U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
WASHINGTON

RADIOMETRY

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Letter Circular LC-635 (Supersedes LC-448)

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RADIOMETRY

Publications by the Staff of the National Bureau of Standards

Contents

I. GENERAL INFORMATION

Some of the publications in this list have appeared in the regular series of publications of the Bureau and others in various scientific and technical journals. Unless specifically stated, papers are not obtainable from the National Bureau of Standards.

Where the price is stated, the publication can be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. The prices quoted are for delivery to addresses in the United States and its territories and possessions and in certain foreign countries which extend the franking privilege. In the case of all other countries, one-third the cost of the publication should be added to cover postage. Remittances should be made either by coupons (obtainable from the Superintendent of Documents in sets of 20 for $1.00 and good until used), or by check or money order payable to the "Superintendent of Documents, Government Printing Office" and sent to him with order.

Publications marked "OP" are out of print, but, in general, may be consulted at technical libraries.

For papers in other scientific or technical journals, the name of the journal or of the organization publishing the article is given in abbreviated form, with the volume number (underscored), page, and year of publication, in the order named. The Bureau can not supply copies of these journals, or reprints from them, and it is unable to furnish information as to their availability or price. They, too, can usually be consulted at technical libraries.

Series letters with serial numbers are used to designate Bureau publications:

S = "Scientific Paper". S1 to S329 are "Reprints" from the "Bulletin of the Bureau of Standards". S330 to S572 were published as "Scientific Papers of the Bureau of Standards". This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

T = "Technologic Paper". T1 to T370. This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" and

the "Journal of Research of the National Bureau of Standards", the latter being the title of this periodical since July 1934 (volume 13, number 1).

C = "Circular".

H = "Handbook".

M = "Miscellaneous Publications".

LC = "Letter Circular", a mimeographed pamphlet obtainable from the National Bureau of Standards without charge.

Circular C24 and supplements giving the complete list of the Bureau's publications (1901-1936), are sold by the Superintendent of Documents for 55 cents. Announcement of new publications is made each month in the Technical News Bulletin which is obtainable by subscription at 50 cents per year.

II. SYNOPSIS OF INVESTIGATIONS

The purpose of the Bureau's investigations in radiometry was to determine the absorptive, emissive and reflective properties of matter, for thermal radiation of wave lengths extending from the extreme ultraviolet through the visible and into the remote infrared spectrum.

The work may be grouped into seven principal subdivisions:

Development and investigation of standard instruments and methods of measuring thermal radiation as applied to problems in astronomy, biology, botany, photochemistry, physiology, psychology and physics; measurement of thermal radiation in absolute value; and evaluation of ultraviolet for use in medicine.

Determination of the fundamental constants of radiation; and development of standards of radiation.

Determination of the (a) absorptive, (b) emissive, and (c) reflective properties of substances for thermal radiation.

Investigation of the thermoelectric and photoelectric properties of materials for use as radiometers.

Investigation of the visibility of radiation; nocturnal radiation; and the photochemical action of ultraviolet radiation.

Investigation of the germicidal and erythematogenic action of ultraviolet radiation; the latter with special reference to dosage intensity meters for use in medicine.

Reports and papers dealing with applications of radiometry to illumination and medicine; preliminary announcements.

Subjoined is a partial list of publications on radiometry, arranged according to the foregoing analysis. The unclassified papers, which usually discuss the practical significance of the work are listed under the periodicals in which they were published. The contributions to the Physical Review are principally abstracts of papers presented before the American Physical Society.

