➤➤➤➤➤ CHAPTER 14

References

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This chapter presents style conventions for citing references within a manuscript and for listing complete reference citations. Many of the references in the examples were created to illustrate a style point under discussion; they may not be real references.

Citing References in Text

In ACS publications, you may cite references in text in three ways:

1. By superscript numbers, which appear outside the punctuation if the citation applies to a whole sentence or clause.

   Oscillation in the reaction of benzaldehyde with oxygen was reported previously.[3]

2. By italic numbers in parentheses on the line of text and inside the punctuation.

   The mineralization of TCE by a pure culture of a methane-oxidizing organism has been reported (*6*).

3. By author name and year of publication in parentheses inside the punctuation (known as author–date).

   The primary structure of this enzyme has also been determined (Finnegan et al., 2004).

In ACS books, all three of these systems are used, depending on the subject matter and series. Table 14-1 lists the referencing systems used by the ACS journals currently in print.

Table 14-1. ACS Periodicals, with Referencing Style, *CASSI* Abbreviation, and 2006 Volume Number

Name as Registered in the U.S. Patent and Trademark Office	*Referencing Style*[a]	CASSI *Abbreviation*	*2006 Vol.*
Accounts of Chemical Research	1	*Acc. Chem. Res.*	39
ACS Chemical Biology	2	*ACS Chem. Biol.*	1
Analytical Chemistry	1	*Anal. Chem.*	78
review issues	2		
Biochemistry	2	*Biochemistry*	45
Bioconjugate Chemistry	2	*Bioconjugate Chem.*	17
Biomacromolecules	1	*Biomacromolecules*	7
Biotechnology Progress	2	*Biotechnol. Prog.*	22
Chemical & Engineering News		*Chem. Eng. News*	84
Chemical Research in Toxicology	2	*Chem. Res. Toxicol.*	19
Chemical Reviews	1	*Chem. Rev.*	106
Chemistry of Materials	1	*Chem. Mater.*	18
Crystal Growth & Design	1	*Cryst. Growth Des.*	6
Energy & Fuels	1	*Energy Fuels*	20
Environmental Science & Technology	2	*Environ. Sci. Technol.*	40
Industrial & Engineering Chemistry Research	1	*Ind. Eng. Chem. Res.*	45
Inorganic Chemistry	1	*Inorg. Chem.*	45
Journal of Agricultural and Food Chemistry	2	*J. Agric. Food Chem.*	54
Journal of the American Chemical Society	1	*J. Am. Chem. Soc.*	128
Journal of Chemical and Engineering Data	1	*J. Chem. Eng. Data*	51
Journal of Chemical Information and Modeling	1	*J. Chem. Inf. Model.*	46
Journal of Chemical Theory and Computation	1	*J. Chem. Theory Comput.*	2
Journal of Combinatorial Chemistry	1	*J. Comb. Chem.*	8
Journal of Medicinal Chemistry	1	*J. Med. Chem.*	49
Journal of Natural Products	1	*J. Nat. Prod.*	69
The Journal of Organic Chemistry	1	*J. Org. Chem.*	71
The Journal of Physical Chemistry A	1	*J. Phys. Chem. A*	110
The Journal of Physical Chemistry B	1	*J. Phys. Chem. B*	110
Journal of Proteome Research	1	*J. Proteome Res.*	5
Langmuir	1	*Langmuir*	22
Macromolecules	1	*Macromolecules*	39
Molecular Pharmaceutics	1	*Mol. Pharm.*	3
Nano Letters	1	*Nano Lett.*	6
Organic Letters	1	*Org. Lett.*	8
Organic Process Research & Development	1	*Org. Process Res. Dev.*	10
Organometallics	1	*Organometallics*	25

[a]Reference style 1 uses superscript numbers, and 2 uses italic numbers in parentheses on the line of the text.

➤ In all three systems, the author's name may be made part of the sentence. In such cases, in the author–date system, place only the year in parentheses.

> The syntheses described by Fraser[8] take advantage of carbohydrate topology.
>
> Jensen (*3*) reported oscillation in the reaction of benzaldehyde with oxygen.
>
> According to Harris (2003), drug release is controlled by varying the hydrolytic stability of the ester bond.

➤ With numerical reference citations, start with 1 and number consecutively throughout the paper, including references in text and those in tables, figures, and other nontext components. If a reference is repeated, do not give it a new number; use the original reference number.

➤ Whenever authors are named, if a reference has two authors, give both names joined by the word "and". If a reference has more than two authors, give only the first name listed, followed by "et al." Do not use a comma before et al.; always use a period after al.

> Allison and Perez[12]
> Johnson et al. (*12*)
> (O'Brien and Alenno, 2005)
> (Bachrach et al., 2004)

➤ To cite more than one reference by the same principal author and various coauthors in one of the numerical citation systems, use the principal author's name followed by "and co-workers" or "and colleagues".

> Pauling and co-workers[10,11]
> Cram and colleagues (*27–29*)

➤ When citing more than one reference at one place by number in one of the numerical systems, list the numbers in ascending order and separate them by commas (*without* spaces as superscripts, *with* spaces on line), or if they are part of a consecutive series, use an en dash to indicate a range of three or more.

> in the literature[2,5,8]
> were reported[3–5,10]
>
> in the literature (*2, 5, 8*)
> were reported (*3–5, 10*)

➤ When citing more than one reference at one place by the author–date system, list them alphabetically according to the first author's name, followed by a comma and the year. Use a semicolon to separate individual references.

> (Axelrod, 2003; Cobbs and Stolman, 2005; Gerson et al., 2001)

➤ When citing more than one reference by the same author at one place by the author–date system, do not repeat the name. List the name followed by the year of each of the references in ascending order; separate the years by commas. If an author has more than one reference in the same year, add lowercase letters to the years to differentiate them. Add letters to all of the years, for example, 2005a, 2005b, etc., not 2005, 2005a, etc. (The references in the list will need to be listed the same way, for example, 2005a, 2005b.

(Trapani, 2003, 2005; Zillman, 2004)
(Knauth, 2005a, 2005b)
(Fordham, 2004; Fordham and Rizzo, 2004)

➤ Cite the reference in a logical place in the sentence.

recent investigations (cite)
other developments (cite)
was reported (cite)
as described previously (cite)
previous results (cite)
were demonstrated (cite)
a molecular mechanics study (cite)
Marshall and Levitt's approach (cite)
the procedure of Lucas et al. (cite)

Style for Reference Lists

Authors are responsible for the accuracy and completeness of all references. Authors should check all parts of each reference listing against the original document.

A reference must include certain minimum data:

- Periodical references must include the author names, abbreviated journal title, year of publication, volume number (if any), and initial page of cited article (the complete span is better).
- Book references must include the author or editor names, book title, publisher, city of publication, and year of publication.
- For material other than books and journals, sufficient information must be provided so that the source can be identified and located.

In lists, references always end with a period.

Table 14-2 provides sample references for common reference types.

Periodicals

RECOMMENDED FORMATS

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* **Year,** *Volume,* Inclusive Pagination.

Author 1; Author 2; Author 3; etc. *Journal Abbreviation* **Year,** *Volume,* Inclusive Pagination.

The journal *Biochemistry* is an exception. Consult this journal's instructions to authors for the correct format.

Author Name Field

Include all author names in a reference citation. With multiple authors, separate the names from one another by semicolons. Always end the author field with a period (exception: *Biochemistry*). List the names in inverted form: surname first, then first initial, middle initial, and qualifiers (Jr., II). Some publications list the first 10 authors followed by a semicolon and et al.; check the guidelines.

Cotton, F. A.
Basconi, J.; Lin, P. B.
Chandler, J. P., III; Levine, S. M.
Schafer, F. W., Jr.
Fishman, W., II.

Farhataziz. (a single name is uncommon, but does occur; no period in *Biochemistry*)

Inderjit; Fontana, M. J. (the first author has a single name)

Article Title Field

Article titles are not essential in reference citations, but they are considered desirable to highlight the contents of a paper and facilitate location in reference libraries. Some ACS publications include the article title in journal references, and some do not; check the publication itself. Article titles are set in roman type without quotation marks and end with a period (or a question mark if that is part of the title). In ACS journals, capitalization follows that of the original publication; in other publications, the main words are capitalized.

