  $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$ .  
 Shanyavskite,  $\text{Al}_2\text{O}_3 \cdot 4\text{H}_2\text{O}$ .

## CARBONATES.

Vaterite,  $\text{CaCO}_3$ .  
 Calciorhodochrosite,  $(\text{Mn}, \text{Ca})\text{CO}_3$ .  
 Zincorhodochrosite,  $(\text{Mn}, \text{Zn})\text{CO}_3$ .  
 Ponite,  $5\text{MnCO}_3 \cdot \text{FeCO}_3$ .  
 Nicholsonite, var. of aragonite with  
 Zn.  
 Chrom-brugnatellite,  
 $7\text{MgO} \cdot \text{Cr}_2\text{O}_3 \cdot 2\text{CO}_2 \cdot 12\text{H}_2\text{O}$ .  
 Stichtite,  
 $6\text{MgO} \cdot (\text{Cr}, \text{Fe})_2\text{O}_3 \cdot \text{CO}_2 \cdot 18\text{H}_2\text{O}$ .  
 Gajite, Hyd. carb. Ca and Mg.

## SULPHATES, ETC.

Bassanite,  $\text{CaSO}_4$ .  
 Hokutolite,  $(\text{Ba}, \text{Pb})\text{SO}_4$ .  
 Metathenardite,  $\text{Na}_2\text{SO}_4$ .  
 Millosevichite,  $\text{Fe}'''$  and Al.  
 Hexahydrate,  $\text{MgSO}_4 \cdot 6\text{H}_2\text{O}$ .  
 Vernadskite,  $4\text{CuO} \cdot 3\text{SO}_3 \cdot 5\text{H}_2\text{O}$ .  
 Almeriite,  
 $\text{Na}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 5\text{Al}(\text{OH})_3 \cdot \text{H}_2\text{O}$ .  
 Calafatite,  
 $\text{K}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 5\text{Al}(\text{OH})_3 \cdot \text{H}_2\text{O}$ .  
 Beaverite,  
 $\text{CuO} \cdot \text{PbO} \cdot \text{Fe}_2\text{O}_3 \cdot 2\text{SO}_3 \cdot 4\text{H}_2\text{O}$ .  
 Ferritungstite,  $\text{Fe}_2\text{O}_3 \cdot \text{WO}_3 \cdot 6\text{H}_2\text{O}$ .  
 Hinsdalite,  
 $\text{PbSO}_4 \cdot \text{AlPO}_4 \cdot 2\text{Al}(\text{OH})_3$ .

<sup>1</sup> Only the more important names given in the preceding alphabetical list are here included.

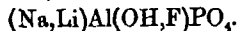
## PHOSPHATES, ETC.

Voelckerite,  $3\text{Ca}_3(\text{PO}_4)_2 \cdot \text{CaO}$ .  
 Hydroxyapatite,  
 $3\text{Ca}_3(\text{PO}_4)_2 \cdot \text{Ca}(\text{OH})_2$ .

Quercyite.

Fluocollophanite.

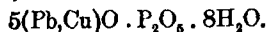
Natramblygonite,



Cobaltoadamite, var. of adamite.

Cuproadamite, ,, ,,

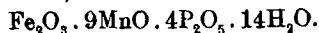
Tsumebite,



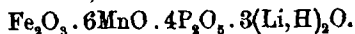
Palaite,  $5\text{MnO} \cdot 2\text{P}_2\text{O}_5 \cdot 4\text{H}_2\text{O}$ .

Stewartite, hyd. phosph. of Mn.

Salmonsite,



Sicklerite,



Pseudoheterosite.

Egueite.

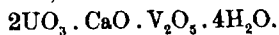
Vilateite.

Soumansite.

Rosieresite.

Flajolite,  $4\text{FeSbO}_4 \cdot 3\text{H}_2\text{O}$ .

Tyuyamunite,



## NIOBATES, ETC.

Ampangabeite.

Betafite.

Samiresite.

## SILICATES

Barbierite,  $\text{NaAlSi}_2\text{O}_6$ .

Cryptoclase,  $\text{NaAlSi}_5\text{O}_{13}$ .

Imerinite, var. of soda-amphibole.

Bababudanite, ,, ,,

Pseudo-låvenite.

Molengraaffite.

Viridine, var. of andalusite.

Thortveitite,  $(\text{Sc}, \text{Y})_2\text{Si}_2\text{O}_7$ .

Natrodavynite.

Molybdosodalite.

Batchelorite,  $\text{H}_2\text{Al}_2\text{Si}_2\text{O}_8$ .

Sheridanite,  $\text{H}_6\text{Mg}_3\text{Al}_2\text{Si}_2\text{O}_{13}$ .

Poechite,  $\text{H}_{16}\text{Fe}_8\text{Mn}_2\text{Si}_3\text{O}_{26}$ .

Manandonite,  $\text{H}_{24}\text{Li}_4\text{Al}_{14}\text{B}_4\text{Si}_6\text{O}_{53}$ .

Minguetite,

$$\text{H}_{16}(\text{Fe}, \text{Al})_8(\text{Fe}, \text{Mg})_8(\text{K}, \text{Na})_2\text{Si}_{17}\text{O}_{63}$$

Gageite,  $\text{H}_4(\text{Mn}, \text{Mg}, \text{Zn})_8\text{Si}_3\text{O}_{16}$ .

Pilbarite,  $\text{H}_8\text{ThUPbSi}_2\text{O}_{14}$ .

Epinatrolite.

Arduinite,  $\text{H}_{16}\text{Na}_4\text{CaAl}_2\text{Si}_5\text{O}_{30}$ .

## HYDROCARBONS.

Delatynite, var. of amber.

Albanite, var. of bitumen.

Aeonite, ,, ,,

Aegerite, ,, ,,

Tabbyite, ,, ,,

Wiedgerite, ,, ,,