III. INSTRUMENTS AND METHODS OF RADIOMETRY.

1. General Survey

Title	Series	Price
A vacuum radiomicrometer. W.W. Coblentz. Bul. BS 2, 479 (1907).	S46	OP
Instruments and methods used in radiometry, I. W.W. Coblentz. Bul. BS 4, 391 (1908)	S85	OP
Instruments and methods used in radiometry, II. W.W. Coblentz. Bul. BS 9, 7 (1912).	S188	OP
Various modifications of bismuth-silver thermopiles having a continuous absorbing surface. W.W. Coblentz. Bul. BS 11, 131 (1914).	S229	20c
Studies of instruments for measuring radiant energy in absolute value; an absolute thermopile. W.W. Coblentz and W.B. Emerson. Bul. BS 12, 503 (1916).	S261	OP
Sensitivity and magnetic shielding tests of a Thomson galvanometer for use in radiometry. W.W. Coblentz. Bul. BS 13, 423 (1916).	S282	10c
Instruments and methods of radiometry, III, Selective radiometers. W.W. Coblentz. Bul. BS 14, 507 (1918).	S319	OP
Methods for computing and intercomparing radiation data. W.W. Coblentz. Sci. Pap. BS 15, 617 (1920).	S360	OP
A new spectropyrheliometer. W.W. Coblentz and H. Kahler. Sci. Pap. BS 16, 233 (1920).	S378	OP
A portable vacuum thermopile. W.W. Coblentz. Sci. Pap. BS 17, 187 (1921).	S413	5c
Radiometry and invisible signaling; war work of the National Bureau of Standards. Misc. Pub. BS No. 46, 133 and 245 (1921).	M46	OP
A portable ultraviolet intensity meter. W.W. Coblentz and R. Stair. BS J. Research 12, 231 (1934).	RP647	OP

III. INSTRUMENTS AND METHODS OF RADIOMETRY (continued)

1. General Survey

Title	Series	Price
Methods and apparatus used in spectroradiometry, W.W. Coblentz. J. Opt. Soc. Am. June, 1923; Radiology, February, 1928.		
Radiometer Aufstellung für einen Monochromator. W.W. Coblentz and C. Leiss. Zeits. f. Instrum. Künde 34, 14 (1914).		
Spectroscopy. E.C.C. Baly. Review by W.W. Coblentz. J. Am. Chem. Soc. (1912).		
Construction and use of thermopiles, and iron-clad Thomson galvanometers; the analysis of spectral radiation by filter radiometry. W.W. Coblentz. Handbook on "The measurement of radiant energy". Edited by W.E. Forsythe; published by the McGraw-Hill Book Co., New York, 1937.		

2. Stellar and Planetary Radiometry

A comparison of stellar radiometers and radiometric measurements on 110 stars. W.W. Coblentz. Bul. BS 11, 613 (1915).	S244	OP
Radiometer measurements of 110 stars with the Crossley reflector. W.W. Coblentz. Lick Obs. Bul. No. 226 (1915).		
Tests of stellar radiometers and measurements of the energy distribution of 16 stars. W.W. Coblentz. Sci. Pap. BS 17, 725 (1922).	S438	10c
Further tests of stellar radiometers and some measurements of planetary radiation. W.W. Coblentz. Sci. Pap. BS 18, 535 (1922).	S460	10c
Temperature estimates of the planet Mars. W.W. Coblentz. Astronom. Nachrichten 224, 362 (1925) and 226, 422 (1926); Sci. Pap. BS 20, 371 (1925).	S512	10c
Further radiometric measurements and temperature estimates of the planet Mars, 1926. W.W. Coblentz and C.O. Lampland. Sci. Pap. BS 22, 237 (1927).	S553	15c
Is there life on other planets. W.W. Coblentz. The Forum. Nov. 1925.		

2. Stellar and planetary Radiometry (continued)

Title	Series	Price
Measurements of solar, sky, nocturnal and stellar radiation. W.W. Coblentz. Glazebrook's Dictionary of Applied Physics 3, 715 (1923).		
Measurements of planetary radiation. W.W. Coblentz and C.O. Lampland. Lowell Obs. Bul. 3, 91 (1925); No. 85.		
Die Ergebnisse der bisherigan Temperaturmessungen des planeten Mars. W.W. Coblentz. Die Naturwissehschaften 15, 62 (1927).		
Radiometric measurements of stellar and planetary temperatures. W.W. Coblentz. Nature 116, 372 and 439 (1925).		
Radiometric determination of the temperature of Mars in 1924. W.W. Coblentz. Nature 116, 472 (1925).		

For additional publications on this subject See also the following periodicals at the end of this circular, viz: Astrophys. J., J. Franklin Inst., Popular Astron. and Proc. Nat. Acad. Sci.

