A (third) list of new mineral names[1].

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Alkali-garnet. W. C. Brögger and H. Bäckström, Zeits. Kryst. Min., 1890, vol. xviii, p. 215 (Alkaligranate, *pl.*). A general term for members of the sodalite group; these being closely related crystallographically and chemically to the true garnets. (Cf. the artificial lagoriolite = natrongranat of J. Morozewicz, 1898.)

Amianthinite. R. Kirwan, Elements of Mineralogy, 2nd edit., 1794, vol. i, p. 164. Asbestiform actinolite.

Ammonium-analcite, Ammonium-leucite, Ammonium-natrolite, Ammonium-stilbite, &c. F. W. Clarke and G. Steiger, Amer. Journ. Sci., 1900, ser. 4, vol. ix, pp. 117, 345; ibid., 1902, vol. xiii, p. 27; Bull. U. S. Geol. Survey, 1902, No. 207. Artificial derivatives of analcite, &c., with ammonium in place of sodium, potassium, or calcium.

Anapaite. A. Sachs, Sitz.-ber. Akad. Wiss. Berlin, 1902, p. 18; Zeits. angew. Chem., 1902, vol. xv, p. 111; 80er Jahres-Ber. Schlesisch. Ges., for 1902, 1903, Abt. II, Sect. *a*, p. 3 (Anapait). J. Loczka, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 438. Pale green, glassy crystals on limonite, from Anapa, Black Sea. Anorthic. $FeCa_2(PO_4)_2 . 4H_2O$. Differs from messelite only in containing a little more water. *See* tamanite.

Anemolite. J. Barnes and W. F. Holroyd, Trans. Manchester Geol. Soc., 1896, vol. xxiv, p. 232 (anemolites). A curved and upturned form of stalactite of calcium carbonate from the Derbyshire limestone caves. Named from ἄνεμος, wind, and λίθος, stone, because of the

[1] The two preceding lists of this series will be found at the ends of vols. xi and xii of this Magazine. A few earlier names, omitted from Dana's 'System of Mineralogy' (6th edit., 1892) and Chester's 'Dictionary of the Names of Minerals' (1896), are included. Certain less accessible names, more especially in Russian literature, have been very kindly supplied by Professor W. Vernadsky, of Moscow. The original spelling of a name, as printed on the page cited, is added in parentheses whenever it differs from the spelling adopted in this list; the case-endings of Russian names have, however, been altered to the nominative.

influence of varying currents of air in determining the direction which the stalactites take.

Ankylite. G. Flink, Meddelelser om Grönland, 1901, Hefte xxiv, plate III. [The reprint of Flink's paper is dated 1899, but was not issued till 1900; Hefte xxiv is dated 1901.] The same as ancylite.

Antimon-luzonite. S. Stevanović, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 235 (Antimon-Luzonit, Stibio-Luzonit). A massive mineral, with a reddish colour and absence of cleavage, from Peru. In composition, $Cu_3(As,Sb)S_4$, it is intermediate between luzonite and famatinite. It is identical with the 'famatinite' from Chile analysed by A. Frenzel in 1875.

Arsensulfurite. F. Rinne, Centralblatt Min., 1902, p. 499 (Arsensulfurit). Amorphous sulphur containing much arsenic (29·22 per cent.). A volcanic sublimation from Java.

Artinite. L. Brugnatelli, Rend. Ist. Lombardo, 1902, ser. 2, vol. xxxv, p. 874; Centralblatt Min., 1903, p. 144. A loose aggregate of snow-white scales which are composed of minute prismatic crystals. The optical characters agree with orthorhombic symmetry. In composition, $MgCO_3 . Mg(OH)_2 . 3H_2O$, near to hydrogiobertite, which, however, is shown to be a mixture of at least two minerals. In peridotite from the Val Lanterna, Val Tellina. Named after Prof. Ettore Artini, of Milan.

Badenite. P. Poni, Ann. Sci. Univ. Jassy, 1900, vol. i, p. 29; Anal. Acad. Române, Bukarest, 1900, vol. xxii; (abstract, this vol., p. 207). A massive steel-grey mineral which appears to be smaltite (or safflorite) with part of the arsenic replaced by bismuth (4·76 per cent.); $(Co,Ni,Fe)_2(As,Bi)_3$. From Badeni, Roumania.

Bakerite. W. B. Giles, Min. Mag., 1903, vol. xiii, p. 353. A massive borosilicate of calcium, $8CaO . 5B_2O_3 . 6SiO_2 . 6H_2O$, from the borax mines of California. Named after Mr. R. C. Baker, of Nutfield (Surrey), by whom the mineral was found.

Baumhauerite. R. H. Solly, Min. Mag., 1902, vol. xiii, p. 151; 1903, vol. xiii, p. 339; Zeits. Kryst. Min., 1903, vol. xxxvii, p. 321. Crystals resembling in general appearance the several other sulpharsenites of lead from the Binnenthal dolomite. Monoclinic. $4PbS . 3As_2S_3$. Named after Professor Heinrich Baumhauer, of Freiburg, Switzerland.

Bavenite. E. Artini, Rend. Accad. Lincei, Roma, 1901, ser. 5,

vol. x, sem. 2, p. 139. Radiating tufts of white needles in the drusy cavities of the Baveno granite. Monoclinic, but twinned to simulate orthorhombic symmetry. $3CaO . Al_2O_3 . 6SiO_2 . H_2O$. Approaches pilinite in composition.

Bleimalachit. S. F. Glinka, Centralblatt Min., 1901, p. 281. Acicular crystals of orthorhombic habit, but monoclinic and twinned. $2CuCO_3 . Cu(OH)_2 . PbCO_3$. Altai Mountains. *See* plumbomalachite.

Bleizinkchrysolith. P. P. Heberdey, Zeits. Kryst. Min., 1892, vol. xxi, p. 56. An artificial product (from a crystallized slag) with the composition $PbZnSiO_4$ and isomorphous with chrysolite.

Bodenzeolith. *See* geolyte.

Boothite. W. T. Schaller, Bull. Dep. Geol. Univ. California, 1903, vol. iii, p. 207. A copper sulphate with $7H_2O$, instead of $5H_2O$ as in chalcanthite; $CuSO_4 . 7H_2O$. Monoclinic, and isomorphous with melanterite. Occurs with other sulphates as an alteration product of chalcopyrite in the Alma mine, Leona Heights, Alameda Co., California. Named after Mr. Edward Booth, of the University of California.

Bourgeoisite. R. Breñosa, Anal. Soc. Española Hist. Nat., 1885, vol. xiv, p. 129 (Bourgeoisita). Described as a tetragonal modification of calcium silicate dimorphous with wollastonite. In a devitrified glass of doubtful origin. Named after Dr. L. Bourgeois, of Paris.

