

Library Guide

Mildred F. Sawyer Library
Suffolk University

Chemistry Resource Guide

[Periodical Indexes and Full-Text Databases](#)

[Clearing Houses on the Web](#)

[Journals on the Web](#)

[Education](#)

[Data Sources on the Web](#)

[Selected Print Resources](#)

This guide provides selected information resources on chemistry. For specific book and periodical titles, check the [Suffolk University Library Catalog](#).

Periodical Indexes and Full-Text Databases

SciFinder Scholar (available in the Suffolk University Chemistry Department)

"SciFinder Scholar is a client server application that provides simple point and click access to the CAS databases, Chemical Abstracts and Registry." Contents include: patent and journal references, substance information, chemical reactions, regulated chemicals information, and commercially available substances. A limited number of links to full-text journal articles are available.

[Blackwell Synergy](#)

Blackwell Publishing, Inc. produces this database consisting of the full-text of more than 800 of its scholarly journals including scientific, technical and medical titles. Includes citation searching. Although you can read abstracts of the journal articles, you will not be able to access the full-text of all of the articles in this database.

[SpringerLink](#)

Springer, a major publisher of scientific, technical, and medical books and journals, provides indexing and full-text for about 750 journals in this database. Includes approximately 175 chemistry and biochemistry journals. Not all of the SpringerLink search results are freely accessible but you do have the option of limiting your search to articles that you can access

without paying a fee.

[Wiley InterScience](#)

Chemistry, polymers and materials science journals published by John Wiley & Sons, Inc. are included in this database. Although you can read abstracts of all of the journal articles, you will not be able to access the full-text of all of the articles.

[HighWire Press](#)

<http://www.highwire.org>

Indexing and full-text of over 300 physical, biological, social and medical sciences journals published by Stanford University's High Wire Press. Includes citation searching.

[Academic Search Premier](#)

Indexes and abstracts more than 8,000 journals. Provides full-text for more than 4,500 publications including 3,600 peer-reviewed publications. Publications cover a wide range of academic areas including chemistry, physics, biology, and medical sciences.

[Academic OneFile](#)

Provides indexing and abstracting of more than 8,000 journals and magazines in the social sciences, humanities, and science and technology. Full-text is provided for about two-thirds of the publications.

[Medline](#)

Premier medical database from the National Library of Medicine, with access to over 11 million references and abstracts. Some linked full-text is available.

[Access Science: McGraw-Hill Encyclopedia of Science & Technology Online](#)

Online encyclopedia produced by McGraw-Hill. Browse by topic or alphabetically or search by word or phrase. Includes data, tables, tools, study guides, bibliographies, a dictionary, biographies, and news articles.

Journals on the Web

[American Chemical Society](#)

<http://www.acs.org>

The ACS web site includes the full-text of select ACS journals. To access the journals, select "ACS Publications" from the "choose a page" drop-down menu. The website also provides news releases, conference and meeting information, student chapter information, educational resources, membership information, and more.

[Royal Society of Chemistry](#)

<http://www.rsc.org>

The RCS web site provides full-text for some of their journals and table of contents for the rest of their journals.

[Journal of Biological Chemistry](http://www.jbc.org)

<http://www.jbc.org>

Searchable database of full-text JBC articles from 1905 to the present.

[All that JAS Journal Abbreviation Sources](http://www.public.iastate.edu/~CYBERSTACKS/JAS.htm)

<http://www.public.iastate.edu/~CYBERSTACKS/JAS.htm>

Registry of web resources that list or provide access to the full titles associated with journal abbreviations.

Data Sources on the Web

[Organic Compounds Database](http://www.colby.edu/chemistry/cmp/cmp.html)

<http://www.colby.edu/chemistry/cmp/cmp.html>

Search for physical and spectra data on over two thousand compounds.

[WebElements Periodic Table](http://www.webelements.com)

<http://www.webelements.com>

An interactive web version of the Periodic Table of the Elements. Includes thousands of graphics showing structures and periodic properties of the elements. Also recommended is the National Institute of Standards and Technology (NIST) Physics Laboratory's [Elemental Data Index](#) where you can search for an element, get data for the element, and link to all of the NIST databases in which the element appears.

[NIST Chemistry WebBook](http://webbook.nist.gov/chemistry)

<http://webbook.nist.gov/chemistry>

This database created by the National Institute of Standards and Technology contains thermochemical, thermophysical, and ion energetics data for thousands of chemical compounds. The [NIST Data Gateway](#) page enables you to search NIST databases by keyword, property and substance, and also provides links to free NIST online databases such as the [Atomic Spectra Database](#) and the [Chemical Kinetics Database](#).

