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INDEX

TO THE

LITERATURE OF DIDYMIUM

1842-1893

BY

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CITY OF WASHINGTON  
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## LETTER OF TRANSMITTAL.

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NEW YORK, JULY 24, 1894.

The Committee of the American Association for the Advancement of Science having charge of Indexing Chemical Literature has voted to recommend to the Smithsonian Institution for publication the three following Indexes:—

AN INDEX TO THE LITERATURE OF CERIUM.<sup>1</sup>

AN INDEX TO THE LITERATURE OF LANTHANUM.<sup>1</sup>

Both by W. H. Magee, Ph. D.

AN INDEX TO THE LITERATURE OF DIDYMIUM.

By A. C. Langmuir, Ph. D.

The latter has already appeared in the *School of Mines Quarterly*, No. 1, Vol. XV.

H. CARRINGTON BOLTON,  
*Chairman.*

To the SECRETARY of the SMITHSONIAN INSTITUTION.

<sup>1</sup> These Indexes are printed as Smithsonian Publication No. 971.



INDEX TO THE LITERATURE OF DIDYMIUM —  
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BY A. C. LANGMUIR, PH. D.

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THE following paper is offered to chemists with the hope that it may be of some value to them in their researches on an element of great theoretical and scientific interest, particularly as an example of the wonderful results accomplished by the use of the spectroscope in modern chemistry. The voluminous literature of didymium affords a striking illustration of the pursuit of science for its own sake, and with no reward beyond the satisfaction of having advanced the cause of truth.

Original work, at the present time, must always be preceded by a long and painstaking search through the literature, which consumes no inconsiderable amount of time. Anything which can lighten the labors of the investigator in this direction is sure to be a welcome addition to the literature.

In 1882 Dr. H. Carrington Bolton originated the idea of indexing the literature of each of the chemical elements, and a Committee on Indexing Chemical Literature was appointed by the American Association for the Advancement of Science. The committee annually reports the progress made during the year, the reports being published in the *Chemical News* and in American journals.

The following elements have been indexed : —

*Columbium*. — Index to the literature of, 1801-1887, by Frank W. Traphagen, Smithsonian Miscellaneous Collections, No. 663, Washington, 1888.

- Iridium*. — Bibliography of the metal, 1803-1885, by N. W. Perry, in Mineral Resources of the United States, 1883-1884, p. 588; School of Mines Quarterly, 1885, p. 114; Chem. News, 1885, 51, p. 32.
- Manganese*. — Index to the literature of, 1596-1874, by H. C. Bolton, Annals of the Lyceum of Natural History, New York, Vol. II., Nov., 1875.
- Titanium*. — Index to the literature of, 1783-1876, by E. J. Hallock, Annals of the New York Academy of Sciences, Vol. I., Nos. 2 and 3, 1877.
- Uranium*. — Index to the literature of, by H. C. Bolton, 1789-1885, Smithsonian Reports for 1885, Washington, 1885, p. 919-946.
- Vanadium*. — Index to the literature of, 1801-1876, by G. Jewett Rockwell, Annals of the New York Academy of Sciences, Vol. I., No. 5, 1877.

The general plan of the following index corresponds with that of the others published. The indexes at the end of every volume of each journal were consulted, unless an index covering a series of years was available. The French journals proved to be very troublesome in this respect, as indexes at the end of the volume are often omitted, and the general indexes are seldom detailed enough to be of much value. This was especially true of the *Bull. Soc. Chim.* and the *Ann. Chim. Phys.*

The abbreviations used are those given by H. Carrington Bolton in his "Select Bibliography of Chemistry, 1492-1892," Smithsonian Miscellaneous Collections, No. 840, Washington, 1893.