Breadalbanite. (Catalogue of the Mineral Collections in the Museum of Practical Geology. By W. W. Smith and others. London, 1864, p. 180.) A variety of hornblende from Perthshire, Scotland. T. Egleston (Catalogue of Minerals and Synonyms, Washington, 1887, Bull. U. S. National Mus., 1889, No. 33) gives breadalbaneite (p. 13) and breadalbanite (p. 33).

Brostenite. P. Poni, Ann. Sci. Univ. Jassy, 1900, vol. i, p. 53; Anal. Acad. Române, Bukarest, 1900, vol. xxii; (abstract, this vol., p. 207). Black friable masses occurring as an alteration product of rhodochrosite, near Brosteni, Roumania. The results of three analyses show it to be a hydrated manganite of iron and manganese near chalcophanite, but of variable composition.

Brunsvigite. J. Fromme, Min. petr. Mitt. (Tschermak), 1902, vol. xxi, p. 171 (Brunsvigit). A chloritic mineral, near metachlorite, occurring as fine scaly masses in the gabbro of Radauthal, Harz (Brunswick).

Ceruleite. H. Dufet, Bull. Soc. franç. Min., 1900, vol. xxiii, p. 147 (céruléite). Turquoise-blue, clayey masses. Under the microscope it is seen to be minutely crystalline. $CuO \cdot 2Al_2O_3 \cdot As_2O_5 \cdot 8H_2O$. Huanaco, Chile. Named from the Latin, *caeruleus*, sky-blue.

Chalmersite. E. Hussak, Centralblatt Min., 1902, p. 69 (Chalmersit). Brilliant, bronze-yellow, acicular crystals very similar to copper-glance in habit, twinning, and angles; they are magnetic like pyrrhotite. Orthorhombic. $CuFe_3S_4 = Cu_2S \cdot Fe_6S_7$ (but only 0·016 gram of material analysed). Associated with pyrrhotite, &c. at the Morro Velho gold-mine, Minas Geraes, Brazil. Named after Mr. G. Chalmers, the superintendent of the mine.

Chocolate-stone. *See* lacroisite.

Chromocyclite. C. Klein, Jahrb. Min., 1892, vol. ii, pp. 176, 220 (Chromocyclit); C. Hintze, Handb. d. Min., 1897, vol. ii, p. 1733 (Chromocyklit). Apophyllite which shows coloured interference rings in convergent polarized light, as distinct from the black and white rings of the leucocyclite variety.

Ciempozuelite. A. de Areitio y Larrinaga, Anal. Soc. Española Hist. Nat., 1873, vol. ii, p. 393 (Ciempozuelita). $3Na_2SO_4 \cdot CaSO_4$. From the salt mines at Ciempozuelos, Madrid. [Possibly a mixture of glauberite ($Na_2SO_4 \cdot CaSO_4$) and thenardite (Na_2SO_4), both of which occur at this locality.]

Clinoaugite. *See* orthoaugite.

Clinopyroxene. *See* orthoaugite.

Coolgardite. A. Carnot, Compt. rend. Acad. Sci., Paris, 1901, vol. cxxxii, p. 1300; Bull. Soc. franç. Min., 1901, vol. xxiv, p. 360; Ann. des Mines, sér. 9, vol. xix, p. 533. Described as a sesquitelluride of gold, silver, and mercury from Kalgoorlie, East Coolgardie gold-field, Western Australia. Proved to be a mixture of coloradoite (HgTe), and the gold and silver tellurides, calaverite, sylvanite, and petzite (L. J. Spencer, Min. Mag., 1903, vol. xiii, p. 268).

Ctypeite. Bull. Soc. franç. Min., 1901, vol. xxiv, p. 456, abstracts (ctypéite). The same as ktypeite (A. Lacroix, 1898).

Cumengite. P. Groth, Tab. Uebers. d. Min., 1898, 4th edit., p. 55 (Cumengit); E. S. Dana, 1st appendix to the 6th edit. of Dana's System of Mineralogy, 1899, p. 21. The same as the cumengeite of Mallard (1893, named after Mr. E. Cumenge); not the cumengite of Kenngott (1853).

Diestit. Zeits. Kryst. Min., 1901, vol. xxxiv, p. 720; Chem. Central-Blatt, 1901, Jahrg. 72, vol. ii, p. 828. The same as vandiestite (q. v.).

Discachatae. M. F. Heddle, Trans. Geol. Soc. Glasgow, 1900 [1901], vol. xi, pp. 167–9; Heddle, Mineralogy of Scotland, 1901, vol. i, pp. 70–2 (Discachatæ). This and other names (haemachatae, haema-ovoid-agates, oonachatae) are proposed for structural varieties of agate, defined by the enclosure of discoidal or ovoidal patches of cacholong, &c., sometimes of a red colour.

Eglestonite. A. J. Moses, Amer. Journ. Sci., 1903, ser. 4, vol. xvi, p. 253. Cubic oxychloride of mercury, $Hg_6Cl_3O_2$. The brownish-yellow colour of the crystals quickly changes to black on exposure to light. Named after the late Professor Thomas Egleston, of Columbia University, New York. *See* terlinguaite.

Eisencordierit. H. Bücking, Ber. Senckenberg. Naturf. Ges. Frankfurt-am-Main, 1900, p. 15. Cordierite with magnesia largely replaced by ferrous iron, as is the case in the cordierite of the 'vitrified' sandstones altered by contact with basalt in central Germany.

Eisenrömerit. *See* ferrorömerite.

Erzbergite. E. Hatle, Mitth. naturwiss. Ver. Steiermark, 1892, vol. xxviii (Jahrg. 1891), p. 295 (Aragonit-Calcit-Sinterbildungen (Erzbergit)). A calcareous deposit from Erzberg, Eisenerz, Styria, consisting of alternate layers of calcite and aragonite.

Esmeraldaite. A. S. Eakle, Bull. Dep. Geol. Univ. California, 1901, vol. ii, p. 320. Pod-shaped masses of a coal-black colour and bright vitreous lustre; it has a glassy fracture, and in thin splinters transmits yellowish-red light; streak, yellowish-brown. The mean of several analyses gives, after deducting 17 per cent. of impurities, the formula $Fe_2O_3 . 4H_2O$. Found in earthy limonite in Esmeralda Co., Nevada.

Ferropallidite. R. Scharizer, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 547 (Ferropallidit). A white, granular ferrous sulphate, $FeSO_4 . H_2O$, occurring with römerite in Chile. Named from *ferrum*, iron, and *pallidus*, pale.

