



CHEMISTRY

DICTIONARIES

Chemical Dictionary, American and British Usage... Ingo W.D. Hackh. 4th ed. rev. by Julius Grant. New York: McGraw Hill, 1969.

REF QD 5 .H3 1969

Previous editions are titled *Hackh's Chemical Dictionary*. A classic chemical dictionary containing many concise definitions -- still useful.

Concise Chemical and Technical Dictionary. H. Bennett, ed. 4th ed. New York: Chemical Publishing Co, 1986.

REF QD 5 .B4 1986

This dictionary excels in its compilation of thousands of trade names or proprietary products in the synthetic resin, plastic, metal, rubber, textile, food, pharmaceutical and paint fields. Brevity of definition is the rule.

Condensed Chemical Dictionary. rev. by G.G. Hawley. 10th ed. New York: Van Nostrand Reinhold, 1981.

REF QD 5 .C5 1981

A compendium of technical data and descriptive information about many thousands of chemicals and chemical phenomena arranged in a single alphabet. Identifies trademarked products used in chemical industries. Emphasizes environmental and energy consideration.

Dictionary of Chemical Terminology in Five Languages. Dobromia Kryt, ed. New York: Elsevier Scientific Publ. Co., 1980.

REF QD 5 .D49

The main listing is by English, which then presents the German, French, Polish, and Russian terms. Indexes allow one to access the term by any of the non-English languages as well.

Glossary of Chemical Terms. Clifford Hampel and Gessner Hawley. 2nd ed. New York: Van Nostrand Reinhold, 1982.

REF QD 5 .H34 1982

Intended for the beginning student in chemistry. Emphasis is on major chemical classifications, important functional terms, basic phenomena and processes, and chemical elements and compounds. Includes word derivations and common prefixes and suffixes where applicable.

ENCYCLOPEDIAS

Concise Encyclopedia Biochemistry. rev. by Thomas Scott and Mary Eagleson. 2nd ed. New York: De Gruyter, 1988.

REF QD 415 .A25 B713 1988

A specialized encyclopedia of great value, translated from German, with many excellent diagrams.

Encyclopedia of Chemistry. Clifford A. Hampel and G.G. Howley, eds. 3rd ed. New York: Van Nostrand Reinhold, 1973.

REF QD 5 .E38 1973

An outstanding one-volume encyclopedia. Alphabetically arranged with many articles on environmental chemistry and the chemistry of life processes. Some articles contain short bibliographies.

McGraw-Hill Encyclopedia of Science and Technology. 7th ed. 20 vols. New York: McGraw-Hill, 1992.

REF Q 121 .M3 1992

A comprehensive encyclopedia covering all branches of science and technology. Contains signed articles written for the

intelligent layperson. Cross references lead to related topics. Bibliographies follow most articles. Use the index volume for best access.

Van Nostrand Reinhold Encyclopedia of Chemistry. Douglas M. Considine, ed. 4th ed. New York: Van Nostrand Reinhold, 1984.

REF QD 5 .V37 1984

Each of the 1300 alphabetically-arranged articles was prepared by an expert. They are written for the student with a general background in chemistry in mind. Major articles are followed by bibliographic references. A detailed subject index is provided.

GUIDES TO LITERATURE

Chemical Abstracts Service Source Index. 1907-1989. 3 vols. Columbus, Ohio: Chemical Abstracts Service, 1990.

REF DESK QD 1 .A514

An important list of current publications, including journals and other scientific periodicals carrying articles of chemical interest, as well as proceedings of nonrecurring meetings. For each item the full title, authorized abbreviation, frequency, publisher and address, and locations of holdings in more than 300 libraries of the world are given. It is useful not only for determining full titles from abbreviations but also for obtaining information on the publications of scientific organizations.

Chemical Information: A Practical Guide to Utilization. Y. Wolman. 2nd ed. New York: Wiley, 1988.

REF QD 8.5 .W64

Organized by the type of information one is seeking, including a good section on Beilstein.