Date.	Author.	Remarks.	References.
1842	MOSANDER . . .	Discovery.	Ann. Chem., Liebig, 44, 125. Ann. der Phys., Pogg., 56, 503. Pharm. Centrbl., 1842, 793. J. de Pharm., 1843, 143. Berzelius' Jsb., 1844, 144. J. Frank. Inst. [3], 5, 411. Am. J. Sci., 43, 404.
1843	MOSANDER . . .	Researches.	Phil. Mag. [3], 23, 241. Ann. Chem., Liebig, 48, 210-223. J. prakt. Chem., 30, 276-288. Ann. de Phys., Pogg., 60, 299-311. Ann. chim. phys. [3], 11, 464.
1843	L. BONAPARTE .	Separation from cerium.	Compt. rend., 16, 1008. J. prakt. Chem., 29, 268. Pharm. Centrbl., 1843, 719. Berzelius' Jsb., 1845, 115. Ann. der Phys., Pogg., 59, 623. Chem. Gaz., 1843, 405. Chemist, Watt, 4, 293. Am. J. Sci., 46, 206.
1845	HERMANN . . . .	Existence of Di doubted.	J. prakt. Chem., 34, 182. Berzelius' Jsb., 1845, 115.
1849	MARIGNAC . . .	Separation from cerium & lanthanum. At'mic weight.	Arch. ph. nat., 11, 21. Ann. Chem., Liebig, 71, 306. Ann. chim. phys. [3], 27, 209. J. prakt. Chem., 48, 423. Pharm. Centrbl., 1849, 837. Chemist, Watt, 1849, 20. Chem. Gaz., 1849, 329. Jsb., 1849, 263, 265.
1850	H. WATTS . . . .	Sep'r'tion fr'm cerium and lanthanum.	J. Chem. Soc., 2, 140. Pharm. Centrbl., 1849, 892.
1853	MARIGNAC . . .	Separation from lanthanum. At'mic weight. Compounds.	Ann. chim. phys. [3], 38, 148-177. J. prakt. Chem., 59, 380-406. Arch. ph. nat., 24, 278. Ann. Chem., Liebig, 88, 232. J. Chem. Soc., 6, 260-273. Chem. Gaz., 1854, 141-148. Am. J. Sci. [2], 16, 413. Jsb., 1853, 346-343.
1856	MARIGNAC . . .	Cryst'lline f'm of sulphate.	Compt. rend., 42, 288. Pharm. Centrbl., 1856, 179.
1857	GLADSTONE . . .	Optical test.	J. Chem. Soc., 10, 219. J. prakt. Chem., 73, 380. Am. J. Sci. [2], 25, 100. Jsb., 1857, 568.
1859	MARIGNAC . . .	Compounds.	Ann. min. [5], 15, 272. Jsb., 1859, 138.

Date.	Author.	Remarks.	References.
1860	STAPFF . . . . .	Sep'r'tion fr'm lanthanum.	J. prakt. Chem., 79, 257. Chem. News, 2, 196.
1860	HERMANN . . . . .	Researches.	Bull. de la Soc. des Naturalistes à Moscou, 1860, 4, 543. J. prakt. Chem., 82, 385-395. Pharm. Centrbl., 1861, 433-438. Arch. ph. nat., 11, 354. Chem. News, 4, 72-87. Jsb., 1861, 195.
1861	NORDENSKIÖLD . . . . .	Crystalline form of oxide.	Ann. der Phys., Pogg., 114, 618. Oefvers. K. Vet. Acad. Forhandl., 1860, 439. J. prakt. Chem., 85, 432. Pharm. Centrbl., 1862, 556.
1861	RAMMELSBURG . . . . .	Isomorphism of didymium with other sulphates.	Ber. der Akad. der Wissensch. zu Berlin, 1861, 891. J. prakt. Chem., 85, 79. Ann. der Phys., Pogg., 115, 580. Ztschr. Chem., 5, 376. Pharm. Centrbl., 1862, 25. Chem. News, 5, 139.
1862	ERDMANN . . . . .	Abs'pt'n sp'm.	J. prakt. Chem., 85, 394.
1862	O. N. ROOD . . . . .	Absorption spectrum.	Am. J. Sci. [2], 34, 129. Ann. der Phys., Pogg., 117, 350. Chem. News, 6, 140.
1864	POPP . . . . .	Separation from cerium.	Ann. Chem., Liebig, 131, 359. Bull. soc. chim., 3, 385.
1864	BUNSEN . . . . .	Absorption spectrum.	Ann. Chem., Liebig, 131, 255. Arch. ph. nat., 21, 384. Phil. Mag. [4], 28, 246. Jsb., 1864, 108.
1864	DAMOUR and DEVILLE.	Estimation and separat'n.	Compt. rend., 59, 270. Institut., 1864, 269. Bull. soc. chim. [2], 2, 339. Chem. News, 10, 230. Jsb., 1864, 704.
1864	W. GIBBS . . . . .	Separation from cerium.	Am. J. Sci. [2], 37, 352. Ztschr. anal. Chem., 3, 394. J. prakt. Chem., 94, 123. Bull. soc. chim., 4, 360.
1864	HERMANN . . . . .	Sep'r'tion fr'm the thorium earths.	J. prakt. Chem., 93, 106.
1865	WILLIAMS . . . . .	Occurrence in churchite.	Chem. News, 12, 183.
1865	DELAFONTAINE . . . . .	Absorption spectrum.	Arch. ph. nat., 21, 97. Ann. der Phys., Pogg., 124, 635. Ann. Chem., Liebig, 135, 194. J. prakt. Chem., 94, 303.