Ferrorömerite. R. Scharizer, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 546 (Eisenrömerit, Ferrorömerit). A synonym of römerite. *See* zinc-römerite.

Geolyte. E. A. Wülfing, Jahreshefte Ver. vaterl. Naturk. Württemberg, 1900, vol. lvi, p. 35 (Geolyt). To replace the term 'Bodenzeolith'

used by agricultural chemists for those constituents of soils which are readily soluble and of indefinite mineralogical composition, but have little in common with zeolites. Named from γῆ, earth, and λύειν, to dissolve.

Grandidierite. A. Lacroix, Bull. Soc. franç. Min., 1902, vol. xxv, p. 86. A blue, sapphirine-like mineral in granite from Madagascar. Orthorhombic, with strong pleochroism. Sp. gr. = 2·99. A basic silico-aluminate of iron, magnesium, and calcium with 2 per cent. of alkalies. Named after Mr. Alfred Grandidier, an authority on the geography and natural history of Madagascar.

Hackmanite. L. H. Borgström, Geol. För. Förh. Stockholm, 1901, vol. xxiii, p. 563 (Hackmanit). A member of the sodalite group occurring as rhombic dodecahedral crystals of a pale reddish-violet colour in a rock called tawite from the Tawa valley, Kola peninsula, Lapland. It has the composition of sodalite, $Na_4(AlCl)Al_2(SiO_4)_3$, but contains in addition 6·23 per cent. of $Na_4[Al(NaS)]Al_2(SiO_4)_3$, a compound which Brögger and Bäckström (1890) concluded to be a constituent of the artificial product known as 'white ultramarine.' The sulphur is present as monosulphide, and not as polysulphide as in lazurite. Named after Dr. Victor Hackman, of Helsingfors.

Haemachatae. *See* discachatae.

Haema-ovoid-agates. *See* discachatae.

Hellandite. W. C. Brögger, Nyt Mag. Naturvid. Kristiania, 1903, vol. xli, p. 213 (Hellandit). Monoclinic crystals in the pegmatite-veins near Kragerö, Norway; they are much altered; the freshest contained 7·55 per cent. of water and were optically isotropic (like gadolinite, orthite, &c.). Probable formula: $Ca_2R_3'''(R'''O)_3(SiO_4)_4$, where R''' = Ce,Di,La,Al,Fe,Mn. Related to guarinite. Named after Professor Armund Helland, of Christiania.

Histrixite. W. F. Petterd, Papers and Proc. Roy. Soc. Tasmania for 1900–1, 1902, p. 77; ibid., for 1902, 1903, p. 24; Rep. Secr. Mines, Tasmania, for 1901–2, 1902, p. 294. Radiating groups of orthorhombic crystals, associated with chalcopyrite, bismuthinite, &c., at Ringville, Tasmania. Described as a sulphide of antimony and bismuth with the formula $7Bi_2S_3 . 2Sb_2S_3 . 5CuFeS_2$. [Probably a mixture.] Named histrixite (porcupine-ore) from the Latin, *hystrix* (*histrix*), a porcupine.

Hörnbergite. J. F. Vogl ? (— Adam, Tableau Minéralogique, Paris, 1869, p. 42). An arsenate of uranium.

Huelvite. *See* lacroisite.

Hussakite. E. H. Kraus and J. Reitinger, Zeits. Kryst. Min., 1901, vol. xxxiv, p. 268 (Hussakit); (abstract, this vol., p. 307). E. Hussak and J. Reitinger, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 563. A synonym of xenotime. Named after Dr. Eugen Hussak, of the Geological Survey of São Paulo, Brazil.

Hydrogöthite. P. A. Zemĭatčenskij, Trav. Soc. Nat. St.-Pétersbourg, 1889, vol. xx, Sect. Géol. et Min., p. 208 (*водоизумутъ*); (abstract, Zeits. Kryst. Min., 1892, vol. xx, p. 185). J. Samojlov, Zeits. Kryst. Min., 1901, vol. xxxv, p. 272. A fibrous (crystalline), cochineal-red hydroxide of iron, $3Fe_2O_3 . 4H_2O$, occurring as veins in limonite in central Russia.

Iodembolite. G. T. Prior and L. J. Spencer, Centralblatt Min., 1902, p. 186 (Jodembolit); Min. Mag., 1902, vol. xiii, p. 176 (iodiferous embolite or iodembolite). To replace the name iodobromite ($2AgCl . 2AgBr . AgI$, which has no existence as a definite compound), and as a general term for minerals of the cerargyrite group (holohedral-cubic silver haloids) containing chlorine, bromine, and iodine, Ag(Cl,Br,I).

Kali-Harmotom. L. Gmelin, Leonhard's Zeits. Min., 1825, vol. i, p. 11. Synonym of phillipsite.

Kalkeisencordierit. H. Bücking, Ber. Senckenberg. Naturf. Ges. Frankfurt-am-Main, 1900, p. 7. Cordierite with lime and ferrous oxide in place of magnesia. In ejected volcanic blocks from the Celebes.

Keweenawite. G. A. Koenig, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 410. A massive, finely-granular mineral, with a pale pinkish-brown colour and metallic lustre, from the Mohawk mine, Keweenaw Co., Michigan. Analyses agree approximately with the formula $(Cu,Ni,Co)_2As$. *See* mohawkite.

Klinoaugit. *See* orthoaugite.

Klino-pyroxen. *See* orthoaugite.

Koenenite. F. Rinne, Centralblatt Min., 1902, p. 493 (Koenenit). A red, scaly mineral with a perfect micaceous cleavage, from the salt deposits of Volpriehausen, Hanover. Rhombohedral, optically uniaxial and positive. $Al_2O_3 . 3MgO . 2MgCl_2 . 6(\text{or } 8)H_2O$. Named after Professor Adolf von Koenen, of Göttingen.

Kunzite. C. Baskerville, Science, New York, 1903, n. ser., vol. xviii, p. 303. G. F. Kunz, Science, New York, 1903, vol. xviii, p. 280; Amer.

Journ. Sci., 1903, ser. 4, vol. xvi, p. 264. A lilac-coloured gem-variety of spodumene from California. Named after Dr. George Frederick Kunz, of New York.

