

The following reference and research sources provide information relevant to the field of chemistry. The resources are available in the Reference Collection, general Stacks or via the Web as indicated. This is not a comprehensive listing.

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Guides to the Literature

Chemical Publications: Their Nature and Use Stacks QD 8.5 .M44 1982
Describes the principle sources for reference and research.

Information Sources in Science and Technology Stacks Q158.5 .H85 1998
Lists, describes, and evaluates important sources of information in chemistry.

Dictionaries and Encyclopedias

Concise Chemical and Technical Dictionary Ref QD 5 .B4 1986
Brief definitions and descriptions are given for scientific terms, chemicals, drugs, and trademark products.

Dictionary of Organic Compounds Ref QD 246 .D5 1996
Entries arranged alphabetically by "DOC Name" entries include synonyms, constitution, physical and chemical properties, use, and bibliographic references. ***The Organic Chemist's Desk Reference*** is a companion volume.

Encyclopedia of the Chemical Elements Ref QD 466 .H295
Each of the elements listed is discussed in terms of its history, prevalence, sources, physical and chemical properties, applications, compounds, and biological and biochemical aspects.

Hawley's Condensed Chemical Dictionary Ref QD 5 .C5 2007
A compilation of technical data and descriptive information covering thousands of chemicals and chemical phenomena, trade name products, processes, reactions, products, and related terminology.

McGraw-Hill Dictionary of Scientific and Technical Terms Ref Q 123 .M15 2003
Terms from science, engineering, and technology. Also available online in the [xreferplus](#) database.

McGraw-Hill Encyclopedia of Science and Technology Ref Q 121 .M3 2002
Provides an authoritative overview of a subject within the major disciplines of science and technology.

Van Nostrand's Encyclopedia of Chemistry Ref QD 4 .V36 2005
Taking a broad view of chemistry as the central science, the entries also cover related areas in physics, engineering, geology, biology, and agriculture and address such emerging disciplines as green chemistry, supramolecular chemistry, and nanotechnology.

Handbooks Including Data Compilations and Tables

CRC Handbook of Chemistry and Physics Ref QD 65 .H3 Annual
A ready reference book of chemical and physical data.

Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables STACKS QA 47 .A34 1965 [also an electronic resource – search IUCAT and use URL link in the online catalog record]

International Critical Tables of Numerical Data, Physics, Chemistry, and Technology STACKS Q 199 .N32 [also an electronic resource – search IUCAT and use URL link in the online catalog record]
Online version of the seven volume work originally prepared under the auspices of the International Research Council and the National Academy of Sciences by the National Research Council of the United States of America between 1926-1930.

Lange's Handbook of Chemistry Ref QD 65 .L36 1999
A standard reference source for both students and professional chemists.

Merck Index Ref RS 51 .M4 14th ed 2006
An encyclopedia of chemicals, drugs, and biologicals.

The Organic Chemist's Desk Reference Ref Qd 291 .R46 1995
A companion volume to the **Dictionary of Organic Compounds**.

PubChem [database]
Published by the National Library of Medicine's National Center for Biotechnology Information *PubChem* contains the chemical structures of small organic molecules and information on their biological activities. *PubChem* includes substance information, compound structures, and bioactivity data in three primary databases, *PubChem Substance*, *PubChem Compound*, and *PubChem BioAssay*.

Sax's Dangerous Properties and Industrial Materials Stacks T55.3 .H3 L53 1996
Provides information on health and safety data, regulatory standards, toxicity, carcinogenicity, and physical properties of chemical substances.

Sittig's Handbook of Toxic and Hazardous Chemicals and Carcinogens
Ref RA 1215 .S58 2002
Information on toxic and hazardous chemicals including the molecular formula, common formula, synonyms, CAS registry number, description, permissible exposure limits in air, points of attack, first aid, shipping, fire extinguishing, and disposal method.

Smithsonian Physical Tables [electronic resource – search IUCAT and use URL link in the online catalog record.]

Online version of tables concentrating on a broad scope of common physical and chemical data.

Reaction Sources

[Encyclopedia of Reagents for Organic Synthesis \(e-ROS\)](#) [database]

e-EROS is the online version of the *Encyclopedia of Reagents for Organic Synthesis* which provides a systematic and exhaustive coverage of reagents used in organic chemistry.

Name Reactions and Reagents in Organic Synthesis Stacks QD 291 .M86 2005

This compilation includes entries for the most commonly used and widely known name reactions and reagents in synthetic organic chemistry. The entries contain a basic definition and formula of the reaction, relevant mechanisms, including intermediate steps, proton exchanges, and transition states, experimental data, related reactions, and recent examples of use in the literature.

Biographical Sources

American Men and Women of Science Ref Q141 .A471 16th ed.

A biographical directory of today's leaders in physical, biological, and related sciences. Also available online in the [Gale Virtual Reference Library](#) database.

[Biography Resource Center](#) [database]

Provides full-text biographical information on people from throughout history, around the world, and across all disciplines and subject areas.

Dictionary of Scientific Biography Ref Q 141 .F35

Articles on the professional lives of scientists from all periods of history (though excluding living persons).