3. The evaluation of Ultraviolet-Radiation for use in Medicine; Ultraviolet Solar Radiation

Data on ultraviolet solar radiation and solarization of window materials. W.W. Coblentz and R. Stair. BS J. Research 3, 629 (1929).	RP113	15c
Measurement of extreme ultraviolet solar radiation by a filter method. W.W. Coblentz and R. Stair. BS J. Research 6, 951 (1931).	RP318	10c
A balanced thermocouple and filter method of ultraviolet radiometry with practical applications. W.W. Coblentz and R. Stair. BS J. Research 7, 723 (1931).	RP370	10c
Tests of a balanced thermocouple and filter radiometer as a standard ultraviolet dosage intensity meter. W.W. Coblentz, R. Stair and J.M. Hogue. BS J. Research 8, 759 (1932).	RP450	5c
Measurements of ultraviolet solar radiation in various localities. W.W. Coblentz, R. Stair and J.M. Hogue. BS J. Research 10, 79 (1933).	RP517	5c
A portable ultraviolet intensity meter, consisting of a balanced amplifier, photoelectric cell and microammeter. W.W. Coblentz and R. Stair. BS J. Research 12, 231 (1934).	RP647	OP

III. INSTRUMENTS AND METHODS OF RADIOMETRY (continued)

3. The Evaluation of Ultraviolet Radiation for use in Medicine; Ultraviolet Solar Radiation. (continued)

Title	Series	Price

Methods of measuring ultraviolet radiation. W.W. Coblentz, Radiology 10, 116 (1928).

Instruments for measuring ultraviolet radiation and the unit of dosage in ultraviolet therapy. W.W. Coblentz. Medical J. and Record 130, 691 (1929). Reprinted in British J. of Radiology 3, 354 (1930).

Choix dúne Unité de Mesure pour les Rayons Ultraviolet Utilisés en Médicine. W.W. Coblentz. Ier Congrès International d' Actinologie, Paris, 1929; Ann. de l'Institut d'Actinologie 4, 8 (1930); Medical J. and Record 130, 691 (1929).

Erythemal and radiometric comparisons of the ultraviolet emitted by various sources as a basis for a specification of the unit of dosage intensity. W.W. Coblentz. IIe Congrès International de la Lumière, Copenhagen, 1932; Comptes-rendus du Congrès, p. 322 (1932).

Considerations relative to the evaluation of ultraviolet radiation in absolute units. W.W. Coblentz. Am. J. Roentgenology and Radium Therapy 33, 793 (1935).

The evaluation of ultraviolet radiation for use in medicine. W.W. Coblentz. Puerto Rico J. Public Health and Tropical Medicine 11, 1 (1935).

Factors affecting ultraviolet solar radiation intensities. W.W. Coblentz and R. Stair. BS J. Research 15, 123 (1935). RP816 5c

Ultraviolet solar intensities in the tropics. W.W. Coblentz. Puerto Rico J. Public Health and Tropical Medicine 11, 23 (1935); J. Research NBS 16, 339 (1936).

Méthode pour determiner la distribution de l'energie dans l'extreme ultraviolet solaire. W.W. Coblentz et R. Stair. Annales l'Institut d'Actinologie 10, 161 (1936).

Evaluation of ultraviolet solar radiation of short wave lengths. W.W. Coblentz and R. Stair. J. Research NBS 16, 315 (1936). RP877 10c

Distribution of energy in the extreme ultraviolet of the solar spectrum. W.W. Coblentz and R. Stair. J. Research NBS 17, 1 (1936). RP899 5c

III. INSTRUMENTS AND METHODS OF RADIOMETRY (continued)

3. The Evaluation of Ultraviolet Radiation for Use in Medicine; Ultraviolet Solar Radiation (continued)

Title	Series	Price
A radiometric method of measuring ultraviolet solar radiation intensities in the stratosphere. W.W. Coblentz and R. Stair. Bul. Amer. Meteorolog. Soc. 18, 345 (1937); Fundamenta Radiologica 1, 12 (1937).		
Physical methods of light dosimetry. W.W. Coblentz. Verhandl. des 3er. Internat. Kongress für Lichtforschung, Wiesbaden, 92 (1936); Fundamenta Radiologica 3, 219 (1938).		
Radiometric measurements of ultraviolet solar intensities in the stratosphere. R. Stair and W.W. Coblentz. J. Research NBS 20, 185 (1938).	RP1075	10c
A precision radio instrument for transitting measurements of ultraviolet solar intensities from unmanned balloons to a ground station. R. Stair. J. Research NBS 22, 295 (1939).	RP1181	5c
Distribution of ozone in the stratosphere. W.W. Coblentz and R. Stair. J. Research NBS 22, 573 (1939).	RP1207	10c
Circulation of ozone in the upper stratosphere. W.W. Coblentz. Bul. Amer. Meteorolog. Soc. 20, 92 (1939).		
A photoelectric cell for measuring ultraviolet solar and sky radiation on a horizontal plane. W.W. Coblentz and R.J. Cashman. Bul. Amer. Meteorolog. Soc. 21, 149 (1940).		
Distribution of ozone in the stratosphere; measurements of 1939 and 1940. W.W. Coblentz and R. Stair. J. Research NBS 26, 161 (1941).	RP1367	5c
Methods and results of ozone measurements over Mount Evans, Colorado. R. Stair and I.F. Hand. Mo. Weather Rev. 67, 331 (1939).		