Lacroisite. H. Lienau, Chemiker-Zeitung, 1903, Jahrg. xxvii, p. 15 (Lacroisit). Torrensite and viellaurite, from manganese mines in the Pyrénées, previously described as new minerals by Lienau (ibid., 1899, Jahrg. xxiii, p. 418), have been shown on microscopical examination by A. Lacroix (Bull. Soc. franç. Min., 1900, vol. xxiii, p. 251) to be mixtures of various manganese minerals (mainly rhodochrosite, tephroite, and rhodonite). Lienau now describes other similar mixtures under the names lacroisite (a mixture of rhodochrosite and rhodonite; named after Professor Alfred Lacroix, of Paris), Schokoladenstein (chocolate-stone), and huelvite (from Huelva, Spain).

Lardite. P. A. Zemĭatčenskij, Trav. Soc. Nat. St.-Pétersbourg, 1889, vol. xx, Sect. Géol. et Min., p. 216 (*лардумъ*); (abstract, Zeits. Kryst. Min., 1892, vol. xx, p. 185). Hydrated silica occurring in clay in central Russia; while still moist it is white and slightly transparent, but on drying it becomes opaque. Named from the Latin, *lardum*, lard. The name lardite was used by J. G. Wallerius in 1788 for steatite. *See* ljardit.

Lassallite. G. Friedel, Bull. Soc. franç. Min., 1901, vol. xxiv, p. 6. A substance resembling matted asbestos, which, under the microscope, is seen to consist of birefringent fibres. $3MgO . 2Al_2O_3 . 12SiO_2 . 8H_2O$. France. Named after M. Lassalle, a mine proprietor.

Ledouxite. J. W. Richards, Amer. Journ. Sci., 1901, ser. 4, vol. xi, p. 458; Chem. News, 1901, vol. lxxxiv, p. 29. The copper arsenide $(Cu,Ni,Co)_4As$, analysed by Dr. Ledoux, and previously named mohawkite (q. v.).

Leukosphenite. G. Flink, Meddelelser om Grönland, 1901, Hefte xxiv, plate VII. The same as leucosphenite.

Liveingite. R. H. Solly, Proc. Cambridge Phil. Soc., 1901, vol. xi, p. 239; Min. Mag., 1902, vol. xiii, p. 160 footnote; (abstract, this vol., p. 206). Crystals resembling in general appearance the several other sulpharsenites of lead from the Binnenthal dolomite. Monoclinic. $5PbS . 4As_2S_3$. Named after Professor G. D. Liveing, of Cambridge.

Ljardit. (Neues Jahrb. Min., 1901, vol. ii, -408-, abstracts.) The same as lardite (q. v.).

Lotrite. G. Munteanu-Murgoci, Bull. Soc. Sci. Bukarest, 1900, vol. ix, p. 596; 1901, vol. ix, p. 783; Inaug.-Diss. München, 1901 (Lotrit). A constituent of an epidote-schist occurring in contact with serpentine in the Lotru valley, southern Carpathians. $3(Ca,Mg)O_2.Al_2O_3.4SiO_2.2H_2O$. Very similar to prehnite, but differs slightly from this in optical characters, as determined under the microscope in rock-sections.

Macrolepidolite. H. Baumhauer, Eclogae geol. Helvetiae, 1903, vol. vii, p. 354. Two varieties of lepidolite, one with a large optic axial angle, and the other with a small angle, are distinguished and called respectively macrolepidolite and microlepidolite (Makrolepidolith and Mikrolepidolith); the two varieties also differ in the character of the etched figures on the cleavage planes.

Malachite de plomb. (Internat. Catal. Sci. Liter., 1903, Mineralogy volume for 1901, p. 108.) *See* plumbomalachite.

Manganosphaerite. K. Busz, Neues Jahrb. Min., 1901, vol. ii, p. 129 (Manganosphärit). Resembles sphaerosiderite in appearance, but has the composition of oligonite ($3FeCO_3.2MnCO_3$), from which it only differs in being not in crystals. In cavities in a basalt-vein at Horhausen, Rhenish Prussia. [The name would suggest either a botryoidal manganese carbonate or a manganiferous sphaerite (hydrated basic aluminium phosphate).]

Melanochalcite. G. A. Koenig, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 404. A pitch-black, amorphous mineral occurring as thin bands in nodules composed of cuprite, malachite, chrysocolla, and quartz at Calumet, near Bisbee, Arizona. A basic silico-carbonate of copper, $Cu_2(Si,C)O_4.Cu(OH)_2$. Named from μέλας, μέλανος, black, and χαλκός, copper.

Mesolitine. J. Apjohn, Journ. Geol. Soc. Dublin, 1844, vol. iii, p. 77. Identical with thomsonite. Named mesolitine because of a supposed relation to mesolite.

Metachalcolite. Bull. Soc. franç. Min., 1902, vol. xxv, p. 372 (abstract of Rinne's paper). Synonym of metakupferuranit (q. v.).

Metakalkuranit. F. Rinne, Centralblatt Min., 1901, p. 709 (Metakalkuranite, *pl.*). Calco-uranite (autunite) from which part of the water has been artificially expelled by heating, thus causing an important series of changes in the optical characters.

Metakoenenite. F. Rinne, Centralblatt Min., 1902, p. 498 (Metakoenenit). Koenenite (q. v.) when heated in water leaves a residue

having the composition $Al_2O_3 . MgO . H_2O$; with ammonium chloride solution it yields $Al_2O_3 . 2H_2O$, and this on ignition gives anhydrous alumina. These artificially produced secondary products ('metakoenenites') retain the scaly form of the original mineral, and are optically uniaxial and negative.

Metakupferuranit. F. Rinne, Centralblatt Min., 1901, p. 618 (Metakupferuranite, *pl.*). Cupro-uranite (torbernite) from which part of the water has been artificially expelled by heating, thus causing an important series of changes in the optical characters. *See* metachalcolite.

Microlepidolite. *See* macrolepidolite.

Mohawk-algodonite. G. A. Koenig, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, pp. 414, 416. Massive copper arsenides from the Mohawk mine, Michigan, of variable composition, but approximating to that of algodonite. *See* mohawkite.

Mohawkite. J. R. Stanton, Engin. and Mining Journ. New York, 1900 (April), vol. lxix, p. 413. A massive copper arsenide, with some cobalt and nickel, from the Mohawk mine, Michigan. Ledoux deduced from his analysis the formula $(Cu,Ni,Co)_4As$. This was afterwards re-named ledouxite (q. v.).

G. A. Koenig, Amer. Journ. Sci., 1900 (December), ser. 4, vol. x, p. 440; Zeits. Kryst. Min., 1901, vol. xxxiv, p. 67. A nickeliferous and cobaltiferous domeykite, $(Cu,Ni,Co)_3As$, from the Mohawk mine. The copper arsenides from this locality show wide variations in composition, and, as pointed out by Koenig, are mixtures, or more of the nature of alloys rather than definite mineral species; nevertheless this author has introduced for them several other new names, viz.:—keweenawite, mohawk-algodonite, mohawk-whitneyite, and semi-whitneyite (q. v.).