Date.	Author.	Remarks.	References.
1865	DELAFONTAINE .	Absorption spectrum.	Ztschr. Chem., 8, 266. Bull. soc. chim., 3, 417.
1865	WINKLER . . . .	Sep'r'tion fr'm lanthanum.	J. prakt. Chem., 95, 410. Ztschr. anal. Chem., 4, 417. Chem. Centrbl., 1865, 1007. Bull. soc. chim., 6, 204. Chem. News, 15, 178.
1866	BUNSEN . . . . .	Absorption spectrum.	Ann. der Phys., Pogg., 128, 100-108. Phil. Mag. [4], 32, 177-182. Ztschr. Chem., 1866, 419. Ztschr. anal. Chem., 5, 109.
1866	BUNSEN . . . . .	Estimation by means of spectrum.	Ann. Chem., Liebig, 137, 1. J. prakt. Chem., 99, 274. Ztschr. Chem., 1866, 72. Chem. Centrbl., 1866, 118. Ztschr. anal. Chem., 5, 109. Ann. chim. phys. [4], 9, 487. Bull. soc. chim. [2], 6, 18. Arch. ph. nat., 25, 113. Am. J. Sci. [2], 41, 399. Jsb., 1866, 799.
1866	HERMANN . . . .	Sep'r'tion fr'm zircon earths.	J. prakt. Chem., 97, 340.
1867	PATTISON and CLARK.	Separation from cerium.	Chem. News, 16, 259. Ztschr. anal. Chem., 8, 249. Ztschr. Chem., 11, 191.
1867	MARIGNAC . . . .	Separation in æschynite.	Arch. ph. nat., May, 1867. Ztschr. Chem., 10, 725.
1869	ZSCHIESCHE . . .	Salts; equivalent of oxide.	J. prakt. Chem., 107, 74. Bull. soc. chim., 13, 232. Ztschr. Chem., 13, 40. Ztschr. anal. Chem., 9, 540. Jsb., 1869, 259.
1869	THALEN . . . . .	Measurement of spectrum.	Nova Acta Reg. Soc. Sc., Upsal [3], vol. 6. Ann. chim. phys. [4], 18, 238.
1869	HERMANN . . . .	Occurrence in mineral kingdom.	J. prakt. Chem., 107, 140.
1870	ERK . . . . .	At'mic weight. Separation from lanthanum and yttrium.	Jenaische Ztschr. Med. Nat., 6, 299. Ztschr. Chem. [2], 7, 101-115. Ztschr. anal. Chem., 10, 476, 509. J. Chem. Soc., 1871, 494. Bull. soc. chim., 16, 84.
1870	W. GIBBS . . . .	Sulphate . .	Ber., 1870, 858.
1870	RAMMELSBERG .	Occurrence in yttrocerite.	Ber., 1870, 858.

Date.	Author.	Remarks.	References.
1872	YOUNG . . . . .	Occurrence in the sun.	Am. J. Sci. [3], 4, 356. Jsb., 1872, 147.
1872	HORNER . . . . .	Occurrence in pyromorphite.	Chem. News, 26, 109, 285. J. Chem. Soc., 25, 995. Bull. soc. chim., 19, 23. Jsb., 1872, 241.
1872	CHURCH . . . . .	Didymium in British min'ls.	Chem. News, 26, 130. J. Chem. Soc., 25, 1075.
1872	RAMMELSBURG .	Determinat'n in tantalites & columbites.	J. Chem. Soc., 25, 194.
1873	MARIGNAC . . .	Crystallographic forms of salts.	Ann. chim. phys. [4], 30, 56. Jsb. rein. Chem., 1873, 57. Bull. soc. chim., 20, 84. J. Chem. Soc., 27, 25.
1873	MENDELEJEFF .	Position in periodic system.	Ann. Chem., Liebig, Suppl., 8, 190. Ann. Chem., Liebig, 168, 45-63. Ber., 1873, 558. J. Chem. Soc., 26, 1004.
1873	HORNER . . . . .	Occurrence in scheelite.	Chem. News, 28, 282. J. Chem. Soc., 27, 345. Bull. soc. chim., 21, 275. Jsb. rein. Chem., 1874, 77. J. de Pharm. [4], 19, 494.
1873	STOLBA . . . . .	Salts . . . . .	Ber. der königl. böhm. Ges. der Wissensch., Nov., 1873. Ztschr. anal. Chem., 13, 59. Jsb. rein. Chem., 1874, 77. Jsb., 1873, 260.
1873	CARLSON . . . . .	Plat'noc'y'n'de	Ber., 1873, 1468.
1873	RAMMELSBURG .	Isomorphism of sulphate with cadmium sulphate.	Ber., 1873, 87.
1873	THALEN . . . . .	Spectrum . .	K. Svensk. Vet. Acad. Handl., 1873, 12, No. 4. Bull. soc. chim. [2], 22, 350. Jsb. rein. Chem., 1874, 75.
1874	FRERICHS . . . . .	Compounds. Separation from lanthanum.	Ber., 1874, 798. Ztschr. anal. Chem., 13, 317. Bull. soc. chim., 22, 498. J. Chem. Soc., 27, 1062. Am. Chemist, 5, 264. Jsb. rein. Chem., 1874, 76. Jsb., 1874, 256.
1874	TOPSOE . . . . .	Crystallographic investigations.	K. Svensk. Vet. Acad. Handl., 1874, No. 5. Bull. soc. chim., 22, 353.