[ChemFinder](http://chemfinder.cambridgesoft.com/)

<http://chemfinder.cambridgesoft.com/>

Search the free ChemFinder database by chemical name, CAS number, molecular formula or weight. Information retrieved includes chemical structures and physical properties.

[eMolecules](http://www.emolecules.com/)

<http://www.emolecules.com/>

Search for molecules using a variety of formats such as trade name, formula, and CAS number. In addition to text searches, you can search by drawing chemical structures using drawing packages such as JME, ISIS/Draw, ChemDraw or ChemSketch. Search results include links to more than 140 leading chemical suppliers and reference links to properties and spectra from sources such as DrugBank, National Cancer Institute, and NIST WebBook.

[CODATA Databases](#)

<http://www.codata.org>

The website of the Committee on Data for Science and Technology (CODATA) has a "Resources" section which includes links to its databases such as [Fundamental Constants](#) and [Key Values for Thermodynamics](#).

[BRENDA: the Comprehensive Enzyme Information System](#)

<http://brenda.bc.uni-koeln.de/>

Database of data about 3,500 enzymes. Database is maintained and developed by the University of Cologne.

[ChemBank](#)

<http://chembank.broad.harvard.edu/>

Contains structures for over 500,000 unique molecular entities which may be found by molecular structures, by assay result, by molecular descriptors, by molecule name, by biological function, by search by structural similarity, etc.

[TOXNET](#)

<http://toxnet.nlm.nih.gov/>

TOXNET is The National Library of Medicine's searchable group of databases on toxicology, hazardous chemicals, and related areas. One of these is the [Hazardous Substances Database \(HSDB\) in Toxnet](#) which is a searchable, peer-reviewed data file that deals with the toxicology of potentially hazardous chemicals and consists of over 4,000 individual chemical records.

[Spectral Database System for Organic Compounds \(SDBS\)](#)

http://www.aist.go.jp/RIODB/SDBS/cgi-bin/cre_index.cgi

The National Institute of Advanced Industrial Science and Technology in Tsukuba, Ibaraki, Japan, created and maintains this searchable "integrated spectral database system for organic compounds which includes 6 different types of spectra under a directory database of the compounds."

Clearing Houses on the Web

[WWW Virtual Library: Links for Chemists](#)

<http://www.liv.ac.uk/Chemistry/Links/links.html>

The University of Liverpool Department of Chemistry hosts this virtual library of worldwide chemistry resources including listings of chemistry departments, government research labs, and job postings.

[Intute Chemistry Gateway](http://www.intute.ac.uk/sciences/chemistry/)

<http://www.intute.ac.uk/sciences/chemistry/>

The Intute Chemistry Gateway describes itself as providing "free access to high quality resources on the Internet. Each resource has been evaluated and categorised by subject specialists based at UK universities." Among the topics included are: analytical chemistry; chemistry of materials and environments; inorganic and organic chemistry; and physical chemistry.

[The Sheffield Chemdex](http://www.chemdex.org/)

<http://www.chemdex.org/>

The University of Sheffield in England hosts this directory of chemistry resources on the internet. Some of the categories included are: university departments; learned societies; government agencies and laboratories; companies; and sites addressing specific compounds or molecules.

[ChemWeb](http://www.chemweb.com)

<http://www.chemweb.com>

ChemWeb provides news, conference information, and a career center. Also provides access to abstracts of articles in a range of online journals, to pay-per-view and free databases including a free Beilstein Abstracts, and to chemistry preprints. Free membership.

[SciCentral](http://www.scicentral.com)

<http://www.scicentral.com>

SciCentral is a portal to science information. It includes web-based chemistry resources such as directories, databases, journals, research news, reports, conferences, and companies.

[INFOMINE: Physical Sciences, Engineering, Computing & Math](http://infomine.ucr.edu/cgi-bin/search?physci/)

<http://infomine.ucr.edu/cgi-bin/search?physci/>

Self-described as "a virtual library, INFOMINE is notable for its collection of annotated and indexed links." INFOMINE can be used to locate links to university-level, scholarly sources such as e-journals, conference proceedings, and databases. You can limit your search to freely accessible sources, fee-based sources, or both.

[Scirus](http://scirus.com/)

<http://scirus.com/>

Elsevier Science publisher claims that its Scirus web site provides the "most comprehensive science specific search engine on the Internet. Scirus searches web pages (e.g. university and society web sites) as well as journals (e.g. IDEAL full text articles, chemistry preprints). Searches can be limited to chemistry, chemical engineering, and biosciences sources.

Education

[Academic Chemistry Departments in the United States of America](#)

<http://www.library.ucsb.edu/subjects/chem/chemuniv.html>

The University of California Santa Barbara (UCSB) Libraries' list contains links to the webpages of chemistry and biochemistry departments at four-year academic institutions in the United States.