Mohawk-whitneyite. G. A. Koenig, Amer. Journ. Sci., 1900, ser. 4, vol. x, p. 446; Zeits. Kryst. Min., 1901, vol. xxxiv, p. 75 (Mohawkit-Whithneyit); Amer. Journ. Sci., 1902, ser. 4, vol. xiv, pp. 414, 416. Intimate mixtures of mohawkite and whitneyite from the Mohawk mine, Michigan. *See* mohawkite.

Moldavite. P. Poni, Ann. Sci. Univ. Jassy, 1900, vol. i, p. 144; Anal. Acad. Române, Bukarest, 1900, vol. xii. Earlier used by Cobalcescu [reference ?] as a specific name for ozocerite, and later by C. Istrati (1897) [who, however, spells the word moldovite] for a variety of ozocerite from Moldavia (Moldova).

Molybdophyllite. G. Flink, Bull. Geol. Inst. Univ. Upsala, 1901, vol. v (1900), p. 91 (Molybdophyllit). Platy masses with a perfect basal cleavage, and having quite the appearance of white mica. Found with hausmannite in granular limestone or dolomite at Långban, Sweden. Hexagonal. $2(Pb,Mg)O . SiO_2 . H_2O$. Differs from barysilite in containing water. Named from μόλυβδος, lead, and φύλλον, a leaf.

Montroydite. A. J. Moses, Amer. Journ. Sci., 1903, ser. 4, vol. xvi, p. 259. Orthorhombic mercuric oxide, HgO, occurring as velvety encrustations of orange-red needles on mercury-ores at Terlingua, Texas. Named after Mr. Montroyd Sharpe, one of the owners of the mines.

Mooraboolite. G. B. Pritchard, Victorian Naturalist, 1901, vol. xviii, p. 63. A zeolite occurring as white, radial aggregates in the decomposed basalt of the Moorabool valley, Victoria. In chemical composition, and in the crystallographic and physical characters as far as determined, it agrees with natrolite.

Mouchketovite. Ann. Géol. et Min. Russie, 1901, vol. iv, sect. iii, p. 107 (Mouchkétovite, Мушкетовитъ). The same as muschketowit (E. S. Fedorov and W. Nikitin, 1899).

Narsasukite. G. Flink, Meddelelser om Grönland, 1901, Hefte xxiv, plate VIII, and p. 154 footnote. Error for narsarsukite.

Natroalunite. W. F. Hillebrand and S. L. Penfield, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, pp. 218, 220; Zeits. Kryst. Min., 1902, vol. xxxvi, pp. 552, 554. Alunite with part of the potash replaced by soda; in material from Colorado $K_2O : Na_2O = 4 : 7$. $(Na,K)_2[Al(OH)_2]_6(SO_4)_4$. Rhombohedral.

Natrojarosite. W. F. Hillebrand and S. L. Penfield, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 211; Zeits. Kryst. Min., 1902, vol. xxxvi, p. 545. A yellowish-brown, glistening powder consisting wholly of minute, perfectly developed rhombohedra with basal planes. $Na_2[Fe(OH_2]_6(SO_4)_4$. From Soda Springs Valley, Nevada.

Natronkalisimonyit. R. Köchlin, Min. petr. Mitt. (Tschermak), 1902, vol. xxi, p. 356. A provisional name for crystals agreeing with blödite (simonyite) in form, but apparently differing slightly in chemical composition: in addition to soda, a little potash (0·43 per cent.) is present, and more water is expelled at 100° C. than from typical blödite. From the salt deposits of Kalusz, Galicia.

Natronphlogopit. E. Weinschenk, Abhandl. Akad. Wiss. München,

1901, vol. xxi, p. 272. A white mica containing magnesia and soda (and potash) in crystalline limestone from Styria.

Neotantalite. P. Termier, Bull. Soc. franç. Min., 1902, vol. xxv, p. 34 (Néotantalite). Minute, regular octahedra resembling pyrochlore, in kaolin from dép. Allier, France. Hydrated tantalate (and niobate) of iron, manganese, and alkalies. Considered to be a dimorphous form of tantalite, but differs considerably from this in composition.

Oonachatae. *See* discachatae.

Orthoaugite. F. Rinne, Sitz.-ber. Akad. Wiss. Berlin, 1900, p. 482 (Orthoaugit). A collective name for the orthorhombic pyroxenes, enstatite, bronzite, and hypersthene, which cannot always be distinguished from each other in rock-sections. Similarly, monoclinic pyroxenes are called clinoaugites (Klinoaugite).

Following Rinne, E. Düll (Zeits. Kryst. Min., 1902, vol. xxxvi, p. 654 footnote, abstract) proposes the terms ortho-pyroxene and klino-pyroxene, abbreviated as o-pyroxene and kl-pyroxene.

Palacheite. A. S. Eakle, Bull. Dep. Geol. Univ. California, 1903, vol. iii, p. 231. Loosely coherent aggregates of brick-red, monoclinic crystals, found as a recent formation in the old workings of the Redington mercury mine, Knoxville, California. $2MgO . Fe_2O_3 . 4SO_3 . 15H_2O$. It is not proved to differ essentially from the imperfectly determined rubrite. Named after Dr. Charles Palache, of Harvard University.

Petricichite. P. Poni, Ann. Sci. Univ. Jassy, 1900, vol. i, p. 143; Anal. Acad. Române, Bukarest, 1900, vol. xxii. Error (?) for pietricikite, which is given by C. Istrati (Bull. Soc. Sci. Bukarest, 1897, vol. vi, p. 65) as the correct spelling of Dana's zietrisikite. A variety of ozocerite from Mount Pietricica, Moldavia.

Petterdite. W. H. Twelvetrees, Rep. Secr. Mines, Tasmania, for 1900–1, 1901, p. 356; Papers and Proc. Roy. Soc. Tasmania, for 1900–1, 1902, p. 51. An oxychloride of lead occurring in Tasmania as white, thin hexagonal plates. Named after Mr. W. F. Petterd, of Launceston, Tasmania.

Pigeonite. A. N. Winchell, Amer. Geologist, 1900, vol. xxvi, pp. 204, 368; Thèse Fac. des Sci. Paris, 1900. A pyroxene, with optic axial angle small and variable ($2E = 13° 16' - 62° 24'$), occurring as a constituent of olivine-diabase at Pigeon Point, Minnesota.