Caruso, R. A.; Susha, A.; Caruso, F. Multilayered Titania, Silica, and Laponite Nanoparticle Coatings on Polystyrene Colloidal Templates and Resulting Inorganic Hollow Spheres. *Chem. Mater.* **2001**, *13*, 400–409.

Journal Abbreviation Field

The journal name is an essential component of a periodical reference citation. Abbreviate the name according to the *Chemical Abstracts Service Source Index*

Table 14-2. Common Types of References with Examples

Reference Type	*See Pages*	*Example*
Print Sources		
Journal article		
with article title	291	Klingler, J. Influence of Pretreatment on Sodium Powder. *Chem. Mater.* **2005,** *17,* 2755–2768.
without article title	291	Klingler, J. *Chem. Mater.* **2005,** *17,* 2755–2768.
Nonscientific magazines and newspapers	299	Squires, S. Falling Short on Nutrients. *The Washington Post,* Oct 4, 2005, p H1.
Books		
without editors	300	Le Couteur, P.; Burreson, J. *Napoleon's Buttons: How 17 Molecules Changed History;* Jeremy P. Tarcher/Putnam: New York, 2003; pp 32–47.
with editors	300	Almlof, J.; Gropen, O. Relativistic Effects in Chemistry. In *Reviews in Computational Chemistry;* Lipkowitz, K. B., Boyd, D. B., Eds.; VCH: New York, 1996; Vol. 8, pp 206–210.
Series publication		
cited as a book	306	Puls, J.; Saake, B. Industrially Isolated Hemicelluloses. In *Hemicelluloses: Science and Technology;* Gatenholm, P., Tenkanen, M., Eds.; ACS Symposium Series 864; American Chemical Society: Washington, DC, 2004; pp 24–37.
cited as a journal	306	Puls, J.; Saake, B. *ACS Symp. Ser.* **2004,** *864,* 24–37.
Meeting or conference, full citation	307–308	Garrone, E.; Ugliengo, P. In *Structure and Reactivity of Surfaces,* Proceedings of the European Conference, Trieste, Italy, Sept 13–20, 1988; Zecchina, A., Cost, G., Morterra, C., Eds.; Elsevier: Amsterdam, 1988.
Theses	309–310	Mäckel, H. Capturing the Spectra of Silicon Solar Cells. Ph.D. Thesis, The Australian National University, December 2004.
Patents	310–311	Sheem, S. K. Low-Cost Fiber Optic Pressure Sensor. U.S. Patent 6,738,537, May 18, 2004.
Government publications, U.S.	311–314	*Agriculture Fact Book 2000;* U.S. Department of Agriculture, U.S. Government Printing Office: Washington, DC, 2000.
Technical reports and bulletins	314	Tschantz, B. A.; Moran, B. M. *Modeling of the Hydrologic Transport of Mercury in the Upper East Fork Poplar Creek (UEFPC) Watershed;* Technical Report for Lockheed Martin Energy Systems: Bethesda, MD, September 2004.
Material Safety Data Sheets	315	*Titanium Dioxide;* MSDS No. T3627; Mallinckrodt Baker: Phillipsburg, NJ, Nov 12, 2003.
Personal communications	315–316	Henscher, L. X. University of Minnesota, Minneapolis, MN. Personal communication, 2001.
Online Periodicals		
Based on print editions	318	Fine, L. Einstein Revisited. *J. Chem. Educ.* [Online] **2005,** *82,* 1601 ff. http://jchemed.chem.wisc.edu/Journal/Issues/2005/Nov/abs1601.html (accessed Oct 15, 2005).
Published in advance of print issue	318–319	Pratt, D. A.; van der Donk, W. A. Theoretical Investigations into the Intermediacy of Chlorinated Vinylcobalamins in the Reductive Dehalogenation of Chlorinated Ethylenes. *J. Am. Chem. Soc.* [Online early access]. DOI: 10.1021/ja047915o. Published Online: Dec 8, 2004. http://pubs.acs.org/cgi-bin/asap.cgi/jacsat/asap/html/ja047915o.html (accessed Dec 8, 2004).

Continued on next page

Table 14-2. Common Types of References with Examples—*Continued*

Reference Type	*See Pages*	*Example*
Retrieved from a database provider	318	Hallet, V. Scanning the Globe for Organic Chemistry. *U.S. News and World Report* [Online], April 19, 2004, p 59. Business Source Premier. http://www.epnet.com/academic/bussourceprem.asp (accessed April 24, 2005).
Published only electronically	319	Zloh, M.; Esposito, D.; Gibbons, W. A. Helical Net Plots and Lipid Favourable Surface Mapping of Transmembrane Helices of Integral Membrane Proteins: Aids to Structure Determination of Integral Membrane Proteins. *Internet J. Chem.* [Online] **2003,** *6*, Article 2. http://www.ijc.com/articles/2003v6/2/ (accessed Oct 13, 2004).
From preprint servers	319	Ward, D. W.; Nelson, K. A. Finite Difference Time Domain (FDTD) Simulations of Electromagnetic Wave Propagation Using a Spreadsheet. 2004, arXiv:physics/0402096. arXiv.org e-Print archive. http://arxiv.org/abs/physics/0402096 (accessed Oct 13, 2004).
Online books		
without editors	319–320	Tour, J. M. *Molecular Electronics: Commercial Insights, Chemistry, Devices, Architecture and Programming* [Online]; World Scientific: River Edge, NJ, 2003; pp 177–180. http://legacy.netlibrary.com/ebook_info.asp?product_id=91422&piclist=19799,20141,20153 (accessed Nov 7, 2004).
with editors	320	Oleksyn, B. J.; Stadnicka, K.; Sliwinski, J. Structural Chemistry of Enamines: A Statistical Approach. In *The Chemistry of Enamines* [Online]; Rappoport, Z., Ed.; The Chemistry of Functional Groups; Patai, S., Rappoport, Z., Series Eds.; Wiley & Sons: New York, 1994; Chapter 2, pp 87–218. http://www3.interscience.wiley.com/cgi-bin/summary/109560980/SUMMARY (accessed April 24, 2005).
Online encyclopedias	320	Alkanolamines from Nitro Alcohols. *Kirk-Othmer Encyclopedia of Chemical Technology* [Online]; Wiley & Sons, Posted March 14, 2003. http://www.mrw.interscience.wiley.com/kirk/articles/alkaboll.a01/frame.html (accessed Nov 7, 2004).
Other Online Sources		
General Web sites	320–321	ACS Publications Division Home Page. http://pubs.acs.org (accessed Nov 7, 2004).
Electronic lists and newsgroups	322	Chemical Information List Server, CHMINF-L@iubvm.ucs.indiana.edu (accessed Oct 13, 2004). Computational Chemistry List, solvent discussion in archived messages of September 2003, chemistry@ccl.net (accessed Nov 10, 2004).
Electronic mail messages	322	Solla, L. R. Cornell University, Ithaca, NY. Personal communication, 2005.
CD-ROMs and DVDs		
periodicals	322	Fleming, S. A.; Jensen, A. W. Substitutent Effects on the Photocleavage of Benzyl–Sulfur Bonds. Observation of the "*Meta*" Effect. *J. Org. Chem.* [CD-ROM] **1996,** *61,* 7044.
books	322–323	*Green Chemistry: Meeting Global Challenges* [DVD]; American Chemical Society: Washington, DC, 2003.

(*CASSI*), and italicize it. One-word journal names are not abbreviated (e.g., *Biochemistry*, *Macromolecules*, *Nature*, *Science*). No punctuation is added to end this field; thus, a period will be there with an abbreviation but not with a spelled-out word.

CASSI and its quarterly supplements provide an extensive list of recommended journal abbreviations. Appendix 14-1 lists *CASSI* abbreviations for more than 1000 of the most commonly cited journals. ACS publication names, their abbreviations, and their volume numbers for 2006 are given in Table 14-1. Note that, in some cases, the word "the" is part of the title.

Sometimes journal names change. Authors should use the abbreviation of the journal title that was in use at the time the article was published. *CASSI* lists the journal titles and the range of years during which the title was being used.

Information Found in *CASSI*

Entries are arranged in *CASSI* alphabetically according to the abbreviated form of the title. Abbreviations are based on the standards of the International Organization for Standardization (ISO). Recommended abbreviations are indicated in boldface type. See Appendix 14-2 for a sample *CASSI* entry with a description of each element in an entry.

Using *CASSI* Abbreviations

➤ The boldface components of the publication title form the abbreviated title. Use a period after each abbreviation, and maintain the punctuation shown in *CASSI*.