Date.	Author.	Remarks.	References.
1874	TOPSOE . . . . .	Crystallo- graphic inves- tigations.	Jsb. rein. Chem., 1874, 77.
1874	CLEVE . . . . .	Researches.	K. Svensk. Vet. Acad. Handl., 2, No. 8. Bull. soc. chim. [2], 21, 246. Chem. News, 30, 21. J. Chem. Soc., 28, 34. Jsb. rein. Chem., 1874, 77. Jsb., 1874, 257.
1874	CLEVE . . . . .	Sep'r'tion fr'm lanthanum.	Bull. soc. chim. [2], 21, 196. Arch. ph. nat., 50, 212.
1874	HARTLEY . . . . .	Dissociation of solutions.	Lond. R. Soc. Proc., 22, 241. Chem. News, 29, 148. Ber., 1874, 140. Jsb., 1874, 97.
1874	THOMSEN . . . . .	Heat of neu- tralization of oxyhydrate.	Ber., 1874, 31. Chem. News, 29, 155. J. Chem. Soc., 27, 430. Jsb., 1874, 118.
1875	HILLEBRAND and NORTON.	Metallic di- dymium.	Ann. der Phys., Pogg., 156, 466. Chem. Centrbl., 1875, 642. J. Chem. Soc., 30, 276. Jsb., 1875, 466. Am. J. Sci. [3], 12, 53.
1875	BUHRIG . . . . .	Detection of traces by spectrum.	J. prakt. Chem. [2], 12, 209.
1875	CLEVE . . . . .	At'mic weight.	Ber., 1875, 129.
1875	PHILLIPS . . . . .	At'mic weight.	Chem. News, 32, 176.
1875	BUNSEN . . . . .	Electrolytic separation from Ce and La.	Ann. der Phys., Pogg., 155, 633.
1875	BUNSEN . . . . .	Absorption spectrums.	Ann. der Phys., Pogg., 155, 378. Ztschr. anal. Chem., 15, 93. Am. J. Sci. [3], 11, 142.
1875	NILSON . . . . .	Valency, sel- enide.	Ber., 1875, 659.
1876	NILSON . . . . .	Valency, chlo- roplatinate.	Ber., 1876, 1058, 1145. Jsb., 1876, 292.
1876	HILLEBRAND . . . . .	Specific heat.	Ann. der Phys., Pogg., 158, 75. Phil. Mag. [5], 3, 111. J. Chem. Soc., 31, 50. Jsb. rein. Chem., 1876, 74. Jsb., 1876, 74.
1876	RAMMELBERG . . . . .	At'mic weight.	Ber., 1876, 1580. Jsb., 1876, 240.