Plumbojarosite. W. F. Hillebrand and S. L. Penfield, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 213; Zeits. Kryst. Min., 1902, vol. xxxvi,

p. 548. A dark-brown, glistening powder consisting wholly of minute, perfectly developed rhombohedra with basal planes. $Pb[Fe(OH)_2]_6(SO_4)_4$. From Cook's Peak, New Mexico.

Plumbomalachite. S. F. Glinka and I. A. Antipov, St. Peterburg, Dnevn. XI Sjezda russ. jest. vrač., 1901, p. 468 (свинцовомъ малахитъ). *See* Bleimalachit, malachite de plomb.

Porcupine-ore. *See* histrixite.

Pseudomesolite. A. N. Winchell, Amer. Geologist, 1900, vol. xxvi, pp. 275, 372; Thèse Fac. des Sci. Paris, 1900. A zeolite agreeing with mesolite in chemical composition, but differing in optical characters. Occurs as colourless to white, radially fibrous masses in plagioclasite in Minnesota.

Pseudophillipsite. F. Zambonini, Neues Jahrb. Min., 1902, vol. ii, p. 73 (Pseudophillipsit). A zeolite, from the leucitic lavas near Rome, agreeing with phillipsite in form and twinning (though octahedral in habit, like gismondite), but containing less silica (38 per cent.) than typical phillipsite: formula, $(Ca,Na_2)_2Al_4Si_5O_{18}.9H_2O$.

Pyknochlorite. J. Fromme, Min. petr. Mitt. (Tschermak), 1903, vol. xxii, p. 62 (Pyknochlorit). A greyish-green, compact chlorite occurring in a quartz and calcite vein in the gabbro of the Radauthal, Harz. It has the same general formula (Sp_3At_4, Tschermak) as clinochlore, but differs from this in containing much more ferrous iron and in its compact (πυκνός) texture.

Revdinite. E. N. Kortkov, Bull. Soc. Ouralienne d'Amateurs des Sci. Nat., 1891-2, vol. xiii, pp. 83, 76 (ревдинитъ). The same as rewdanskit (R. Hermann, 1867); other forms of spelling are: refdanskite, revdanskite, revdinskite, rewdjanskit. An impure hydrous nickel silicate from Revda (= Revdinsk), Urals.

Rickardite. W. E. Ford, Amer. Journ. Sci., 1903, ser. 4, vol. xv, p. 69; Engin. and Min. Journ. New York, 1903, vol. lxxv, p. 113; Chem. News, 1903, vol. lxxxvii, p. 56; Zeits. Kryst. Min., 1903, vol. xxxvii, p. 609. A massive telluride of copper, Cu_4Te_3, with a rich purple colour resembling an iridescent tarnish. From Vulcan, Gunnison Co., Colorado. Named after Mr. T. A. Rickard, of New York. *See* sanfordite.

Sanfordite. Ores and Metals, Denver, Colorado, April, 1903 (Sandfordite in title). A synonym of the earlier name rickardite (q. v.). Named after Mr. Albert B. Sanford, of Denver, who first noticed the mineral in 1901.

Schertalite. R. W. E. MacIvor, Chem. News, 1902, vol. lxxxv, p. 217. To replace the name muellerite for a phosphate in bat guano from Skipton Caves, Ballarat, Victoria. Small, indistinct crystals with the composition $Mg(NH_4)_2H_2(PO_4)_2 . 4H_2O$. Named after Professor Arnulf Schertal, late of Freiberg, Saxony.

Schokoladenstein. *See* lacroisite.

Sclerospathite. W. F. Petterd, Rep. Secr. Mines, Tasmania, for 1901–2, 1902, p. 297; Papers and Proc. Roy. Soc. Tasmania, for 1902, 1903, p. 27. A hydrated sulphate of iron and chromium, perhaps allied to knoxvillite, occurring as tough ($\sigma\kappa\lambda\eta\rho\acute{o}\varsigma$), felted masses of short fibres, at Salisbury, Tasmania.

Seligmannite. H. Baumhauer, Sitz.-ber. Akad. Wiss. Berlin, 1901, p. 110 (abstract, this vol., p. 205); ibid., 1902, p. 611. R. H. Solly, Min. Mag., 1903, vol. xiii, p. 336. Crystals resembling in general appearance the several sulpharsenites of lead from the Binnenthal dolomite. Orthorhombic, with angles, habit, and twinning similar to those of bournonite, and probably therefore with the composition $Cu_2S . 2PbS . As_2S_3$. Named after Herr Gustav Seligmann, of Coblenz.

Semi-whitneyite. G. A. Koenig, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 416. Massive copper arsenides in which the ratio of Cu : As is variable and very high (up to 30 : 1). *See* mohawkite.

Serendibite. G. T. Prior and A. K. Coomáraswámy, Nature, 1902, vol. lxv, p. 383; Quart. Journ. Geol. Soc., 1902, vol. lviii, p. 420; Min. Mag., 1903, vol. xiii, p. 224. Blue, embedded crystals in the contact-zones between crystalline limestone and granulite. Probably anorthic; with polysynthetic twinning and strong pleochroism.

$$10(Fe,Ca,Mg)O . 5Al_2O_3 . 6SiO_2 . B_2O_3.$$

Named from 'Serendib,' an old Arab name for Ceylon, where the mineral was found.

Serpentin-Asbest. C. F. Naumann, Elem. d. Min., 2nd edit., 1850, p. 284. Synonym of chrysolite.

Silver-analcite, Silver-chabazite. G. Steiger, Amer. Journ. Sci., 1902, ser. 4, vol. xiv, p. 31. Artificial derivatives of analcite and chabazite with silver in place of sodium or calcium.

Speculite. E. H. Liveing, Engin. and Mining Journ., New York, 1903, vol. lxxv, p. 814. A specular gold and silver telluride from Kalgoorlie, Western Australia, resembling sylvanite in colour and perfect cleavage, but differing from this in chemical composition (Au 36, Ag 4 per cent.) and sp. gr. (8·64).

Stagmalite. O. C. Farrington, Field Columbian Museum, Chicago, Publication 53, Geol. Ser., 1901, vol. i, p. 261 (Stagmalites). A general term, to include both stalactite and stalagmite, for formations produced by dropping water. From *στάγμα*, a drop, and *λίθος*, a stone.

Steenstrupite. O. B. Boeggild, Meddelelser om Grönland, 1901, vol. xxiv, p. 203. The same as steenstrupine.

Stibio-domeykite. G. A. Koenig, Amer. Journ. Sci., 1900, ser. 4, vol. x, p. 445; Zeits. Kryst. Min., 1901, vol. xxxiv, p. 67. Massive domeykite containing a small amount of antimony (0·78 to 1·29 per cent.). From the Mohawk mine, Lake Superior copper region.