J*ournal of* **Polym***er* **Sci***ence***, Part A: Polym***er* **Sci***ence*
J. Polym. Sci., Part A: Polym. Sci.

➤ Maintain the word spacing shown in *CASSI*, except for D.C., N.Y., U.K., U.S., and U.S.A.

Analyst (Cambridge, U.K.)
Anesth. Analg. (Hagerstown, MD, U.S.)
Ann. N.Y. Acad. Sci.
Proc. Natl. Acad. Sci. U.S.A.
Science (Washington, DC, U.S.)

➤ Use a terminal period only if the last word of the periodical title is abbreviated.

Int*ernational* **J***ournal of* **Nanosci***ence*
Int. J. Nanosci. (last word is abbreviated; period is used)

J*ournal of* **Controlled Release**
J. Controlled Release (last word is not abbreviated; no period is used)

➤ If the periodical abbreviation in *CASSI* shows a hyphen with spaces on both sides, change the hyphen to an em dash closed up on each side.

Annu*al* **Tech***nical* **Conf***erence* - **Soc***iety of* **Plast***ics* **Eng***ineers*
Annu. Tech. Conf.—Soc. Plast. Eng.

➤ If a boldface **n** precedes the volume number in *CASSI,* use the abbreviation "No." before the volume number in italics in the entry.

Br*itish* **Med***ical* **J***ournal* … **n6372 1983**
Br. Med. J. **1983,** *No. 6372.*

Include all the information shown for volume in italics, especially for references to government publications and reports.

Los Alamos Nat*ional* **Lab***oratory***, [Rep***ort***] LA (U***nited* **S***tates*) … **LA-14240-SR 2005**
Los Alamos Natl. Lab., [Rep.] LA (U.S.) **2005,** *LA-14240-SR.*

Exceptions to the Rules of *CASSI* Abbreviations

➤ Strict rules for *CASSI* abbreviations can be modified for periodicals whose titles include multiple parts, sections, and series.

ABBREVIATION

Acta Crystallogr., Sect. C: Cryst. Struct. Commun. **2005,** *61,* 99–102.

ACCEPTABLE VARIATION The section title need not be named:

Acta Crystallogr., Sect. C **2005,** *61,* 99–102.

ACCEPTABLE VARIATION The section can be indicated by the volume number:

Acta Crystallogr. **2005,** *C61,* 99–102.

➤ For some periodicals whose *CASSI* abbreviation includes a place of publication, you need not add the place of publication unless its omission would create ambiguity. If *CASSI* lists only one journal with a given main title, there is no ambiguity in omitting the place of publication.

USE	NOT NECESSARILY
Clin. Chem.	*Clin. Chem. (Washington, DC, U.S.)*
Nature	*Nature (London, U.K.)*
Science	*Science (Washington, DC, U.S.)*

In contrast, omission of the place of publication would create ambiguity for different journals having the same main title.

Transition Met. Chem. (Dordrecht, Neth.)
Transition Met. Chem. (N.Y.)

Year of Publication Field

The year of publication is essential information in a periodical citation. The year is set in boldface type, followed by a comma in boldface type.

Publication Volume Field

The volume number is important information and is recommended for all periodical citations; it is essential for publications having more than one volume per year (such as the *Journal of Chemical Physics*). The volume number is set in italic type and is separated from the pagination information by a comma, which is set in italic type.

➤ For periodicals in which each issue begins with page 1, include issue information (either the number or the date) in the publication volume field. Issue information is set in roman type, enclosed in parentheses, and spaced from the volume number, which it directly follows.

ISSUE NUMBER

Mullin, R. *Chem. Eng. News* **2005,** *83* (42), 7.

DATE OF ISSUE

Mullin, R. *Chem. Eng. News* **2005,** *83* (Oct 17), 7.

➤ For publications that have supplements, the following form is recommended.

Taylor, C. W.; Kumar, S. *Eur. J. Cancer* **2005,** *40* (Suppl. 1), 781.
Eur. J. Anaesthesiol. **2005,** *22* (Suppl. S36), 1–35.

➤ For journals that have no volume numbers, include issue numbers, especially when the pagination of each issue begins with page 1. Use the following form. Note that the issue number is not italicized.

Wills, M. R.; Savory, J. *Lancet* **1983,** No. 2, 29.

Pagination Field

Pagination is an essential element of a reference citation. The complete page range is preferable, but initial page numbers are acceptable.

➤ In page spans, use all digits, closed up, with no commas or spaces.

2–15	1376–1382
44–49	2022–2134
103–107	11771–11779

➤ You may also indicate pagination in reference citations by "f" or "ff", which mean "and following" page or pages, respectively. The f or ff is set in roman type and is spaced from the preceding number:

60 f (indicates page 60 and the page following—pages 60 and 61)

60 ff (indicates page 60 and pages following)

58–60 ff (indicates pages 58 through 60 and pages following—essentially the same as 58 ff except that the three pages enumerated contain the most pertinent information and other relevant information is scattered on the rest of the pages)

➤ The pagination field may also include terms such as "and references therein" and similar expressions (especially in references to review articles). This phrase follows the page numbers and is not separated by a comma.

Puskas, J. E.; Chan, S. W. P.; McAuley, K. B.; Shaikh, S.; Kaszas, G. *J. Polym. Sci., Part A: Polym. Chem.* **2005,** *43,* 5394–5413 and references therein.

➤ Some publications use article numbering, rather than page numbering, where each article starts on page 1. Use the article number in the pagination field.

Brosset, C. *Ark. Kemi, Mineral. Geol.* **1945,** *20A,* No. 7.

Use of Punctuation To Indicate Repeating Fields of Information

The choice of what punctuation to use to indicate repeating fields of information depends on whether the publication will appear strictly in print or on the Web. For publications that will appear in both print and on the Web, use the rules for Web publications.

➤ In references that will appear only in print publications, use a semicolon, a comma, or a period to indicate repeating information.

1. Same authors in multiple publications:

   Chauvin, Y.; Gilbert, B.; Guibard, I. *Vib. Spectrosc.* **1991,** *1,* 299–304; *J. Chem. Soc., Chem. Commun.* **1990,** 1715–1716.

2. Same authors in multiple publications, but with letters to separate the references (the semicolon from the previous example is changed to a period):

   (a) Schrock, R. R. *Chem. Commun.* **2003,** 2389. (b) *J. Mol. Catal. A* **2004,** *213,* 21–30.

3. Same authors of multiple articles in the same journal:

   Lu, Y.; Pignatello, J. J. *Environ. Sci. Technol.* **2002,** *36,* 4553–4561; **2004,** *38,* 5853–5862.

When the year and volume are the same:

Clay, S. A.; Koskinen, W. C. *Weed Sci.* **1990,** *38,* 74–80, 262–266.

When the year is the same but the volumes are different:

> Badyal, R.; Fleissner, A. *Chem. Phys.* **2005,** *317,* 73–86; **2005,** *316,* 201–215.

➤ In references that will appear only in Web publications, provide complete references so that the references can be properly linked. If two or more references with the same authors are cited, it is not acceptable to combine them into a single reference.

1. Same authors in multiple publications:

   > Chauvin, Y.; Gilbert, B.; Guibard, I. *Vib. Spectrosc.* **1991,** *1,* 299–304; Chauvin, Y.; Gilbert, B.; Guibard, I. *J. Chem. Soc., Chem. Commun.* **1990,** 1715–1716.

2. Same authors in multiple publications, but with letters to separate the references:

   > (a) Schrock, R. R. *Chem. Commun.* **2003,** 2389. (b) Schrock, R. R. *J. Mol. Catal. A* **2004,** *213,* 21–30.

3. Same authors of multiple articles in the same journal:

   > Lu, Y.; Pignatello, J. J. *Environ. Sci. Technol.* **2002,** *36,* 4553–4561; Lu, Y.; Pignatello, J. J. *Environ. Sci. Technol.* **2004,** *38,* 5853–5862.

The same principle holds no matter what information is being repeated: provide each reference in its entirety. Do not use the Latin terms ibid. (in the same place) or idem (the same).

References to Chemical Abstracts

Use a semicolon to separate the periodical citation from a reference to its abstract (*Chemical Abstracts*).