IV. MEASUREMENT OF RADIATION IN ABSOLUTE UNITS

1. Determination of the Fundamental Constants of Radiation

Title	Series	Price
The constants of spectral radiation of a uniformly heated enclosure or so-called black body, I. W.W. Coblentz. Bul. BS 10, 1 (1913).	S204	10c
Constant of total radiation. W.W. Coblentz and W.B. Emerson. Bul. BS 12, 503 (1916)	S261	OP
Present status of the determination of the constant of total radiation from a black body. W.W. Coblentz. Bul. BS 12, 553 (1916).	S262	OP
Constants of spectral radiation of a uniformly heated enclosure or so-called black body, II. W.W. Coblentz. Bul. BS 13, 459 (1916).	S284	OP
The mechanical equivalent of light. W.W. Coblentz and W.B. Emerson. Bul. BS 14, 255 (1917).	S305	OP
Constants of radiation of a uniformly heated enclosure. W.W. Coblentz. Sci. Pap. BS 15, 529 (1920).	S357	OP
Present status of the constants and verifications of the laws of thermal radiation of a uniformly heated enclosure. W.W. Coblentz. Sci. Pap. BS 17, 8 (1920); also in Jahrbuch Radioakt. u. Elektronik, July 1913.	S406	10c
The mehcnical equivalent of light. H.E. Ives, W.W. Coblentz, and F.E. Kingsbury. Phys. Rev., N.S., 5, 259 (1915).		
Present status of the radiation constants. W.W. Coblentz. Trans. Amer. Inst. Mining and Metallurg. Eng., Bul. No. 152, August, 1919.		
Calculation of Planck's constant, C_2 (data by Coblentz). J.H. Dellinger. Bul. BS 13, 535 (1917).	S287	OP

IV. MEASUREMENT OF RADIATION IN ABSOLUTE UNITS (continued)

1. Determination of the Fundamental Constants of Radiation

Title	Series	Price
Calculation of the constants of Planck's radiation equation (data by Coblentz). H.M. Roeser. Bul. BS 14, 237 (1917).	S304	OP
Determination of the radiation constants. W.W. Coblentz. Glazebrook's Dictionary of Applied Physics 2, 541 (1923).		
Radiation constants. W.W. Coblentz. Int. Crit. Tables 5, 237 (1929).		

2. Establishment of Standards of Thermal Radiation

Measurement of standards of radiation in absolute value. W.W. Coblentz. Bul. BS 11, 87 (1914).	S227	5c
The present status of the standards of thermal radiation maintained by the National Bureau of Standards. W.W. Coblentz and R. Stair. BS J. Research 11, 79 (1933).	RP578	5c
A standard source of ultraviolet radiation for calibrating photoelectric dosage intensity meters. W.W. Coblentz and R. Stair. J. Research NBS 16, 83 (1936).	RP858	5c
Interlaboratory measurement and evaluation of ultraviolet radiation; report of IES Subcommittee. Trans. Illum. Eng. Soc. 28, 684 (1933).		

V. DETERMINATION OF THE ABSORPTIVE, EMISSIVE AND REFLECTIVE PROPERTIES OF MATERIALS

1. General Survey

Investigations of infra-red spectra; Part I, absorption spectra; Part II, emission spectra. W.W. Coblentz. Pub. No. 35, Carnegie Institution of Washington, 1905.

Investigations of infra-red spectra: Part III, transmission spectra; Part IV, reflection spectra. W.W. Coblentz. Pub. No. 65, Carnegie Institution of Washington, 1906.

