

Las Positas College Library Library Research Guide: Chemistry

REFERENCE SOURCES – Use reference sources for background information, broad overviews and summaries. The reference collection includes general and subject dictionaries and encyclopedias, biographies, directories, almanacs, atlases, etc. Many also contain bibliographies for further research. Reference books cannot be checked out from the library but may be photocopied.

Subject Specific

There are several excellent chemistry reference materials at the LPC library. Here are just a few examples of subject specific materials that you will find of use.

- | | |
|--|---------------------------|
| • <i>Basic Laboratory and Industrial Chemicals</i> | Ref QD64.L53 1993 |
| • <i>Chemical Elements from Carbon to Krypton</i> | Ref QD466.N464 1999 v.1-3 |
| • <i>Chemistry Foundations and Applications</i> | Ref QD4.C48 2004 v.1-4 |
| • <i>CRC Handbook of Chemistry and Physics</i> | Ref QD65.H3 2003-2004 |
| • <i>Hawley's Condensed Chemical Dictionary</i> | Ref QD5.C5 2002 |
| • <i>Lange's Handbook of Chemistry</i> | Ref QD65.L36 1999 |
| • <i>MacMillan Encyclopedia of Chemistry</i> | Ref QD4.M33 1997 v.1-4 |
| • <i>The Merck Index</i> | Ref RS51.M4 2001 |

BOOKS & AUDIOVISUALS – Use the library catalog to find materials in the library. This will show you all the books and audiovisual materials both LPC Library and Chabot library own. You can search for a book, DVD or video by the author, title, subject, or keyword. A subject search allows you to find books about a topic or a person. In *power search* you may also LIMIT your search in many ways, for instance by *type*, “video” or “DVD” to find only those formats.

Examples of subject headings:

- | | |
|---------------------------|------------------------|
| • Chemical elements | • Hazardous substances |
| • Chemical technology | • Organic chemistry |
| • Chemistry | • Organic compounds |
| • Chemistry handbooks | • Physical chemistry |
| • Environmental chemistry | • Spectrum analysis |

PERIODICALS – Periodicals provide in-depth analyses of events and trends, research studies on particular subjects, and professional literature. When conducting research in both the social and physical sciences it is important to know the difference between “popular” periodical literature and more scholarly publications. A good guide to identifying whether your source is from a popular magazine or scholarly journal can be found at Las Positas College: Scholarly Journals or Popular Magazines <http://www.laspositascollege.edu/library/magazines_journals.php>.

Las Positas College subscribes to several journals in the field of chemistry, such as *Chemical Education* and *Chemical & Engineering News*, as well as some popular magazines, like *Science*, *Science News*, and *Scientific American*, which may report on research that is of interest to you. Use the Library Catalog to find the science magazines available in the Library. Use Power Search to search science or chemistry as "word or phrase." Limit your search in the drop down list in "library" to Las Positas College and in "Type" to Periodical.

In addition, you may want to find articles by using an online database. These electronic databases can be accessed in the LPC Library or from home at LPC Library Homepage.

Examples:

Academic Search Premier (EBSCO) – Contains thousands of citations and full-text articles on social, scientific, health, historic, business, and economic, political and global issues, including chemistry, from magazines, journals, and newspapers. Under **Search Options** you can limit your search in order to retrieve materials from peer-reviewed journals or full-text articles.

You can limit your search to a specific journal or magazine. There are titles on the science of the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems, including works on acids, alkalis, explosives, crystallization, dilution, evaporation, fermentation, fire, metals, pharmacy, and solutions. Some of the full-text science/chemistry journals include *Annual Review of Physical Chemistry*, *Canadian Journal of Chemistry*, *Chemical Week*, *Discover*, *Omni*, *Science*, *Science News*, or *Scientific American*.

- Suggestion: Do a subject search for a chemical such as “toluene.” Explore the subdivisions, such as spectra and toxicology or the related terms to expand your search.
- Suggestion: Do a keyword search for “chemical bonds”

Merck Index - Contains 10,955 monographs describing significant chemicals, drugs, and biological substances from the encyclopedia, *Merck Index* (Ref RS51.M4 2001).

- The electronic version includes all of the printed information, and enhances it by allowing rapid searching across all data fields: names and CAS Registry Numbers, physical properties as well as many other attributes. It also allows searching by structure, substructure, similarity, Organic Name Reactions, and Additional Tables.

CQ Researcher – Explores a single “hot” issue in the news in depth each week. Topics from social and teen issues to environment, health, education and science and technology dating back to 1991 are covered.

- Suggestion: Enter “hazardous substances” in the quick search field.

INTERNET RESOURCES – You may want to explore some Internet resources to supplement or enhance your research. Always be cautious of information you find on the Web since the quality of sources varies tremendously on the Internet. It is always a good idea to check the information against another source. As with all information resources, whether in print or on the Internet, you evaluate its quality based on the following criteria:

AccuracyIs it free from mistakes and errors?
AuthorityWhat are the qualifications of the author?
ObjectivityIs there any strong bias?
CurrencyIs the information up-to-date?
CoverageTo what extent is the topic explored?

Examples of Relevant Web Sites:

Go to the Library Guide, *Chemistry, Engineering, & Zoology Internet Sources* listed under **Student Links** on the Library Homepage. Click on “Chemistry” for a list of relevant chemistry resources.

- The links, *Academic Info*, *Chemguide: Helping You to Understand Chemistry*, *Common Molecules*, *General Chemistry Online*, *MEDLINE Plus Drug Information*, or the *Periodic Table of the Elements* are some of the interesting links you may find there.

Use the *Librarians’ Internet Index* (<http://www.lii.org>) to search for other recommended sites.

- Suggestion: Do a keyword search for “chemistry,” “organic chemistry,” “chemical toxicity” or other pertinent terms. Once you find a good site listed, try the subject headings listed below the annotated citation for more information.

CITATION OF SOURCES – Suggestion: keep printouts of your sources, or write out all pertinent information on author, title, publisher, date, or Internet address to identify where you got the information. Follow the format recommended by your instructor or ask a librarian to show you a “style manual.” There is a link to instructions for MLA or APA citations on the LPC Library Homepage: *Citation Style Guides* (<http://www.laspositascollege.edu/library/cited.php>).

The *Citation Style Guides* also lists a scientific style guide, *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers* (Ref T11.S386 1994) and links to online scientific style guides.