> Mohamed, A. M.; Hawata, A.; El-Torgoman, M.; El-Kousy, S. M.; Ismail, A. E.; Øgaard Madsen, J.; Søtofte, I.; Senning, A. *Eur. J. Org. Chem.* **2002,** 2039–2045; *Chem. Abstr.* **2003,** *138,* 4195.
>
> Mloston, G.; Majchrazak, A.; Senning, A.; Søtofte, I. *J. Org. Chem.* **2002,** *67,* 5690–5695; *Chem. Abstr.* **2002,** *137,* 201289.

Chemical Abstracts routinely contains more than one abstract per page. The method of distinguishing which abstract was being cited has changed over the years. Three variations are worth noting.

1. The column (two columns per page) in which the abstract occurs followed by a superscript number:

   > *Chem. Abstr.* **1946,** *40,* 4463[8]. (This is the eighth abstract in column 4463.)

2. The column (two columns per page) in which the abstract occurs followed by a letter, either on the line or superscript (generally italic):

Chem. Abstr. **1953,** *47,* 1167*f.* (This is abstract f in column 1167.)
Chem. Abstr. **1947,** *41,* 571^{d}. (This is abstract d in column 571.)

3. The abstract number itself followed by an online letter (roman), often a computer check character:

Chem. Abstr. **1989,** *110,* 8215j. (This is abstract number 8215.)

Special Situations

➤ You may treat Beilstein references as periodical references.

Beilstein, 4th ed. **1950,** *12,* 237.

➤ Cite journals published in a foreign language either by the actual non-English title or by a translated form.

Nippon Ishikai Zasshi or *J. Jpn. Med. Assoc.*
Nouv. J. Chim. or *New J. Chem.*

➤ When citing an article printed in the English translation of a foreign-language journal, include reference to the original article, if possible, and use a semicolon to separate the two citations.

Tarasov, Y. I.; Kochikov, I. V.; Kovtun, D. M.; Vogt, N.; Novosadov, B. K.; Saakyan, A. S. *J. Struct. Chem. (Engl. Transl.)* **2004,** *45* (5), 778–785; *Zh. Strukt. Khim.* **2004,** *45* (5), 822–829.

➤ Separate two or more companion publications with a semicolon.

Clear, J. M.; Kelly, J. M.; O'Connell, C. M.; Vos, J. G. *J. Chem. Res., Miniprint* **2005,** 3038; *J. Chem. Res., Synop.* **2005,** 260.

Nonscientific Magazines and Newspapers

RECOMMENDED FORMAT

Author 1; Author 2; Author 3; etc. Title of Article. *Title of Periodical,* Complete Date, Pagination.

For nonscientific magazines and other periodicals that are not abstracted by Chemical Abstracts Service, give the authors' names in inverted form ending with a period, the article title in roman type with main words capitalized and ending with a period, the full magazine title in italic type followed by a comma in italic type, the complete date of the issue (see pp 160–161 about dates) ending with a comma, and the pagination.

Squires, S. Falling Short on Nutrients. *The Washington Post,* Oct 4, 2005, p H1.

Books

Some ACS publications include the chapter title in book references, and some do not; check the publication itself. Also, consult the instructions to authors in *Biochemistry* for exceptions to the format presented here and elsewhere in this chapter.

RECOMMENDED FORMATS FOR BOOKS WITHOUT EDITORS

Author 1; Author 2; Author 3; etc. Chapter Title. *Book Title,* Edition Number; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination.

Author 1; Author 2; Author 3; etc. *Book Title;* Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination.

When a book has authors and no editors, it means either that the entire book was written by one author or that two or more authors collaborated on the entire book.

Le Couteur, P.; Burreson, J. *Napoleon's Buttons: How 17 Molecules Changed History;* Jeremy P. Tarcher/Putnam: New York, 2003; pp 32–47.

Morris, R. *The Last Sorcerers: The Path from Alchemy to the Periodic Table;* Joseph Henry Press: Washington, DC, 2003; pp 145–158.

RECOMMENDED FORMATS FOR BOOKS WITH EDITORS

Author 1; Author 2; Author 3; etc. Chapter Title. In *Book Title,* Edition Number; Editor 1, Editor 2, etc., Eds.; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination.

Author 1; Author 2; Author 3; etc. In *Book Title,* Edition Number; Editor 1, Editor 2, etc., Eds.; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination.

When a book has editors, it means that different authors wrote various parts of the book independently of each other. The word "In" before the book title indicates that the authors mentioned wrote only a part of the book, not the entire book.

Holbrey, J. D.; Chen, J.; Turner, M. B.; Swatloski, R. P.; Spear, S. K.; Rogers, R. D. Applying Ionic Liquids for Controlled Processing of Polymer Materials. In *Ionic Liquids in Polymer Systems: Solvents, Additives, and Novel Applications;* Brazel, C. S., Rogers, R. D., Eds.; ACS Symposium Series 913; American Chemical Society: Washington, DC, 2005; pp 71–88.

Almlof, J.; Gropen, O. Relativistic Effects in Chemistry. In *Reviews in Computational Chemistry;* Lipkowitz, K. B., Boyd, D. B., Eds.; VCH: New York, 1996; Vol. 8, pp 206–210.

If the book as a whole is being referenced, the author names might not appear.

Ionic Liquids in Polymer Systems: Solvents, Additives, and Novel Applications; Brazel, C. S., Rogers, R. D., Eds.; ACS Symposium Series 913; American Chemical Society: Washington, DC, 2005.

Advances in Inorganic Chemistry and Radiochemistry; Emeléus, H. J., Sharpe, A. G., Eds.; Academic: New York, 2001.

Author Name Field

➤ Separate the names of multiple authors by semicolons, and always end the author field with a period (except in *Biochemistry*). List names in inverted form: surname first, then first initial, middle initial, and qualifiers (Jr., II).

➤ If a book has no primary authors because each chapter was written by a different author, you may place the editor names in the author name field (especially for lists in alphabetical order). Separate editor names by commas, and in this case, the period after the abbreviation Ed. or Eds. terminates the field.

Stocker, J. H., Ed. *Chemistry and Science Fiction;* American Chemical Society: Washington, DC, 1998.

➤ A book might have no named authors because it was compiled by a committee or organization. These books are discussed under the section "Works Written by an Organization or a Committee", p 307.

Chapter Title Field

Chapter titles are not essential, but they are considered desirable components in reference citations because they highlight the contents of a paper and facilitate its location in reference libraries. Chapter titles are set in roman type and end with a period.

Puls, J.; Saake, B. Industrially Isolated Hemicelluloses. In *Hemicelluloses: Science and Technology;* Gatenholm, P., Tenkanen, M., Eds.; ACS Symposium Series 864; American Chemical Society: Washington, DC, 2004; pp 24–37.

Book Title Field

Book titles are essential elements in book reference citations. In general, book titles should not be abbreviated. They are set in italic type and are separated from the next field of the reference by a semicolon, which is set in italic type.

➤ The edition number (in ordinal form) and the abbreviation "ed." follow the book title, set off by an italic comma; they are set in roman type. The edition information is separated from the next field of the reference by a semicolon.

Reagent Chemicals, 10th ed.;

➤ When both authors and editors are given, use the word "In" (set in roman type) immediately before the title of the book to indicate that the cited authors wrote only part of the book.

Hillman, L. W. In *Dye Laser Principles with Applications;* Duarte, F. J., Hillman, L. W., Eds.; Academic: New York, 1990; Chapter 2.

Editor Name Field

For books with editors, list the names of the editors, after title and edition information, in inverted form as described in the section "Author Name Field", separated from one another by commas. The names are denoted as editors by including the abbreviation "Eds." or "Ed." after the final name. The editor field is set in roman type and ends with a semicolon (unless it is used in the author field location).

Lignocellulose Biodegradation; Saha, B. C., Hayashi, K., Eds.; ACS Symposium Series 889; American Chemical Society: Washington, DC, 2004.

The Chemistry of the Atmosphere: Oxidants and Oxidation in the Earth's Atmosphere; Bandy, A. R., Ed.; Royal Society of Chemistry: Cambridge, U.K., 1995.

In books that have no primary authors, the names of the editors may appear in either the author name field (especially for lists in alphabetical order) or the editor name field. When the editor names appear in the author name field, they are separated by commas and the field ends with a period.

Saha, B. C., Hayashi, K., Eds.; *Lignocellulose Biodegradation;* ACS Symposium Series 889; American Chemical Society: Washington, DC, 2004.