V. DETERMINATION OF THE ABSORPTIVE, EMISSIVE AND REFLECTIBE PROPERTIES OF MATERIALS (continued)

1. General Survey

Title	Series	Price
Investigation of infra-red spectra: Part V, reflection spectra; Part VI, transmission spectra, Part VII, emission spectra. W.W. Coblentz. Pub. No. 97, Carnegie Institution of Washington, 1908.		
A physical study of the fire fly. W.W. Coblentz. Pub. No. 164, Carnegie Institution of Washington, 1911.		

2. Absorption Spectra: Transparency of Window Glasses to Ultraviolet; Eye-Protective Glasses.

Some optical properties of iodine. W.W. Coblentz. Phys. Rev., January, February and July, 1903.		
Radiometric investigation of infra-red absorption and reflection spectra. W.W. Coblentz. Bul. BS 2, 457 (1907).	S45	OP
Radiometric investigation of water of crystallization, light filters and standard absorption bands. W.W. Coblentz. Bul. BS 7, 619 (1911).	S168	OP
Absorption reflection and dispersion constants of quartz. W.W. Coblentz. Bul. BS 11, 471 (1914).	S237	OP
Spectroradiometric investigation of the transmission of various substances, I. W.W. Coblentz, W.B. Emerson and M.B. Long. Bul. BS 14, 653 (1918).	S325	OP
Infra-red transmission and reflection data of standard lens and prism material. W.W. Coblentz. Sci. Pap. BS 16, 701 (1920): also in Glazebrook's Dict. Appl. Phys. 4, 136 (1923).	S401	OP
Spectroradiometric investigation of the transmission of various substances, II. W.W. Coblentz. Sci. Pap. BS 17, 267 (1921).	S418	OP
Glasses for protecting the eyes from injurious radiations. W.W. Coblentz and W.B. Emerson. Tech. Pap. BS No. 93, 1st Ed., 1917; 2nd Ed. 1918; 3rd Ed. 1919.	T93	OP

V. DETERMINATION OF THE ABSORPTIVE, EMISSIVE AND REFLECTIVE PROPERTIES OF MATERIALS (continued)

2. Absorptive Spectra: Transparency of Window Glasses to Ultraviolet: Eye-Protective Glasses (continued)

Title	Series	Price
Transmissive properties of eye protective glasses and other substances. W.W. Coblentz and R. Stair. Tech. Pap. BS 22, 555 (1928).	T369	OP
Some measurements of the transmission of ultraviolet radiation through various fabrics. W.W. Coblentz, R. Stair and C.W. Schoffstall. BS J. Research 1, 105 (1928).	RP6	OP
The Raman spectra of scattered radiation. W.W. Coblentz. Philosoph. Magazine 7, 203 (1929).		
Infrared absorption spectra of some plant pigments. R. Stair and W.W. Coblentz. BS J. Research 11, 703 (1933).	RP617	5c
Infrared absorption spectra of plant and animal tissue and of various other substances. R. Stair and W.W. Coblentz. BS J. Research 15, 295 (1935).	RP830	5c
A non-actinic cobalt-blue glass. W.W. Coblentz and A.N. Finn. J. American Ceramic Society 9, 423 (1926).		
Some light transmissive characteristics of eye glasses. W.W. Coblentz. The Central J. of Homeopathy 5, 597 (1924).		
The transmissive properties of tinted lenses. W.W. Coblentz. American J. of Ophthalmology 15, 932 (1932).		
Summary data on the transmissibility of ultraviolet radiation through glasses and glass substitutes used for therapeutic purposes. W.W. Coblentz. Trans. Nat. Tuberculosis Association, 34th Meeting, p. 71 (1928).		
The status of window materials for transmitting ultraviolet radiation. W.W. Coblentz. Medical J. and Record 131, 596 (1930).		
Ultraviolet transmission changes in glass as a function of the wave length of the radiation stimulus. W.W. Coblentz and R. Stair. J. Research NBS 13, 733 (1934).	RP744	5c

V. DETERMINATION OF THE ABSORPTIVE, EMISSIVE AND REFLECTIVE PROPERTIES OF MATERIALS (continued)

2. Absorptive Spectra: Transparency of Window Glasses to Ultraviolet; Eye-Protective Glasses (continued)

Title	Series	Price
Spectral-transmissive properties and use of colored eye-protective glass. W.W. Coblentz and R. Stair. Circular of the NBS, C421 (June 1, 1938).	C421	10c
Information on ultraviolet transparency of window materials and fabrics.	LC549	Free