Stibio-luzonite. *See* antimon-luzonite.

Stoffertite. C. Klein, Sitz.-ber. Akad. Wiss. Berlin, 1901, p. 722 (Stoffertit). Differs from brushite ($HCaPO_4 . 2H_2O$) only in containing a little more water ($HCaPO_4 . 2\frac{3}{4}H_2O$). This difference is probably not essential, but, in case it should at some future time be proved to be so, the new name is provisionally given. From the guano deposits of the island of Mona, Porto Rico, West Indies. Named after Dr. Adolph Stoffert, of Hamburg, who sent the material for examination.

Sulfurite. F. Rinne, Centralblatt Min., 1902, p. 500 (Sulfurit). Naturally occurring amorphous sulphur. *See* arsensulfurite.

Synchysite. G. Flink, Bull. Geol. Inst. Univ. Upsala, 1901, vol. v (1900), p. 81 (Synchysit); abstract, this vol., p. 207. The mineral from Narsarsuk, Julianehaab, Greenland, previously described as parisite, has characters sufficiently distinct from those of the Colombian parisite to be regarded as a distinct species. Hexagonal. $CeFCa(CO_3)_2$. Named from *σύγχυσις*, confounding.

Taeniolite. Amer. Journ. Sci., 1900, ser. 4, vol. x, p. 324, abstract (Tæniolite). The same as tainiolite (Flink, 1901).

Tamanite. S. P. Popoff, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 267. The same as anapaite (q.v.). Professor Groth, in an editorial footnote (l. c.), calls attention to this identity, but he gives no reason for admitting the later name as a synonym. Named from the locality, Taman peninsula, Black Sea.

Terlinguaite. W. H. Turner, Mining and Scientific Press, San Francisco, July 21, 1900. Yellowish-green crystals on the mercury-ores of Terlingua, Brewster Co., Texas, determined by S. L. Penfield to be an oxychloride of mercury.

A. J. Moses (Amer. Journ. Sci., 1903, ser. 4, vol. xvi, p. 253) distin-

guishes two oxychlorides of mercury from this locality, which he names eglestonite (q. v.) and terlinguaite. The latter name is applied to monoclinic crystals having the composition Hg_2ClO; these are sulphur-yellow, and alter to olive-green on exposure to light.

Termierite. G. Friedel, Bull. Soc. franç. Min., 1901, vol. xxiv, p. 6 (Termiérite). A clay, resembling halloysite in appearance, with the formula $Al_2O_3 . 6SiO_2 . 18H_2O$. Associated with kaolinite, etc., France. Named after Professor Pierre Termier, of Paris.

Thelotite. C. E. Bertrand and B. Renault, Bull. Soc. Hist. Nat. Autun, 1892, vol. v, pp. 163, 240 (thélotite). An undetermined carbonaceous constituent of Boghead coal from the Thélots pits at Autun.

Vandiestite. (Author?) Described as probably a new species, but without name, by R. Pearce (Colorado Sci. Soc. Bull., 1898, No. 6, p. 4; Proc. [1902], vol. vi, p. 163). The information here given was reproduced, under the name Von Diestite, in a note by E. Cumenge (Bull. Soc. franç. Min., 1899, vol. xxii, p. 25 *bis*): in abstracts of this note the name Diestit (q. v.) has been used. The form vandiestite is given in a dealer's advertisement (Amer. Journ. Sci., November, 1901). A massive telluride of silver, bismuth, gold, and lead, from Sierra Blanca, Colorado. Named after Mr. P. H. van Diest, of San Luis, Colorado, by whom the mineral was found.

Vanthoffite. K. Kubierschky, Sitz.-ber. Akad. Wiss. Berlin, 1902, p. 407 (Vanthoffit). The results of several analyses of an apparently homogeneous specimen, from the salt deposits of Wilhelmshall near Stassfurt, were plotted as curves, and the compound $3Na_2SO_4 . MgSO_4$ inferred to be present in the mixture of salts. This is colourless, with a vitreous lustre, and a coarsely crystalline structure. Pure material was isolated from another specimen by means of a heavy liquid. The salt $3Na_2SO_4 . MgSO_4$ was afterwards prepared artificially by Professor J. H. van't Hoff, of Berlin, after whom the mineral is named.

Vierzonite. A. de Grossouvre, Bull. Soc. géol. France, 1901, ser. 4, vol. i, p. 432. A. Lacroix, Min. de France, 1901, vol. iii, p. 329. A deposit ('argile à silex') consisting essentially of pulverulent opal, which has been produced by the weathering of Cretaceous beds in the neighbourhood of Vierzon, dép. Cher. The same name has been previously applied to a yellow ochreous clay from the same locality (H. W. Bristow, Glossary of Mineralogy, 1861).

Violaite. E. S. Fedorov, Annales de l'Institut agronomique de

Moscou, 1901, vol. vii, p. 43 (Віолантъ). A strongly pleochroic pyroxene which forms an essential constituent of a rock called kedabekite from the Kedabek copper-mine, Caucasus. Differs from fedorovite (Viola, 1899) in having a considerable portion of the magnesia replaced by ferrous oxide. Named after Dr. Carlo Viola, of Rome.

Von Diestite. *See* vandiestite.

Weldite. F. M. Krausé, Proc. Roy. Soc. Tasmania, for 1884, 1885, p. lxxv. A silicate of aluminium and sodium, from the Weld river, upper Huon district, Tasmania.

Wiikite. W. Ramsay. Mentioned, but without name, by W. Ramsay and A. Zilliacus, Öfvers. Finska Vetenskaps-Soc. Förhandl., 1897, vol. xxxix, p. 58. The name wiikite appears in a dealer's advertisement (Amer. Journ. Sci., December, 1899). An euxenite-like mineral found with monazite in a felspar-quarry at Impilaks, Lake Lagoda, Finland. Named after Professor F. J. Wiik, of Helsingfors.

Zeophyllite. A. Pelikan, Anzeiger Akad. Wiss. Wien, Math.-naturw. Cl., 1902, Jahrg. xxxix, p. 113; Sitz.-ber., 1902, vol. cxi, Abth. I, p. 336 (Zeophyllit). A zeolite containing fluorine; $H_4Ca_4F_2Si_3O_{11}$. It occurs at Gross-Priesen, Bohemia, as hemispherical and spherical aggregates of small plates with a perfect cleavage and pearly lustre. Named from *ζεῖν*, to boil, and *φύλλον*, a leaf.