Guide to Basic Information Sources in Chemistry. Arthur Antony. New York: Wiley, 1979.

REF DESK QD 8.5 .A57 1979.

Chiefly an annotated bibliography of individual sources.

How to Find Chemical Information. Robert Maizell. 2nd ed. New York: Wiley, 1987

REF QD 8.5 .M34 1987

Separate chapters devoted to current awareness programs, Chemical Abstracts Service, patents, inn services, and physical properties of compounds.

Use of the Chemical Literature. R.T. Bottle, ed. 3rd ed. London: Butterworth, 1979.

REF QD 8.5 .B6 1979

A guide to the literature including periodicals, translating and abstracting services, various types of reference works, nomenclature, patent literature, and a full chapter on Beilstein.

INDEXES AND ABSTRACTS

Analytical Abstracts. London: Royal Society of Chemistry, 1954-

For volumes 18-53, 1970-91 - PER QD 71 .A49

For volumes 1-17, 1954-69 - PER COM QD 71 .A49

Includes information on published proceedings of conferences of interest to analytical chemists, as well as abstracts of papers published in journals. Annual author and subject indexes.

Applied Science and Technology Index. New York: H.W. Wilson, 1958-

INDEX TABLE #6A

Journals selected for inclusion represent primarily the applied and engineering sciences and popular trade and society publications in the field.

Chemical Abstracts. Columbus, Ohio: American Chemical Society, 1907-

PER QD 1 .A51

The most comprehensive scientific abstracting service in English. Thousands of journals, patents from all over the world, conference proceedings, reports and monographs are indexed. Issues appear weekly: odd-numbered issues treat organic chemistry, biochemistry, chemical history, education and documentation; even-numbered issues treat inorganic, physical, analytical and polymer chemistry, and chemical engineering. Each issue includes its own indexes, but the semi-annual cumulative indexes provide additional access points, including subject, chemical substance, ring system, formula, and patent

indexes. There are also collective indexes covering 5 or 10 year periods. Truly one of the most important, most comprehensive, and most complex indexes produced.

Chemical Titles. Columbus, Ohio: American Chemical Society, 1960- .

PER QD 1 .C47

An index to titles of articles appearing in nearly 1000 periodicals. Each biweekly issue is in three parts: (1) key words alphabetically arranged down the center of the column; (2) a bibliography listing journals of current papers from selected journals in table of content order; (3) an index of authors. Processed more rapidly than *Chemical Abstracts*, it is used as a current awareness tool.

Science Citation Index. Philadelphia: Institute for Scientific Information, 1961- .

INDEX TABLES #5B-#6A

A unique index, the chief aim of which is to provide access to related articles by indicating sources in which a known article has been cited. Several thousand journals in all the natural sciences are now covered. Published bimonthly with annual accumulations in three major divisions: a source (author) index, a citation index, and a key-word-in-title (subject) index. Five year cumulative sets are provided for the earlier time periods.

DIRECTORIES

Directory of Graduate Research. Washington: American Chemical Society, 1991.

REF QD 21 .D5x

Identifies the faculties, publications and doctoral theses in departments of chemistry, chemical engineering, biochemistry and medicinal chemistry at universities in the United States and Canada. Enables a student to determine where a particular research interest may be pursued.

Industrial Research Laboratories in the United States. Washington, D.C.: National Research Council of the National Academy of Sciences, 1985.

REF T 176 .I65

Presents information on non-government laboratories devoted to basic and applied research. Most laboratories are company-owned but some are university, cooperative or foundation laboratories.

Research Centers Directory. Detroit, MI: Gale Research Co, 1990.

REF Q 180 .U5 R35X

Arranged by broad subject area with detailed subject, institution, and research center indexes.

BIOGRAPHICAL SOURCES

American Men and Women of Science. 17th ed. 8 vols. New York: Bowker, 1990.

REF Q 141 .A47

Gives biographical data for over 100,000 men and women of importance in their fields. Information given usually includes full name, address, field of specialization, place and date of birth, degrees, positions, memberships, and research specializations.