3. Emission Spectra: Ultraviolet Lamps

Selective radiation from the Nernst glower. W.W. Coblentz. Bul. BS 4, 533 (1908).	S91	OP
Selective radiation from various solids, I. W.W. Coblentz. Bul. BS 5, 159 (1908).	S97	OP
Radiation constants of metals. W.W. Coblentz. Sci. Pap. BS 5, 339 (1909).	S105	OP
Selective radiation from various solids, II. W.W. Coblentz. Bul. BS 6, 301 (1910).	S131	OP
Ber. über neueren Untersuchungen über Ultrarote Emissions-Spektren. W.W. Coblentz. Jahrb. Radioakt. u. Elektronik, 1910.		
Luminous efficiency of the fire fly. H.E. Ives and W.W. Coblentz. Bul. BS 6, 321 (1910).	S132	OP
The color of the light emitted by lampyridae. W.W. Coblentz. The Canadian Entomologist 43, 355 (1911).		
Selective radiation from various substances, III. W.W. Coblentz. Bul. BS 7, 243 (1911).	S156	OP
Selective radiation from various substances, IV. W.W. Coblentz. Bul. BS 9, 81 (1912).	S191	OP
Comparison of stellar radiometers and radiometric measurements of 110 stars with the Crossley reflector. W.W. Coblentz. Bul. BS 11, 613 (1915); also in Bul. Lick Obs., 1916.	S244	OP

3. Emission Spectra: Ultraviolet Lamps (continued)

Title	Series	Price
Distribution of energy in the visible spectrum of an acetylene flame. W.W. Coblentz and W.B. Emerson. Bul. BS 13, 355 (1916).	S279	OP
Emissivity of straight and helical filaments of tungsten. W.W. Coblentz. Bul. BS 14, 115 (1917).	S300	OP
A new spectropyrheliometer and measurements of the component radiations from a quartz mercury vapor lamp. W.W. Coblentz and H. Kahler. Sci. Pap. BS 16, 233 (1920).	S378	OP
Tests of stellar radiometers and measurements of the energy distribution of 16 stars. W.W. Coblentz. Sci. Pap. BS.17, 725 (1922).	S438	10c
Further tests of stellar radiometers and some measurements of planetary radiation. W.W. Coblentz. Sci. Pap. BS 18, 535 (1922).	S460	10c
Emissive tests of paints for decreasing or increasing heat radiation from surfaces. W.W. Coblentz and C.W. Hughes. Tech. Pap. BS 18, 171 (1924).	T254	OP
Spectral energy distribution of the light emitted by plants and animals. W.W. Coblentz and C.W. Hughes. Sci. Pap. BS 21, 521 (1926).	S538	OP
The decrease in ultraviolet and total radiation with usage of quartz mercury vapor lamps. W.W. Coblentz, M.B. Long and H. Kahler. Sci. Pap. BS 15, 1 (1918).	S330	OP
Effect of solar radiation upon balloons. J.D. Edwards and M.B. Long. Tech Pap. BS 12, June, 1919. (Preliminary by Coblentz and Emerson).	T128	OP
Distribution of energy in the spectrum of an acetylene flame. W.W. Coblentz. Sci. Pap. BS 15, 639 (1920); also J. Frank. Inst.	S362	OP
Radiation constants of a nitrogen-filled tungsten lamp. W.W. Coblentz. Lighting Journal 2, 35 (1914).	-	-