The Hutchinson Dictionary of Scientific Biography [electronic resource – part of [xreferplus](#) database]

The dictionary covers all of the major scientists and provides readable reviews of each scientist's early life, career, major discoveries, and significant publications.

Nobel Prize Winners: Chemistry Ref QD 35 .N64 1990

Presents a history and overview of the Nobel Prize in chemistry, followed by biographies of Nobel laureates from 1901-1989. Includes photographs and bibliographies of writing by and about prize winners. For the most recent information go to <http://nobelprize.org/> and search for information about the Nobel Prize in Chemistry.

Notable Twentieth-Century Scientists Ref Q141 .N73 1995

Biographical sketches of 20th century scientists both living and deceased.

Histories

Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures Ref Q124.8 .E53 1997 Includes the history of the scientific, technological, and medical accomplishments of cultures outside the United and Europe.

Science and Its Times: Understanding the Social Significance of Scientific Discovery Ref Q175.46 .S35 2000

Discusses the major fields of science from 2000 B.C. to present.

The Wilson Chronology of Science and Technology Ref Q125 .O26 1997

A timeline of scientific progress arranged by year and within each year by categories, including chemistry.

Directories

[DGRweb](#) [electronic resource]

A comprehensive source of information on chemical research and researchers at universities in the U. S. and Canada. The search interface allows advanced searches of both faculty and institutions.

Style Manual

The ACS Style Guide: Effective Communication of Scientific Information

Stacks QD 8.5 .A25 2006

The essential desk reference for authors, editors, and publishers of scientific research, this guide is a complete stylistic handbook.

Scientific Style and Format: the CSE Manual for Authors, Editors, and Publishers

Ref T 11 .S386 2006

The Council of Science Editors scientific style guide for science publications which includes discipline-specific practices.

Electronic Databases

For a complete list of database use the Databases A-Z link, for databases specific to a subject area use the [Databases by Subject](#) link and choose the Chemistry, Medicine or the Science link.

[Academic Search Premier](#)

Multi-disciplinary database that indexes and includes full-text to scholarly publications covering academic areas of study including social sciences, humanities, education, computer sciences, engineering, language and linguistics, arts & literature, medical sciences, and ethnic studies.

[ISI Web of Knowledge](#) Web of Science - Science Citation Index

Web of Science citation databases include: *Science Citation Index Expanded*, *Social Sciences Citation Index*, and *Arts & Humanities Citation Index* from 1995 to present.

[MDL CrossFire Commander](#)

MDL CrossFire Commander is a client/server software that provides access to the *Beilstein Handbook of Organic Chemistry* and the *Gmelin Handbook of Inorganic and Organometallic Chemistry*. Between the two handbooks, they cover the entire range of modern chemical knowledge from its beginnings in the 18th century.

[Science.gov](#)

Science.gov is a gateway to authoritative selected science information provided by U.S. Government agencies, including research and development results.

[SciFinder Scholar](#)

A desktop research tool used to locate and process information on a wide variety of chemical and science related topics. *SciFinder Scholar* retrieves information contained in databases produced by Chemical Abstracts Services as well as *MEDLINE*.

Chemistry Related Periodicals

Below is a partial listing of periodicals available in the library that relate to chemistry. Periodicals can be found in four different formats (current, bound, microform, and on the Web). The *Indiana University Kokomo Periodical Holdings List*, must be consulted for complete information. All journal titles are listed in [IUCAT](#). If a journal is available online, [IUCAT](#) will provide a live URL hyperlink. All links labeled "Kokomo" are accessible. Sometimes links not labeled "Kokomo" may also be available.

Annual Review of Biochemistry Stacks QP 501 .A7

Journal of Chemical Education QD 1 .J93

These two databases also provide access to full-text chemical journals and magazines.

[ACS Publications](#) [database]

Full-text chemical journals and magazines published by the American Chemical Society. The current file is 1996 to present, archives is 1879-1996. See the A-Z list to locate individual titles.

Some of the titles included are:

Analytical Chemistry

Chemical Reviews

Inorganic Chemistry

[Wiley Interscience](#) [database]

Full-text for over 300 leading scientific, technical, medical, and professional journals published by John Wiley & Sons. This database allows you to browse by "Subject Area" and then "By Category". Choose Chemistry and then the category within Chemistry, for example: Inorganic Chemistry.

Selected Chemistry Resources on the Web

Go to the [Useful Reference Links](#) on the Indiana University Kokomo Library Web page. Look under Chemistry or Medicine or the Science category dependent on your topic.

**Library of Congress (LC) Classification
Outline and call numbers useful for
Chemistry**

QD 1-999	Chemistry
QD 1-65	General (including alchemy)
QD 71-142	Analytical chemistry
QD 146-197	Inorganic chemistry
QD 241-441	Organic chemistry
QD 415-436	Biochemistry
QD 450-801	Physical and theoretical chemistry
QD 625-655	Radiation chemistry
QD 701-731	Photochemistry
QD 901-999	Crystallography
R – RZ	Medicine
RS	Pharmacy and material medica
TP 1-1185	Chemical Technology