Dictionary of Scientific Biography. C.C. Gillispie, ed. 18 vols. New York: Schribner, 1970-80.

REF Q 141 .D5

Presents scholarly, well-documented information on scientists from all periods ranging from classical antiquity to modern times, except no living scientists are included. Each article is followed by a bibliography.

HANDBOOKS

Beilstein Handbook of Organic Chemistry (Beilstein Handbuch der organischen Chemie). Berlin: Springer-Verlag, 1918-92.

PER QD 251 .B4

This monumental, ongoing compilation, the most important reference work in organic chemistry, provides a comprehensive summary of published data on organic compounds. The main work (Hauptwerk) covers the literature through 1909, and the supplements (Ergaenzungswerk) cover ten or twenty year periods thereafter. All compounds are classified according to structure. Refer to a guide to the literature for detailed explanation.

Due to the cost of this title, the Libraries' subscription ceased in 1992. This database may be searched online.

CRC Atlas of Spectral Data and Physical Constants for Organic Compounds. Cleveland, OH: CRC Press, 1975.

REF QD 257.7 .G7 1975

Contains data for 21,000 compounds. Features include a "Name/Synonym Directory"; a section on nomenclature; structural diagrams; and spectral cross-correlation tables.

CRC Handbook of Chemistry and Physics. Cleveland, OH: CRC Press, annual.

REF DESK QD 65 .H3

The standard ready-reference source for chemical and physical data. Major sections are mathematical tables, elements and inorganic compounds, organic compounds, and general physical constants. Detailed index facilitates access.

The Chemical Formulary. New York: Chemical Pub. Co., 1933-

REF TP 151 .C53

An ongoing compilations of formulations of mixtures and blends of chemicals for household or industrial use, such as cosmetics, detergents, polish, etc. This information is difficult to locate elsewhere.

Chemical Technician's Ready Reference Handbook. 2nd ed. New York: McGraw Hill, 1981.

REF QD 61 .S58 1981

A guide to laboratory procedure for the chemical technician. Clearly written and well illustrated.

Comprehensive Organometallic Compounds. Sir Geoffrey Wilkinson, ed. 9 vols. New York: Pergamon Press, 1982.

REF QD 411 .C65 1982

A handbook to the synthesis, reactions and structure of organometallic compounds. Includes numerous references to the literature and is well indexed.

Dictionary of Inorganic Compounds. J. E. Macintyre, ed. 5 vols. New York: Chapman and Hall, 1992.

REF QD 148 .D53

Newly published counterpart to the *Dictionary of Organic Compounds* described below.

Dictionary of Organic Compounds. J. Buckingham, ed. 7 vols and suppl. New York: Chapman and Hall, 1982.

REF QD 251 .D49 1982

Provides data on 150,000 of the most common organic compounds, including structural formula, properties, derivatives, and bibliographic references. Like a miniature *Beilstein*: easier to use but covers a fraction of the number of compounds.

Gmelins Handbuch der anorganischen Chemie. 8th ed. Berlin: Springer-Verlag, 1924-

PER QD 151.G52

The counterpart to *Beilstein* for inorganic compounds. Arrangement is based on the periodic table, but it is best to consult a guide to chemical literature for full explanation.

Handbook of Organic Chemistry. John Dean. New York: McGraw Hill, 1987.

REF QD 251.2 .D43 1987

This volume is specifically designed to meet the special needs of the organic chemist.

Lange's Handbook of Chemistry. John Dean. 13th ed. New York: McGraw Hill, 1985.

REF QD 65 .L36

This handbook is designed to provide quick access to chemical and physical data used in laboratory work and manufacturing. Arranged by broad subject area with a detailed subject index.

The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals. Susan Budavari, ed. 11th ed. Rahway, NJ: Merck, 1989.

REF DESK RS 51 .M4 1989

Comprehensive, interdisciplinary encyclopedia of chemicals, drugs and biological substances. Provides concise descriptions of the preparation and general properties of compounds, correlating their generic and chemical names with structures, trademarks, and company affiliations.