3. Emission Spectra: Ultraviolet Lamps (continued)

Title	Series	Price
Radiometric measurements on the carbon arc and other light sources used in phototherapy. W.W. Coblentz, M.J. Dorcas and C.W. Hughes. Sci. Pap. BS 21, 535 (1926). (Abstract in J. Amer. Med. Assocn. 88, 390 (1927).	S539	OP
Physical characteristics of sources of ultraviolet and infrared used in therapy, W.W. Coblentz. Handbook on Physical Therapy, issued by the Council on Physical Therapy of the Amer. Med. Assocn. 1st Ed., 1932; 2nd Ed., 1935; 3rd Ed., 1939.		
Sources of artificial radiation and their physical properties, W.W. Coblentz. Principles and Practice of Physical Therapy 1, chapter 9, 1931: revised 1932.		
Light therapy-- The physics of ultraviolet and infrared radiation, W.W. Coblentz, Post-Graduate Seminar in Physical Medicine, under the auspices of the Philadelphia County Medical Society and the Pennsylvania Physical Therapy Association, April 18-22, 1932. International Clinics, June and September, 1932.		
Sources and properties of thermal radiation, especially ultraviolet rays, used in phototherapy, W.W. Coblentz, Physical Therapeutics 45, 407 (1927); reprinted in Zs. fur Gesamte Physikalische Therapie 35, 75 (1928).		
Some spectral characteristics of light sources and window materials used in therapy. W.W. Coblentz. Trans. Illum. Eng. Soc., March, 1928.		
Some everyday problems in radiation, W.W. Coblentz. Architecture and Building, September, 1923.		
Emission tests of paints for decreasing and increasing heat radiation from surfaces. W.W. Coblentz. The American Architect 128, 135 (1925).		
The present status of light sources and window materials in therapy. W.W. Coblentz. J. American Institute of Electrical Engineers 48, 397 (1929).		
Thermal radiation from materials and selected sources of radiation. W.W. Coblentz. International Critical Tables 5, 242 (1929).		
Physical characteristics of sources of ultraviolet used in therapy. W.W. Coblentz. Medical Record 150, 103 (1939).		
Radiation from fluorescent lamps. W.W. Coblentz. Tech. News Bul. NBS No. 286 (Feb. 1941).		

4. Reflection Spectra

Title	Series	Price
The reflecting power of various metals. W.W. Coblentz. Bul. BS 7, 197 (1911).	S152	OP
The diffuse reflecting power of various substances. W.W. Coblentz. Bul. BS 9, 283 (1912).	S196	OP
Reflecting power of tungsten and stellite. W.W. Coblentz and W.B. Emerson. Bul. BS 14, 307 (1917).	S308	OP
Reflecting power of stellite and lacquered silver. W.W. Coblentz and H. Kahler. Sci. Pap. BS 15, 215 (1919).	S342	OP
Preparation and reflective properties of some alloys of aluminum with magnesium and zinc. R.G. Waltenberg and W.W. Coblentz. Sci. Pap. BS 15, 653 (1920).	S363	OP
Reflecting power of monel metal, stellite and zinc. W.W. Coblentz. Sci. Pap. BS 16, 249 (1920).	S379	5c
Ultraviolet reflecting power of some metals and sulphides. W.W. Coblentz and C.W. Hughes. Sci. Pap. BS 19, 577 (1924).	S493	OP
Reflecting power of beryllium, chromium and several other metals. W.W. Coblentz and R. Stair. BS J. Research 2, 343 (1929).	RP39	OP
Ultraviolet reflecting power of aluminum and several other metals. W.W. Coblentz and R. Stair. BS J. Research 4, 189 (1930).	RP141	5c
Note on the spectral reflectivity of rhodium. W.W. Coblentz and R. Stair. J. Research NBS 22, 93 (1939).	RP1168	5c
Note on the spectral reflectivity of rhodium. W.W. Coblentz. Pub. Amer. Astron. Soc. 10, 9 (1940).		

VI. THERMOELECTRICAL AND PHOTOELECTRICAL PROPERTIES OF MATERIALS

Title	Series	Price
Thermoelectric properties of tantalum and tantalum and tungsten. W.W. Coblentz. Bul. BS 6, 107 (1909).	S120	OP
Thermoelectric properties of molybdenum. W.W. Coblentz. Bul. BS 7, 220 (1911).	S152	OP
Photoelectric sensitivity of bismuthinite and various other substances. W.W. Coblentz. Bul. BS 14, 591 (1918).	S322	OP
Some optical and photoelectric properties of molybdenite. W.W. Coblentz and H. Kahler. Sci. Pap. BS 15, 121 (1919).	S338	10c
The spectral photoelectric sensitivity of silver sulphide and several other substances. W.W. Coblentz and H. Kahler. Sci. Pap. BS 15, 231 (1919).	S344	OP
Spectrophotoelectric sensitivity of thalofide. W.W. Coblentz. Sci. Pap. BS 16, 253 (1920).	S380	OP
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