Date.	Author.	Remarks.	References.
1876	WYROUBOFF . . .	Ferrocyanide.	Ann. chim. phys. [5], 8, 456. Jsb., 1876, 312.
1876	NILSON . . . . .	Platinonitrite.	Ber., 1876, 1728.
1876	PETERSSON . . .	Molecular volume.	Ber., 1876, 1566.
1877	DELAFONTAINE .	Occurrence in N.C.s'm'rsk'te	Arch. ph. nat., 59, 176. Jsb., 1877, 251.
1877	CLEVE . . . . .	Compounds.	Bull. soc. chim. [2], 29, 492. Ber., 1878, 910.
1878	STOLBA . . . . .	Sep'r'tion fr'm cerium and lanthanum.	Jsb. rein. Chem., 1878, 80. Böhm. Ges. d. Wissensch., 1878. Jsb., 1878, 1059.
1878	BOISBAUDRAN . .	Occurrence in rhabdophan.	Compt. rend., 86, 1028. Ztschr. Kryst., 3, 191. Jsb., 1878, 1228.
1878	FRERICHS and SMITH.	Researches.	Ann. Chem., Liebig, 191, 331-366. Ber., 1878, 804. Chem. Centrbl., 1878, 386. Chem. News, 37, 250; 38, 59. J. Chem. Soc., 34, 647. Jsb. rein. Chem., 1878, 79.
1878	FRERICHS . . . .	Compounds.	Ber., 1878, 1151. J. Chem. Soc., 34, 934. Jsb. rein. Chem., 1878, 80.
1878	DELAFONTAINE .	Didymium in N. C. samar- skite.	Compt. rend., 87, 632. Chem. News, 38, 223. Jsb., 1878, 259.
1878	DELAFONTAINE .	Probable com- pound nature of didymium from cerite.	Compt. rend., 87, 634. Ber., 1879, 364. Chem. Centrbl., 1878, 802. J. Chem. Soc., 36, 119. Monit. Sc Quesneville, 20, 1393. Jsb. rein. Chem., 1878, 79. Jsb., 1878, 259.
1878	NILSON . . . . .	Platino-iodo- nitrate.	Ber., 1878, 885.
1878	CLAES . . . . .	Absorption spectrum.	Ann. der Phys., Pogg. [2], 3, 404.
1878	COSSA . . . . .	Wide occur- rence of didymium.	Gazz. chim. ital., 9, 118-140. J. Chem. Soc., 36, 696. Chem. News, 38, 164. Jsb. rein. Chem., 1878, 80.
1878	SORET . . . . .	Absorption of ultra-violet rays.	Arch. ph. nat. [2], 63, 89. Compt. rend., 86, 1062.
1879	BOISBAUDRAN and J. L. SMITH.	Absorption spectrum.	Compt. rend., 88, 323, 1167. Monit. Sc. Quesneville, 21, 450. Chem. Centrbl., 1879, 258, 483.

Date.	Author.	Remarks.	References.
1879	BOISBAUDRAN and J. L. SMITH.	Absorption spectrum.	J. Chem. Soc., 36, 696, 861. Chem. News, 39, 286. Jsb., 1879, 165. Ber., 1879, 841, 2080.
1879	CLEVE . . . . .	Chloro-stanna- te didymi'm a simple body.	Bull. soc. chim. [2], 31, 197. J. Chem. Soc., 36, 602. Jsb., 1879, 286.
1879	SCHUCHARDT . .	Metallic di- dymium.	Chem. News, 40, 35.
1879	COSSA . . . . .	Occurrence in scheelite, etc.	Compt. rend., 87, 377. Ber., 1879, 362. Chem. Centrbl., 1879, 128. Jsb. Min., 1879, 615. Ztschr. Kryst., 3, 447. Chem. News, 40, 90. Jsb., 1879, 1179.
1879	COSSA . . . . .	Detection in minerals.	Ztschr. Kryst., 3, 325. Jsb. rein. Chem., 1879, 66.
1879	SORET . . . . .	Absorption spectrum.	Compt. rend., 88, 422.
		Fluorescence of salts.	Ber., 1879, 1019, 2078. Chem. Centrbl., 1819, 308.
1879	SELLA . . . . .	Tungstate.	R. Acad. Lincei, 3, 26. Ztschr. Kryst., 3, 631. Jsb. rein. Chem., 1879, 66. Chem. News, 40, 90.
1879	KOPP . . . . .	At'mic weight. Isomorphism.	Ber., 1879, 909.
1879	STOLBA . . . . .	Separation of cerium and didymium.	Chem. Centrbl., 1879, 595.
1880	E. F. SMITH . . .	Electrolytic estimation.	Ber., 1880, 754.
1880	MARIGNAC . . . .	Occurrence in samarskite.	Arch. ph. nat. [3], 3, 413. Compt. rend., 90, 899. Ann. chim. phys. [5], 20, 535. Chem. Centrbl., 1880, 356. Jsb. rein. Chem., 1880, 73. Jsb., 1880, 295.
1880	NILSON . . . . .	Occurrence in euxenite and separation.	Ber., 1880, 1430, 1439. Compt. rend., 91, 57. Jsb., 1880, 300.
1880	NILSON and PETERSSON.	Molecul'r heat and volume.	Ber., 1880, 1459. Compt. rend., 91, 232. Jsb., 1880, 237.
1880	PERONI and SCHIAPARELLI.	Occurrence in urine.	Gazz. chim. ital., 10, 390. Jsb., 1880, 1114.
1880	COSSA . . . . .	Occurrence in urine.	Gazz. chim. ital., 10, 465. Ber., 1880, 2414.