Bandy, A. R., Ed. *The Chemistry of the Atmosphere: Oxidants and Oxidation in the Earth's Atmosphere;* Royal Society of Chemistry: Cambridge, U.K., 1995.

Publication Information Field

The name of the publisher, place of publication, and year of publication are essential elements in a book reference.

Name of Publisher

Check the title page, front and back, for the publisher's name and location. Names and addresses of publishers are also listed in *Chemical Abstracts Service Source Index, 1907–2004 Cumulative,* pp 21I–39I.

➤ Generally, do not abbreviate publishers' names.

American Chemical Society, *not* Am. Chem. Soc. *or* ACS
American Ceramic Society, *not* Am. Ceram. Soc.

EXCEPTION You may use well-known acronyms or abbreviations created by the publishers themselves.

AIChE *or* American Institute of Chemical Engineers
ASTM *or* American Society for Testing and Materials
IUPAC *or* International Union of Pure and Applied Chemistry

➤ In some publisher's names, words such as Co., Inc., Publisher, and Press are not essential.

Academic Press: New York *or* Academic: New York

➤ Expanded names are also not essential.

John Wiley & Sons *or* John Wiley *or* Wiley

➤ It is not necessary to repeat the publisher's name for a book compiled by the organization that published it.

CRC Handbook of Chemistry and Physics, 85th ed.; Boca Raton, FL, 2004.

Place of Publication

For the place of publication, give the city and state for U.S. cities or the city and country for all others. The country or state is not needed if the city is considered a major city in the world and could not be confused easily with other cities of the same name (e.g., London, Paris, New York, and Rome). Use the two-letter postal abbreviations (listed in Chapter 10) for states. Spell out names of countries unless they have standard abbreviations, such as U.K. for United Kingdom.

Birmingham, U.K.	Dordrecht, Netherlands	Princeton, NJ
Boca Raton, FL	Elmsford, NY	Springfield, IL
Cambridge, MA	Englewood Cliffs, NJ	Springfield, MA
Cambridge, U.K.	London	Washington, DC
Chichester, U.K.	New York	

Year of Publication

In book references, the year is set in lightface (not bold) roman type, following the place of publication. Terminate the field with a period or with a semicolon if further information is given.

Gould, S. J. *The Structure of Evolutionary Theory;* Belknap Press: Cambridge, MA, 2002.

Kline, R. B. *Principles and Practice of Structural Equation Modeling,* 2nd ed.; Guilford Press: New York, 2004.

Volume and Pagination Field

Volume Information

➤ The volume field contains specific information, such as volume number and chapter number. Use the following abbreviations and spelled-out forms with the capitalization, spelling, and punctuation shown:

Abstract
Chapter

No.
Paper
Part
Vol. (for specific volumes, Vol. 4; Vols. 1, 2; Vols. 1 and 2; Vols. 3–5)
vols. (for a number of volumes, 4 vols.)

Annual Review of Physical Chemistry; Leone, S. R., McDermott, A. E., Paul, A., Eds.; Annual Reviews: Palo Alto, CA, 2005; Vol. 56.

➤ If a volume or part number refers to the volume or part of an entire series of books, this information is placed where a series number would normally appear and not in the volume field for the specific book being cited.

Wiberg, K. In *Investigations of Rates and Mechanisms of Reactions;* Lewis, E. S., Ed.; Techniques of Chemistry, Vol. VI, Part I; Wiley & Sons: New York, 1974; p 764.

➤ If the book or set of books as a whole is the reference, do not include individual volume information.

McGraw-Hill Encyclopedia of Science and Technology, 9th ed.; McGraw-Hill: New York, 2002; 20 vols.

Pagination Information

➤ If you are citing a chapter, the complete page range is best, but initial page numbers are acceptable. Pagination may also be indicated by "f" or "ff" notation (meaning "and following" page or pages, respectively). The f or ff is set in roman type and is spaced from the preceding number. These points are illustrated under the "Pagination Field" heading for periodicals.

➤ Pagination information is set in roman type and ends with a period, except when miscellaneous information follows it, in which case it should end with a semicolon (see the next section). Use the abbreviations "p" and "pp" to indicate single and multiple pages, respectively.

p 57
p 93 f
pp 48–51
pp 30, 52, 76
pp 30, 52, 76 ff
pp 30, 52, and 76
pp 562–569
pp 562–9 (acceptable in journals)
2005; Vol. 2, p 35.
2004; pp 55–61.

➤ If the book as a whole is the reference, page numbers need not be given.

Miscellaneous Information

If you wish to include additional information about a book that is important for the reader to know, you may add it at the end of the reference with or without parentheses, append it to the title in parentheses before the semicolon, or place it between the title and the publisher.

AOCS. *Official Methods and Recommended Practices of the American Oil Chemists' Society;* Link, W. E., Ed.; Champaign, IL, 1958 (revised 1973).

Brown, H. C. *The Nonclassical Ion Problem;* Plenum: New York, 1977; Chapter 5 (with comments by P. v. R. Schleyer).

Otsu, T.; Kinoshita, M. *Experimental Methods of Polymer Synthesis* (in Japanese); Kagakudojin: Kyoto, Japan, 1972; p 72.

Tessier, J. Structure, Synthesis and Physical–Chemical Properties of Deltamethrin. In *Deltamethrin Monograph;* Tessier, J., Ed.; Roussel-Uclaf: Paris, 1982; pp 37–66; translated by B. V. d. G. Walden.

Tessier, J. Structure, Synthesis and Physical–Chemical Properties of Deltamethrin. In *Deltamethrin Monograph;* Tessier, J., Ed.; Walden, B. V. d. G., Translator; Roussel-Uclaf: Paris, 1982.

Volatile Compounds in Foods and Beverages; Maarse, H., Ed.; Marcel Dekker: New York, 1991; see also references therein.

Special Situations

➤ *Organic Syntheses* collective volumes should be treated as books.

Organic Syntheses; Wiley & Sons: New York, Year; Collect. Vol. No., Pagination.

YEAR	COLLECTIVE VOLUME NO.
1941	I
1943	II
1955	III
1963	IV
1973	V
1988	VI
1990	VII
1993	VIII
1998	IX
2004	X

Organic Syntheses, Cumulative Indices for Collective Volumes I–VIII was published in 1995. Beginning with Volume 82, each volume of *Organic Syntheses* is planned to be published online on orgsyn.org in installments about every three months, with printed volumes appearing annually.

➤ For references to the *Kirk-Othmer Encyclopedia*, include the article title followed by a period, similar to the citation of a chapter title.

Chloramines and Bromamines. *Kirk-Othmer Encyclopedia of Chemical Technology,* 4th ed.; Wiley & Sons: New York, 1993; Vol. 4, pp 931–932.

Series Publications

Publications such as book series that are periodical in nature but are not journals may be styled as either books or journals. *CASSI* lists every document abstracted and indexed by the Chemical Abstracts Service; hence, book titles are included and abbreviated. Key words to look for with these types of publications include "Advances", "Methods", "Progress", and "Series".

RECOMMENDED FORMAT FOR CITATION AS A BOOK

Author 1; Author 2; Author 3; etc. In *Title;* Editor 1, Editor 2, Eds.; Series Title and Number; Publisher: Place of Publication, Year; Pagination.

➤ In book format, use the regular citation format for a book reference, but include information pertaining to the series. The series title is spelled out and set in roman type.

Kebarle, P. In *Techniques for the Study of Ion–Molecule Reactions;* Saunders, W., Farrar, J. M., Eds.; Techniques of Chemistry Series 20; Wiley & Sons: New York, 1988; p 125.

Lignocellulose Biodegradation; Saha, B. C., Hayashi, K., Eds.; ACS Symposium Series 889; American Chemical Society: Washington, DC, 2004.

➤ If a volume or part number is given for a series of books instead of a series number, cite this information where a series number would normally appear.

Wiberg, K. In *Investigations of Rates and Mechanisms of Reactions;* Lewis, E. S., Ed.; Techniques of Chemistry, Vol. VI, Part I; Wiley & Sons: New York, 1974; p 764.

➤ As for any book, you may cite specific chapters.

Puls, J.; Saake, B. Industrially Isolated Hemicelluloses. In *Hemicelluloses: Science and Technology;* Gatenholm, P., Tenkanen, M., Eds.; ACS Symposium Series 864; American Chemical Society: Washington, DC, 2004; pp 24–37.