Zinc-römerite. R. Scharizer, Zeits. Kryst. Min., 1903, vol. xxxvii, p. 546 (Zinkrömerit). Römerite in which ferrous iron is replaced by zinc. In the natural mineral, from the Harz, this replacement is only partial, but it is more complete in an artificial product.

SYSTEMATIC CLASSIFICATION OF NEW MINERALS[1].

ELEMENTS.

Sulfurite, amorphous S.
Arsensulfurite, do. with As.

SULPHIDE.

Chalmersite, $CuFe_2S_4$.

TELLURIDES.

Rickardite, Cu_4Te_3.
Speculite, contains Au,Ag.
Vandiestite, contains Ag,Bi,Au,Pb.

ARSENIDES.

Badenite, $(Co,Ni,Fe)_2(As,Bi)_3$.

[1] Synonyms, names of mixtures, and various indefinite names given in the alphabetical list above are here omitted.

Keweenawite, $(Cu,Ni,Co)_2As$.
Mohawkite, $(Cu,Ni,Co)_3As$.
Stibio-domeykite, $Cu_3(As,Sb)$.
Ledouxite, $(Cu,Ni,Co)_4As$.
Mohawk-algodonite.
Mohawk-whitneyite.
Semi-whitneyite.

Sulpharsenites, &c.

Liveingite, $Pb_5As_8S_{17}$.
Baumhauerite, $Pb_4As_6S_{13}$.
Seligmannite, $CuPbAsS_3$?
Histrixite,
$7Bi_2S_3 . 2Sb_2S_3 . 5CuFeS_2$?
Antimon-luzonite, $Cu_3(As,Sb)S_4$.

Haloids.

(Mercuric iodide)[1], HgI.
Iodembolite, Ag(Cl,Br,I).
Terlinguaite, Hg_2ClO.
Eglestonite, Hg_6Cl_3O.
Petterdite, oxychloride Pb.
Koenenite,
$Al_2O_3 . 3MgO . 2MgCl_2 . 6H_2O$.

Oxides.

(Cadmium oxide)[2], CdO.
Montroydite, HgO.
Lardite, var. of opal.
Vierzonite, „ „
Hydrogöthite, $3Fe_2O_3 . 4H_2O$.
Esmeraldaite, $Fe_2O_3 . 4H_2O$.
Brostenite, near chalcophanite.

Carbonates.

Erzbergite, calcareous sinter.
Manganosphaerite,
$3FeCO_3 . 2MnCO_3$.
Synchysite, $CeFCa(CO_3)_2$.
Artinite, $MgCO_3 . Mg(OH)_2 . 3H_2O$.
Plumbomalachite,
$2CuCO_3 . Cu(OH)_2 . PbCO_3$.
Melanochalcite,
$Cu_2(Si,C)O_4 . Cu(OH)_2$.

Anhydrous Silicates.

Pigeonite, var. of pyroxene.
Violaite, „ „
Kunzite, violet spodumene.
Bourgeoisite, $CaSiO_3$?
Eisencordierit, var. of cordierite.
Kalkeisencordierit, „
Hackmanite, sodalite group.
Bleizinkchrysolith, $PbZnSiO_4$ (artificial).
Hellandite,
$2CaO . 3(Ce,Al,\&c.)_2O_3 . 4SiO_2$.
Serendibite,
$10(Fe,Ca,Mg)O . 5Al_2O_3 . 6SiO_2 . B_2O_3$.
Grandidierite, contains Al,Fe,Mg, Ca.

Hydrous Silicates.

Macrolepidolite, var. of lepidolite.
Microlepidolite, „ „
Natronphlogopit, var. of phlogopite.
Pyknochlorite, near clinochlore.
Brunsvigite, near metachlorite.
Lassallite,
$3MgO . 2Al_2O_3 . 12SiO_2 . 8H_2O$.
Termierite, $Al_2O_3 . 6SiO_2 . 18H_2O$.

[1] A. J. Moses, Amer. Journ. Sci., 1901, ser. 4, vol. xii, p. 98; Zeits. Kryst. Min., 1902, vol. xxxv, p. 417. Minute scarlet crystals, probably cubic, from Broken Hill, New South Wales.

[2] B. Neumann & E. Wittich, Chemiker-Zeitung, 1901 (July), Jahrg. xxv, p. 561; E. Wittich & B. Neumann, Centralblatt Min., 1901 (September), p. 549; abstract, this vol., p. 308. Cubic octahedra from Monte Poni, Sardinia.

Lotrite,
$3(Ca,Mg)O . 2Al_2O_3 . 4SiO_2 . 2H_2O$.
Bavenite, $3CaO . Al_2O_3 . 6SiO_2 . H_2O$.
Molybdophyllite,
$2(Pb,Mg)O . SiO_2 . H_2O$.
Bakerite, $8CaO . 5B_2O_3 . 6SiO_2 . 6H_2O$.

Zeolites.

Chromocyclite, var. of apophyllite.
Zeophyllite, $H_4Ca_4F_2Si_3O_{11}$.
Pseudophillipsite,
$(Ca,Na_2)_2Al_4Si_5O_{18} . 9H_2O$.
Pseudomesolite, near mesolite.
Mooraboolite, near natrolite.
Silver-analcite, &c. (artificial).
Ammonium-analcite, &c. ,,

NIOBATES, &c.

Neotantalite.
Wiikite, near euxenite.

PHOSPHATES, &c.

Anapaite, $FeCa_2(PO_4)_2 . 4H_2O$.
Ceruleite,
$CuO . 2Al_2O_3 . As_2O_5 . 8H_2O$.
Schertalite,
$Mg(NH_4)_2H_2(PO_4)_2 . 4H_2O$.
Stoffertite, $HCaPO_4 . 2\frac{3}{4}H_2O$.
Hörnbergite, uranium arsenate.

SULPHATES.

Ciempozuelite, $3Na_2SO_4 . CaSO_4$.
Vanthoffite, $3Na_2SO_4 . MgSO_4$.
Natroalunite,
$(Na,K)_2[Al(OH)_2]_6(SO_4)_4$.
Natrojarosite,
$Na_2[Fe(OH)_2]_6(SO_4)_4$.
Plumbojarosite,
$Pb[Fe(OH)_2]_6(SO_4)_4$.
Ferropallidite, $FeSO_4 . H_2O$.
Boothite, $CuSO_4 . 7H_2O$.
Natronkalisimonyit, near blödite.
Palacheite,
$2MgO . Fe_2O_3 . 4SO_3 . 15H_2O$.
Zinc-römerite,
$(Fe,Zn)SO_4 . Fe_2(SO_4)_3 . 14H_2O$.

HYDROCARBON.

Thelotite.

September, 1903.