Date.	Author.	Remarks.	References.
1880	COSSA . . . . .	Occurrence in urine.	Jsb., 1880, 293.
1880	COSSA . . . . .	Tungstate.	Gazz. chim. ital., 10, 467. Ber., 1881, 107. J. Chem. Soc., 40, 225.
1880	SORET . . . . .	Spectrum.	Jsb., 1880, 293. Compt. rend., 91, 378. Chem. Centrbl., 1880, 662. Jsb., 1880, 210.
1880	SORET . . . . .	Ultra violet absorption spectrum.	Jsb. rein. Chem., 1880, 74. Arch. ph. nat. [3], 4, 261. Jsb., 1880, 214.
1881	CLARKE . . . . .	At'mic weight.	Am. Chem. J., 3, 263. Phil. Mag. [5], 12, 101. Jsb., 1881, 7.
1881	BRAUNER . . . . .	Valency pentoxide.	Chem. Ztg., 1881, 791.
1881	CROOKES . . . . .	Phosphorescence of oxide.	Lond. R. Soc. Proc., 32, 206. Ann. chim. phys. [5], 23, 555. Compt. rend., 92, 1281. Chem. News, 43, 237. Jsb., 1881, 131.
1882	BRAUNER . . . . .	Researches.	Sitzb. Akad., Wien [2], 84, 1165; 86, 168. Monatsh. Chem., 3, 1-60, 486-503. Compt. rend., 94, 1718. Ann. der Phys., Pogg., Beibl., 6, 418. Ber., 1882, 109, 115, 2231. Chem. Centrbl., 1882, 616. Monit. Sc., Quesneville [3], 12, 595, 794. J. Chem. Soc., 41, 68. Chem. News, 46, 16. Jsb., 1882, 283, 285.
1882	CLARKE . . . . .	At'mic weight.	Am. Chem. J., 4, 76.
1882	HARTLEY . . . . .	Separation from cerium.	Chem. News, 45, 40. Chem. Centrbl., 1882, 151.
1882	STOLBA . . . . .	Volumetric estimation.	Chem. Centrbl., 1882, 826. Jsb., 1882, 1286.
1882	BOISBAUDRAN . . . . .	Separation from gallium.	Compt. rend., 94, 1439. Jsb., 1882, 1296.
1882	CLEVE . . . . .	Preliminary note.	Compt. rend., 94, 1528. Monit. Sc., Quesneville, 24, 689. Chem. Centrbl., 1882, 451. Ber., 1882, 1750. Chem. Ztg., 1882, 658.



Date.	Author.	Remarks.	References.
1882	CLEVE . . . . .	Preliminary note.	J. Chem. Soc., 44, 18. Chem. News, 45, 273.
1882	CLEVE . . . . .	At'mic weight.	Compt. rend., 95, 33. Monit. Sc., Quesneville, 1882, 798. Chem. Centrbl., 1882, 616. J. Chem. Soc., 42, 1165. Chem. News, 46, 43.
1883	CLEVE . . . . .	At'mic weight.	Bull. soc. chim. [2], 39, 289. Ber., 1883, 1212. J. Chem. Soc., 44, 852. Chem. News, 47, 203. Jsb., 1883, 37.
1883	CLEVE . . . . .	Separation from samarium.	Compt. rend., 97, 94. Ber., 1883, 2494. J. Chem. Soc., 43, 362. Chem. News, 48, 39, 74. Jsb., 1883, 361.
1883	WELSBACH . . .	Sep'r'tion fr'm other gado-linite earths.	Monatsh. Chem., 4, 630-642.
1883	ARCHE . . . . .	Preparation from cerite.	Monatsh. Chem., 4, 913-925. J. Chem. Soc., 46, 557.
1883	STOLBA . . . . .	Estimation as oxalate.	Chem. Centrbl., 1883, 313.
1883	BEQUEREL . . .	Absorption and emission spectrum.	Compt. rend., 96, 1217. Jsb., 1883, 243.
1883	BRAUNER . . . .	Preparation from cerite.	J. Chem. Soc., 43, 278-289. Monit. Sc. Quesneville [3], 12, 595-625; 13, 160. Ber., 1883, 1860. Jsb., 1883, 354.
1883	J. L. SMITH . . .	Occurrence in samarskite. Estimation by spectroscope.	Am. Chem. J., 5, 80. Chem. News, 48, 13, 29. J. Chem. Soc., 46, 111. Ber., 1883, 1886. Jsb., 1883, 1562.
1883	DEBRAY . . . . .	Separation from cerium.	Compt. rend., 96, 828. Chem. News, 47, 199.
1883	THALEN . . . . .	Spectrum.	Ann. der Phys., Pogg., Beibl., 7, 893. Oefvers. konigl. Vet. Forhandl., v. 7. Ber., 1883, 2760.
1884	HAUSHOFER . . .	Microscopic test.	Ber. bair. akad. Wissensch., 13, 436-448. Jsb., 1884, 1551.