➤ In journal format, the series title is used as a journal title, abbreviated according to *CASSI* and italicized, and the series number is used as a journal volume number.

RECOMMENDED FORMAT FOR CITATION AS A JOURNAL

Author 1; Author 2; Author 3; etc. *Abbreviation* **Year,** *Volume,* Pagination.

Puls, J.; Saake, B. *ACS Symp. Ser.,* **2004,** *864,* 24–37.
Kebarle, P. *Tech. Chem. (N.Y.)* **1988,** *20,* 125.

Works Written by an Organization or a Committee

An organization or a committee may be the author of a book or periodical article. Acronyms for very well known organizations may be used. It is not necessary to repeat the publisher's name for a work compiled by the organization that published it.

BOOK FORMAT

American Chemical Society, Committee on Analytical Reagents. *Reagent Chemicals: Specifications and Procedures,* 10th ed.; Washington, DC, 2006.

World Health Organization. *Pathology and Genetics of Tumours of the Head and Neck;* Albany, NY, 2002; Vol. 9.

PERIODICAL FORMAT

International Union of Pure and Applied Chemistry, Physical Chemistry Division, Commission on Molecular Structure and Spectroscopy. Presentation of Molecular Parameter Values for Infrared and Raman Intensity Measurements. *Pure Appl. Chem.* **1988,** *60,* 1385–1388.

IUPAC. Molecular Absorption Spectroscopy, Ultraviolet and Visible (UV/VIS). *Pure Appl. Chem.* **1988,** *60,* 1449–1460.

Meetings and Conferences

References to work presented at conferences and meetings must be treated on a case-by-case basis. At least three types of citations are possible:

1. Full citations of published abstracts and proceedings. The format resembles that of a book citation.
2. *CASSI* citations of published abstracts and proceedings. The format is that of a periodical citation.
3. References to oral presentations, posters, or demonstrations at technical meetings, possibly accompanied by handouts or brochures. These references contain no publication information.

Full Citations

RECOMMENDED FORMAT

Author 1; Author 2; Author 3; etc. Title of Presentation. In *Title of the Collected Work,* Proceedings of the Name of the Meeting, Location of Meeting, Date of Meeting; Editor 1, Editor 2, etc., Eds.; Publisher: Place of Publication, Year; Abstract Number, Pagination.

The format resembles that of a book citation. The title field, however, includes additional information on the meeting title, location, and dates. The actual title

of the book (collected work) is set in italic type and is separated from the meeting information by a comma. The information on meeting location is set in roman type, but it is not repeated if it is included in the book title. The entire field ends with a semicolon.

Garrone, E.; Ugliengo, P. In *Structure and Reactivity of Surfaces,* Proceedings of the European Conference, Trieste, Italy, Sept 13–20, 1988; Zecchina, A., Cost, G., Morterra, C., Eds.; Elsevier: Amsterdam, 1988.

Abstracts are slightly different in that they usually do not have editors. The word "in" is not used before the book title.

Prasad, A.; Jackson, P. *Abstracts of Papers, Part 2,* 212th National Meeting of the American Chemical Society, Orlando, FL, Aug 25–29, 1996; American Chemical Society: Washington, DC, 1996; PMSE 189.

When the phrase "Proceedings of" is part of the reference, include the publisher and place of publication. When a society sponsors a meeting, the society is assumed to be the publisher. If the place of the meeting and the place of publication are the same, additional publisher and place information is not required. However, many organizations such as the ACS sponsor meetings in various cities.

Harwood, J. S. Direct Detection of Volatile Metabolites Produced by Microorganisms. *Proceedings of the 36th ASMS Conference on Mass Spectrometry and Allied Topics,* San Francisco, CA, June 5–10, 1988.

CASSI *Citations*

Proceedings and abstracts of meetings and conferences are indexed in *CASSI.* The reference format follows that for periodicals.

Abstr. Pap.—Am. Chem. Soc. **1989,** *198.*

CASSI gives the number of a meeting in ordinal form. Convert this number to an italic cardinal number, and use it as the volume number in the citation, unless *CASSI* has already indicated another volume number.

Journal format can be used for references to preprint papers.

Jones, J.; Oferdahl, K. *Natl. Meet.—Am. Chem. Soc., Div. Environ. Chem.* **1989,** *29* (2), ENVR 22 (or Paper 22).

Material That Has No Publication Information

RECOMMENDED FORMATS

Author 1; Author 2; Author 3; etc. Title of Presentation (if any). Presented at Conference Title, Place, Date; Paper Number.

List the data concerning the conference (name, place, and date) separated by commas and followed by a semicolon and the paper number (if any). The entire citation is set in roman type.

Zientek, K. D.; Eyler, J. R. Presented at the 51st ASMS Conference on Mass Spectrometry and Allied Topics, Montreal, Canada, June 8–12, 2003.

Dizman, B.; Elasri, M. O.; Mathias, L. J. Presented at the 227th National Meeting of the American Chemical Society, Anaheim, CA, March 28–April 1, 2004; Paper POLY 229.

Theses

RECOMMENDED FORMATS

Author. Title of Thesis. Level of Thesis, Degree-Granting University, Location of University, Date of Completion.

References to theses should be as specific as practical, including, at a minimum, the degree-granting institution and date.

Chandrakanth, J. S. Effects of Ozone on the Colloidal Stability of Particles Coated with Natural Organic Matter. Ph.D. Dissertation, University of Colorado, Boulder, CO, 1994.

Mäckel, H. Capturing the Spectra of Silicon Solar Cells. Ph.D. Thesis, The Australian National University, December 2004.

Kulamer, T. M.S. Thesis, Princeton University, 2004.

Author Name Field

Cite the name in inverted form: surname first, then first initial, middle initial, and qualifiers (Jr., II). End the field with a period.

Title Field

Thesis titles are not essential, but they are informative. They are set in roman type and end with a period.

Erickson, T. A. Development and Application of Geostatistical Methods to Modeling Spatial Variation in Snowpack Properties, Front Range, Colorado. Ph.D. Dissertation, University of Colorado, Boulder, CO, 2004.

Moore, S. Synthesis and Pharmacology of Potential Site-Directed Therapeutic Agents for Cocaine Abuse. Ph.D. Thesis, Georgia Institute of Technology, Atlanta, GA, 2004.

Thesis Level Field

Work done at a master's level is often called a thesis. Work toward the Ph.D. (doctor of philosophy) may be called a thesis or a dissertation, depending on the policy of the degree-granting institution. The following abbreviations are standard for U.S. degrees. Many variations exist for degrees from institutions of other countries.

A.B., B.A., B.S.
A.M., M.A., M.S., M.B.A.
Ph.D., M.D.

Coghill, S. M.S. Thesis, Northwestern University, Evanston, IL, 2004.
Breton, J. C. Intégrales Multiples Stochastiques Poissonniennes. Ph.D. Dissertation, University of Lille, France, 2001.

University Name and Location Field

The name of the degree-granting university is the minimum requirement for an acceptable citation. You should also include the city and state or city and country. Use the two-letter postal abbreviations for states. Spell out names of countries unless they have standard abbreviations, such as U.K. for United Kingdom.

Blättler, T. M. Covalent Immobilization of Poly(L-lysine)-*g*-poly(ethylene glycol) onto Aldehyde Plasma Polymer Coated Surfaces. Diploma Thesis, University of South Australia, 2004.
Mohamed, M. Waterjet Cutting Up to 900 MPa. Ph.D. Thesis, University of Hannover, Germany, 2004.

Date of Completion Field

Indicate the date the thesis was completed by year only; month and year; or month, day, and year.

Fleissner, C. Ph.D. Thesis, New York University, March 2003.
Marshall, M. Ph.D. Thesis, University of California, San Francisco, CA, 2005.
Stover, J. Ph.D. Dissertation, Harvard University, May 24, 2001.

Patents

RECOMMENDED FORMAT

Patent Owner 1; Patent Owner 2; etc. Title of Patent. Patent Number, Date.

The minimum data required for an acceptable citation are the name(s) of the patent owner(s), the patent number, and the date. Ensure that the patent stage (Patent, Patent Application, etc.) is indicated and that the pattern of the number (e.g., spaces, commas, dashes) follows that of the original patent document. If possible, include the title and the *Chemical Abstracts* reference (preceded by a semicolon) as well.