[Academic Chemistry Departments Outside the United States of America](#)

<http://www.library.ucsb.edu/subjects/chem/chemuni2.html>

The UCSB Libraries' list contains links to the webpages of chemistry and biochemistry departments at universities outside the United States.

Selected Print Resources

Encyclopedias

[World of Chemistry](#)

REF QD33 .W873 2000

Self-described as containing "over 1,000 entries that provide basic information about chemical terms and concepts, applications of chemistry encountered in everyday life, description of the chemistry behind industrial and commercial products, natural phenomena, and biographical sketches of individuals who have made major contributions to the development of chemical ideas and inventions."

[MacMillan Encyclopedia of Chemistry](#)

REF QD4 .M33 1997

This four volume encyclopedia includes: biographies; concept definitions as well as topic overviews; illustrations of equations, structures and principles; and a list of commonly-used abbreviations and symbols. Articles include cross-references and bibliographies. The entries are arranged alphabetically within the volumes, and volume 4 contains an index to the entire encyclopedia.

[Concise Encyclopedia Biochemistry and Molecular Biology](#)

REF QD415 .A25 B713 1997

This one volume encyclopedia is a source for data in biochemistry, biophysics, molecular biology, and cell biology. It contains more than 4,500 alphabetically arranged entries, and over 1,000 figures, tables, and formulas.

[Encyclopedia of the Elements: Technical Data, History, Processing, Applications](#)

REF QD466 E54 2004

In one volume, this encyclopedia gives information about the elements: facts about the elements;

their occurrence; their discovery and history; uses; techniques for manufacturing metals, alloys and compounds; tools for element identification (e.g. spectral analysis); and the roles of elements in our lives.

[Encyclopedia of Life Sciences](#)

REF QD302.5 .E54 2002

The twenty volumes that constitute the *Encyclopedia* cover ten core areas of the biological sciences including biochemistry. Volume 20 includes: an alphabetical listing of the articles; a subject index; a glossary; a study guide of core introductory articles; and an appendix containing additional reference information.

Handbooks

[CRC Handbook of Chemistry and Physics](#)

REF QD65 .H3 2005-2006

Excellent source of physical and chemical data. Includes large section on mathematical tables and a chapter on chemical nomenclature, terminology, and symbols.

[Lange's Handbook of Chemistry](#)

REF QD65 .L36 2005

Classic handbook of chemistry and physics including facts, data, tables, and illustrations. Includes properties of approximately 4,400 organic and 1,400 inorganic compounds.

[CRC Handbook of Basic Tables for Chemical Analysis](#), 2nd Edition

REF QD78 .B78 2003

Contains tables on chromatography, spectroscopy, electrophoresis, electroanalytical methods, qualitative tests, solution properties, and spectrophotometry.

[Merck Index](#), 14th Edition

REF RS51 .M4 2006

Published by Merck Research Laboratories. Entries cover chemicals, laboratory reagents, drugs and pharmaceuticals, and naturally occurring substances and plants. Includes ring structures and Chemical Abstracts Service registry numbers.

[The Elements](#), 3rd Edition

REF QD466 .E48 1998

Data includes properties of the elements, their history, and their effect on humans.

[Hazardous Chemicals Desk Reference](#), 5th Edition

REF T55.3 .H3 L49 2002

This handbook provides concise summaries of physical properties, standards, and safety profiles for approximately 5,000 hazardous chemicals.

[Hazardous Laboratory Chemicals Disposal Guide](#), 3rd Edition

REF QD64 .A76 2003

Provides concise information about the health hazards, spillage disposal, and waste disposal of chemical compounds.

Dictionaries

[Dictionary of Chemistry](#)

This online dictionary in the [Oxford Reference Online Premium](#) database "covers all the commonly encountered terms in chemistry, including physical chemistry and biochemistry. Clear and concise coverage of laboratory techniques, chemical engineering, and environmental matters, plus entries on such topics as buckminsterfullerene, fullerite, quasicrystal, oscillating reaction, and one-pot synthesis."

[Hawley's Condensed Chemical Dictionary](#), 15th Edition

REF QD5 .C5 2007

A dictionary of chemical terms that includes technical data, descriptive information on chemicals and chemical phenomena and descriptions or identifications of trademarked products.

[Oxford Dictionary of Biochemistry and Molecular Biology](#)

REF QD415 .A25 O94 2000

Provides coverage of terminology that relates to the structures and function of molecular biology and other related areas such as DNA. Includes basic definitions, some diagrams of ring structures, and explanations of some topics in greater depth.