Date.	Author.	Remarks.	References.
1884	ROBINSON . . . .	Separation from cerium and lanthanum.	Lond. R. Soc. Proc., 37, 150. Chem. News, 50, 251. Jsb., 1884, 50.
1884	WELSBACH . . . .	Separation from cerium, lanthanum, and yttrium.	Sitzb. Akad., Wien [2], 90, 337. Monatsh. Chem., 5, 508-522. Jsb., 1884, 395.
1884	COSSA . . . . .	Molybdate. Valency.	Compt. rend., 98, 990. J. prakt. Chem. [2], 29, 383. Ber., 1884, 249. Chem. Centrbl., 1884, 452. J. Chem. Soc., 46, 821. Jsb., 1884, 395.
1884	COSSA . . . . .	Diffusion of didymium.	Gazz. chim. ital., 13, 280. J. Chem. Soc., 46, 262.
1884	CLARKE . . . . .	At'mic weight.	Chem. News, 50, 21. Chem. Ztg., 1884, 1038.
1884	HÖGBOM . . . . .	Tungstate.	Bull. soc. chim. [2], 42, 3.
1884	MARIGNAC . . . .	Equivalent weight.	Arch. ph. nat. [3], 10, 5, 193. Ztschr. anal. Chem., 23, 140. Chem. News, 50, 69.
1885	J. L. SMITH . . . .	Estimat'n separation from other earths.	Chem. News, 51, 289, 304. Ber., 1885, 515. Jsb., 1885, 1932.
1885	LINNEMANN . . . .	Abs'pt'n lines of didy'm in some zircons.	Monatsh. Chem., 6, 533.
1885	WELSBACH . . . .	Decomposit'n into constituents. Researches.	Monatsh. Chem., 6, 477-491. Chem. Centrbl., 1885, 774. Ber., 1885, 605. Chem. Ztg., 1885, 997. J. Chem. Soc., 48, 1113. Chem. News, 52, 49. Jsb., 1885, 478.
1885	CLEVE . . . . .	Oxides.	Bull. soc. chim. [2], 43, 56.
1885	HOOD . . . . .	Absorption spectrum.	Chem. News, 52, 271.
1885	CLEVE . . . . .	Researches.	Bull. soc. chim. [2], 43, 359-366. Chem. News, 52, 227, 255, 264, 278, 291. Ber., 1885, 52, 318. J. Chem. Soc., 48, 1039. Chem. Centrbl., 1886, 69.
1885	LOMPELL . . . . .	Fluorescence.	Ann. der Phys., Pogg. [2], 24, 288. Jsb., 1885, 333.
1885	PICCINI . . . . .	Position in periodic system.	Atti d. Acc. d. Lincei, 1885, 82. Ber., 1885, 255. Jsb., 1885, 359.



Date.	Author.	Remarks.	References.
1886	STROHECKER . .	Occurrence in clays of Hainstadt.	J. prakt. Chem. [2], 33, 133. Chem. News, 53, 136. Jsb., 1886, 407.
1886	CROOKES . . . .	Absorption spectrum.	Lond. Roy. Soc. Proc., 40, 502. Chem. News, 54, 27. Ber., 1886, 652. Jsb., 1886, 308.
1886	DEMARÇAY . . .	Spectrum.	Compt. rend., 102, 1551. Ber., 19, 650. J. Chem. Soc., 50, 837. Chem. News, 54, 36. Jsb., 1886, 311.
1886	MORTON . . . . .	Crystalline form of compounds.	Oefers. königl. Vet. Forhandl., 1885, 189-199. Ztschr. Kryst., 12, 517. Ber., 1886, 388. Jsb., 1886, 402.
1886	HUMPIDGE . . .	Spectrum.	Chem. News, 53, 154.
1886	HARTLEY . . . .	Spectrum.	Chem. News, 53, 179.
1886	COSSA . . . . .	Tungstate and molybdate.	Atti d. Acc. d. Lincei, 1886, 320. Gazz. chim. ital., 16, 284. Compt. rend., 102, 1315. Ber., 1886, 482, 536. J. Chem. Soc., 50, 981. Chem. Centrbl., 1887, 1371. Ztschr. Kryst., 13, 299.
1886	PLAATS . . . . .	At'mic weight.	Ann. chim. phys. [6], 7, 501. Ztschr. anal. Chem., 26, 276.
1887	BAILEY . . . . .	At'mic weight.	J. Chem. Soc., 51, 682. Jsb., 1887, 53.
1887	BECQUEREL . . .	Absorption spectrum.	Compt. rend., 104, 168, 777, 1691. Ber., 1887, 246, 457. Chem. News, 55, 148; 56, 23. J. Chem. Soc., 52, 537, 873. Jsb., 1887, 352.
1887	DEMARÇAY . . .	Absorption spectrum.	Compt. rend., 105, 276. Ber., 1887, 533. J. Chem. Soc., 52, 1008. Chem. News, 56, 114. Jsb., 1887, 353.
1887	KRÜSS and NILSON.	Didymium composed of nine elements.	Ber., 1887, 2134. Chem. News, 56, 166. Jsb., 1887, 474.
1887	BAILEY . . . . .	Absorption spectrum.	Ber., 1887, 2769. Jsb., 1887, 474.
1887	KRÜSS and NILSON.	Occurrence in fergusonite.	Ber., 1887, 1679. Jsb., 1887, 574.