Sheem, S. K. Low-Cost Fiber Optic Pressure Sensor. U.S. Patent 6,738,537, May 18, 2004.
Lenssen, K. C.; Jantscheff, P.; Kiedrowski, G.; Massing, U. Cationic Lipids with Serine Backbone for Transfecting Biological Molecules. Eur. Pat. Appl. 1457483, 2004.

Petrovick, P. R.; Carlini, E. Antiulcerogenic Preparation from *Maytenus ilicifolia* and Obtaintion Process. Br. Patent PI 994502, March 6, 1999.

Langhals, H.; Wetzel, F. Perylene Pigments with Metallic Effects. Ger. Offen. DE 10357978.8, Dec 11, 2003; *Chem. Abstr.* **2005,** *143,* 134834.

Shimizu, Y.; Kajiyama, H. (Kanebo, Ltd., Japan; Kanebo Synthetic Fibers, Ltd.). Jpn. Kokai Tokkyo Koho JP 2004176197 A2 20040624, 2004.

Government Publications

Publications of the U.S. government and those of state and local governments can be pamphlets, brochures, books, maps, journals, or almost anything else that can be printed. They may have authors or editors, who may be individuals, offices, or committees, or the author may not be identified. They are published by specific agencies, but they are usually (though not always) available through the Government Printing Office rather than the issuing agency. To enable others to find the publication, the American Library Association suggests that you include as much information as possible in the citation. The following are examples of the most commonly cited types of references.

Publications of Federal Government Agencies

RECOMMENDED FORMAT

Author 1; Author 2; etc. Chapter Title. *Document Title;* Government Publication Number; Publishing Agency: Place of Publication, Year; Pagination.

The format resembles that of a serial publication in book format. Include as much information as possible.

Gebhardt, S. E.; Thomas, R. G. *Nutritive Value of Foods;* Home and Garden Bulletin No. 72; U.S. Department of Agriculture, U.S. Government Printing Office: Washington, DC, 2002.

Agriculture Fact Book 2000; U.S. Department of Agriculture, U.S. Government Printing Office: Washington, DC, 2000.

Dey, A. N.; Bloom, B. *Summary Health Statistics for United States Children: National Health Interview Survey, 2003;* DHHS Publication PHS 2005-1551; Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, U.S. Government Printing Office: Washington, DC, 2005.

ISCORS Assessment of Radioactivity in Sewage Sludge: Modeling To Assess Radiation Doses; NUREG-1783; EPA 832-R-03-002A; DOE/EH-0670; ISCORS Technical Report 2004-03; Interagency Steering Committee on Radiation Standards, Sewage Sludge Subcommittee, U.S. Government Printing Office: Washington, DC, 2005.

Author Name Field

Include all author names. With multiple authors, separate the names from one another by semicolons. Always end the author field with a period. List the names in inverted form: surname first, then first initial, middle initial, and qualifiers (Jr., II). Some publications list the first 10 authors followed by a semicolon and "et al."

Chapter Title Field

Chapter titles are set in roman type and end with a period.

Document Title Field

Treat the formal title of the document as the title of a book. These titles are set in italic type and are separated from the next component of the reference by a semicolon, which is set in italic type.

Government Publication Number Field

The government publication number, also called an agency report number, is important because it is unique to the publication and because some indexing services provide access by these numbers. These numbers (or number–letter combinations) are usually printed somewhere on the cover or title page of the document and are sometimes identified as a "report/accession number". Treat a report number the same as a series number; that is, it follows the book title, ends with a semicolon, and is set in roman type.

Publishing Agency Field

The publishing agency field may take on added complexity in government publications. Often, the office or agency issuing the report as well as the Government Printing Office must be cited. The order is department or agency, administration or office, and finally U.S. Government Printing Office, all separated by commas and set in roman type. The field ends with a colon.

Place of Publication Field

For the U.S. Government Printing Office, it is always Washington, DC. The field ends with a comma preceding the date of publication.

Year of Publication Field

The year of publication is set in roman type and ends with a semicolon if it is followed by pagination information. It ends with a period if it is the last field.

Pagination Field

The page numbers are set in roman type and end with a period, unless miscellaneous material is appended to the reference.

Alternative Format

Government agency references can also be given with *CASSI* abbreviations. In that case, the format is the same as for periodicals.

Thompson, C. R.; Van Atta, G. R.; Bickoff, E. M.; Walter, E. D.; Livingston, A. L.; Guggloz, J. *Tech. Bull.—U.S. Dep. Agric.* **1957,** *No. 1161,* 63–70.

Other Federal Publications

Federal Register

The *Federal Register* is a periodical and is treated as such in citations.

Agency for Toxic Substances and Disease Registry. Update on the Status of the Superfund Substance-Specific Applied Research Program. *Fed Regist.* **2002,** *67,* 4836–4854.

U.S. Food and Drug Administration. Food Labeling: Health Claims and Label Statements for Dietary Supplements. *Fed Regist.* **1999,** *65* (195), 59855–59857.

Code of Federal Regulations

Licensing of Government Owned Inventions. *Code of Federal Regulations,* Part 404, Title 37, 2005.

Labeling Requirements for Pesticides and Devices. *Code of Federal Regulations,* Part 156, Title 40, 1998; *Fed. Regist.* **1998,** *15,* 7.

U.S. Code

The Public Health and Welfare. *U.S. Code,* Section 1396a, Title 42, 2000.

U.S. Laws

Treat the name of the law as a chapter title (roman, terminated with a period). No publisher name is needed. The number and date of the law are separated by a comma. If additional publication information is given, it is preceded by a semicolon.

Domestic Quarantine Notices. *Code of Federal Regulations,* Section 301.10, Title 7, Vol. 5, 2005.

Federal Insecticide, Fungicide, and Rodenticide Act. Public Law 92-516, 1972; *Code of Federal Regulations,* Section 136, Title 7, 1990.

State and Local Government Publications

RECOMMENDED FORMAT

Author 1; Author 2; etc. Chapter Title. *Document Title;* Publication Number or Type; Publishing Agency: Place of Publication, Date; Pagination.

Annual Report 2004: Moving Forward; Santa Barbara County Air Pollution Control District: Santa Barbara, CA, 2005.

Turner, B.; Powell, S.; Miller, N.; Melvin, J. *A Field Study of Fog and Dry Deposition as Sources of Inadvertent Pesticide Residues on Row Crops;* Report of the Environmental Hazard Assessment Program; California Department of Food and Agriculture: Sacramento, CA, November 1989.

Technical Reports and Bulletins

Technical reports and bulletins come in many forms. Examples of some of these have already been presented. Many are in-house publications, and some are government publications. Others are reports of work in progress. The publication itself may include a phrase alluding to its status as a technical report or technical bulletin, but it may also simply be called a report or bulletin. Include whatever information is available, following the format shown for the word "Report", "Report No.", etc. Document titles are set in italic type.

RECOMMENDED FORMAT

Author 1; Author 2; etc. *Title of Report or Bulletin;* Technical Report or Bulletin Number; Publisher: Place of Publication, Date; Pagination.

Tschantz, B. A.; Moran, B. M. *Modeling of the Hydrologic Transport of Mercury in the Upper East Fork Poplar Creek (UEFPC) Watershed;* Technical Report for Lockheed Martin Energy Systems: Bethesda, MD, September 2004.

Fourth DELOS Workshop. Evaluation of Digital Libraries; Final Report to the National Science Foundation on Grant IIS-225626; Hungarian Academy of Sciences: Budapest, 2002.

Data Sets

Data sets are compilations of data, such as spectra or property tables. These data sets are often published serially as loose-leaf services, but the content is not always organized in chapters as in other serial publications. The citation of a serial data set should contain the title of the data set, the publisher, the place of publication, the date of the volume, the data entry number (as opposed to the data value), and the name of the figure or other identifying information. The page number can be included in the citation if page numbers are used in the index of the data set.

References to data retrieved from a stand-alone database should cite the source as a computer program (for example, *MDL CrossFire Commander,* see p 323 f) or as an online reference book (for example, the *Kirk-Othmer Encyclopedia of Chemical Technology,* see p 305 f), with the data entry number or other identifying information included at the end of the citation. Data retrieved from an Internet-based database should cite the source as a Web site (see pp 316 ff). If the data retrieved are calculated data, also cite the software used for calculation (for example, ACD/Labs).

RECOMMENDED FORMAT FOR PRINTED DATA SETS

Title; Publisher: Place of Publication, Date; Data Entry Number, Figure Title or other identifying information.