Date.	Author.	Remarks.	References.
1887	WILLGERODT . .	Application as a chloridizing agent.	J. prakt. Chem. [2], 35, 395. Jsb., 1887, 618.
1887	C. M. THOMPSON.	Absorption spectrum of components.	Chem. News, 55, 277.
1887	OUVRARD . . . .	Phosphate.	Compt. rend., 107, 39. Bull. soc. chim. [3], 51, 42. Chem. Centrbl., 1888, 1078.
1888	KIESEWETTER and KRÜSS.	Spectrum.	J. Chem. Soc., 54, 1037. Ber., 1888, 2310, 2320.
1888	. . . . .	Application.	Eng. Mining J., 46, 1.
1889	CROOKES . . . .	Absorption spectrum of components.	Chem. News, 60, 27. J. Chem. Soc., 55, 259.
1889	BETTENDORFF . .	Sep'r'tion fr'm lanthanum.	Ann. Chem., Liebig, 256, 163.
1891	BETTENDORFF . .	Preparation from orthite.	Ann. Chem., Liebig, 263, 164.
1891	KRÜSS . . . . .	Separation from erbium.	Ann. Chem., Liebig, 265, 1-27. Ber., 1891, 700.
1891	GLADSTONE . . .	Molecular refraction of salts.	J. Chem. Soc., 60, 1425. J. Chem. Soc., 59, 595.
1891	BEHRENS . . . .	Microscopic reactions.	Ztschr. anal. Chem., 30, 144.
1891	HARTINGER . . .	Absorption and emission spectrum.	Monatsh. Chem., 12, 362-367.
1891	C. M. THOMPSON.	Didymium from different sources.	Chem. News, 64, 167. Chem. Centrbl., 1891, 792. Ber., 1891, 945.
1892	SCHOTTLÄNDER .	Separation from lanthanum and cerium; spectrum.	Ber., 1892, 378-394, 569-599. Chem. News, 65, 205, 219, 233, 243, 254. Chem. Centrbl., 1892, 661.
1893	KRÜSS . . . . .	Electrolysis of solutions.	Ztschr. anorg. Chem., 3, 60. Chem. Centrbl., 1893, 382. Chem. News, 67, 65. Ber., 1893, 249.
1893	KRÜSS . . . . .	Equivalent.	Ztschr. anorg. Chem., 3, 58. Chem. News, 67, 32, 40. Ber., 1893, 249.
1893	KRÜSS and LOOSE.	Behavior toward pot'ssi'm chromate.	Ztschr. anorg. Chem., 3, 92. Chem. News, 67, 75, 87, 100. Chem. Centrbl., 1893, 462.

Date.	Author.	Remarks.	References.
1893	KRÜSS and LOOSE.	Behavior toward pot'ssi'm chromate.	Ber., 1893, 250.
1893	KRÜSS . . . . .	Behavior toward aniline.	Ztschr. anorg. Chem., 3, 108. Chem. Centrbl., 1893, 462. Ber., 1893, 251.
1893	NORDENSKIÖLD .	Unknown nature of cerite.	J. prakt. Chem., 47, 20. Chem. Centrbl., 1893, 339.
1893	EAKINS . . . . .	Didymium in Texas gadolinite.	Bull. U. S. Geol. Survey, No. 64. Chem. News, 67, 79.



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