The Sadtler Standard Spectra: 300 MHz Proton NMR Standards; Bio-Rad, Sadtler Division: Philadelphia, PA, 1994; No. 7640 (1-Chloropentane).

Material Safety Data Sheets

Material Safety Data Sheets (MSDSs) are published by the company that manufactures the material covered on the sheet. Citations should include the title of the data sheet, which is the name of the material; the MSDS number; the manufacturing company; the location of the company; and the date on which the document was released. If the online version was used, the designation "Online" is included in brackets after the MSDS number, and the URL and date accessed are included at the end of the citation.

RECOMMENDED FORMATS

Title; MSDS Number; Manufacturing Company: Location of Company, Date.
Title; MSDS Number [Online]; Manufacturing Company: Location of Company, Date. URL (accessed Month Day, Year).

Titanium Dioxide; MSDS No. T3627; Mallinckrodt Baker: Phillipsburg, NJ, Nov 12, 2003.
Acetic Anhydride; MSDS No. A0338 [Online]; Mallinckrodt Baker: Phillipsburg, NJ, Feb 18, 2003. http://www.jtbaker.com/msds/englishhtml/a0338.htm (accessed Nov 10, 2004).

Unpublished Materials

Material in any stage preceding actual publication falls under this general classification, as do personal communications and work not destined for publication.

RECOMMENDED FORMAT FOR MATERIAL INTENDED FOR PUBLICATION

Author 1; Author 2; etc. Title of Unpublished Work. *Journal Abbreviation,* phrase indicating stage of publication.

Various phrases indicating the stage of publication are acceptable in these references.

➤ For material accepted for publication, use the phrase "in press".

Tang, D.; Rupe, R.; Small, G. J.; Tiede, D. M. *Chem. Phys.,* in press.

➤ For material intended for publication but not yet accepted, use "unpublished work", "submitted for publication", or "to be submitted for publication".

Chatterjee, K.; Visconti, A.; Mirocha, C. J. Deepoxy T-2 Tetraol: A Metabolite of T-2 Toxin Found in Cow Urine. *J. Agric. Food Chem.,* submitted for publication, 2004.

Nokinara, K. Duke University, Durham, NC. Unpublished work, 2003.

As Gordon G. Hammes says in Chapter 1 of this book,

> Occasionally, the attribution of an idea or fact may be to a "private communication" of a colleague or fellow scientist. In such cases, permission must be obtained from the individual in question before the citation is made. Reference to unpublished material should be avoided if possible because it generally will not be available to interested readers.

RECOMMENDED FORMAT FOR MATERIAL NOT INTENDED FOR PUBLICATION

Author. Affiliation, City, State. Phrase describing the material, Year.

Henscher, L. X. University of Minnesota, Minneapolis, MN. Personal communication, 2001.

Heltman, L. R. DuPont. Private communication, 2003.

Wagner, R. L. University of Utah, Salt Lake City, UT. Unpublished work, 2004.

Messages sent by electronic mail are considered personal communications and are referred to as such.

Electronic Sources

Electronic media continue to develop rapidly in content, organization, and presentation of information. The conventions for citing electronic resources are evolving to reflect these changes, but the basic principles of citation remain the same: present enough documentation with enough clarity to establish the identity and authority of the source and direction for locating the reference. The guidelines stress consistency both in presentation of information and in reasons for exceptions.

To date, much of the material available in electronic media corresponds to and/or is modeled after the traditional print-based sources discussed earlier in this chapter and should be cited according to those guidelines as appropriate. However, given the transient nature of electronic sources, it is important to provide additional documentation about the format or online location and the date the source was accessed.

Internet Sources

Internet sources include online editions of traditional sources such as periodicals and books available through Web technology; new collective sites of information, including Internet-based databases using Web, file transfer protocol (FTP),

and Telnet technologies; and electronic mailing lists and mail messages that may or may not use Web interfaces. Each source has an electronic address; for sources using the World Wide Web, this address is called the uniform resource locator (URL). As Web interfaces and supporting technologies evolve, direct addresses of items will often change to reflect new structures. Changing addresses can disrupt access to information sources that may still be available but at new locations and in modified formats. This issue can be resolved locally through use of persistent URLs. A persistent URL remains constant, but the actual location of a source is tracked through a local database that can be updated without disrupting the URL.

Information sources can also be tracked globally through coordinated efforts such as the Digital Object Identifier (DOI) system. Information providers register their sources, which are assigned unique and persistent DOIs. Each DOI is similar to a barcode that manages a complex profile of multiple pieces, formats, locations, ownership rights, and interoperability features. The identity of and access to an electronic information source is maintained through its DOI regardless of changes in location, format, or publisher. The use of DOIs is spreading among publishers as an efficient system to manage journal articles and other types of intellectual property on the Web. Further information about the DOI system can be found at http://www.doi.org (accessed April 13, 2005).

CrossRef is an application of the DOI system that links online citations across publishers. The unique identification and persistent location information in the DOI is packaged into an open URL that publishers and libraries can use to link to subscribed full-text content from reference lists. These links appear with citations in the reference lists of online articles and databases from several participating publishers.

For the purposes of citation, reference style conventions continue to use the URL as the most direct route to the location of a source. DOIs are sometimes used by publishers in place of page numbers or article numbers and should be included in citations in this context.

➤ URLs can be long and complicated, and there are conventions for splitting an address between multiple lines; see Chapter 10 (pp 156–157) for guidelines on breaking URLs and e-mail addresses.

Online Periodicals

There are several types of periodicals online, including those based on print editions, electronic copies retrieved from databases, articles released online in advance of a full print issue, periodicals published only in electronic format, and article preprints posted in preprint servers. The reference styles for periodicals apply, with additional information concerning online location and accession date assigned as needed. As for print periodicals, article titles are desirable but not included in all ACS publications; check the publication itself.

RECOMMENDED FORMAT FOR ONLINE PERIODICALS BASED ON PRINT EDITIONS

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [Online] **Year,** *Volume,* Inclusive pagination or other identifying information. URL (accessed Month Day, Year).

Currently, the majority of the articles retrieved from online publications are based on corresponding print versions. For these articles, the basic periodical reference style is used, but if the article has been viewed only in its electronic form, the designation "Online" is included in brackets after the journal abbreviation.

Fine, L. Einstein Revisited. *J. Chem. Educ.* [Online] **2005,** *82,* 1601 ff. http://jchemed.chem.wisc.edu/Journal/Issues/2005/Nov/abs1601.html (accessed Oct 15, 2005).

RECOMMENDED FORMATS FOR ELECTRONIC COPIES OF ARTICLES RETRIEVED FROM A DATABASE PROVIDER

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [Online] **Year,** *Volume,* Article Number or other identifying information. Database Provider. URL of top page (accessed Month Day, Year).

Author 1; Author 2; Author 3; etc. Title of Article. *Title of Periodical* [Online], Complete Date, Pagination. Database Provider. URL of top page (accessed Month Day, Year).

Electronic copies of periodicals, nonscientific magazines, or newspapers retrieved from subscription database services often provide only the original text but not the original formatting or the figures. For online articles provided as content in a subscription database, use the reference style for periodicals or nonscientific magazines as appropriate, and include the name of the database provider, the URL of the top page, and the date accessed.

Hallet, V. Scanning the Globe for Organic Chemistry. *U.S. News and World Report* [Online], April 19, 2004, p 59. Business Source Premier. http://www.epnet.com/academic/bussourceprem.asp (accessed April 24, 2005).

RECOMMENDED FORMAT FOR ARTICLES PUBLISHED ONLINE IN ADVANCE OF PRINT ISSUES

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [Online early access]. DOI or other identifying information. Published Online: Month Day, Year. URL (accessed Month Day, Year).

Often, articles are ready for publication in advance of a full issue of a periodical. Several publishers offer these articles online up to weeks in advance of the print issue. They are identical to the corresponding print articles except that page numbers are often not yet available. Publishers market this service under different names; the ACS Publications Division labels them As Soon As Publishable (ASAP). For citation purposes, use the designation "Online early access" in brackets after the journal abbreviation in place of the publisher-specific term.

Also include the DOI or other identifying information, the online publication date, the URL, and the date accessed.

Pratt, D. A.; van der Donk, W. A. Theoretical Investigations into the Intermediacy of Chlorinated Vinylcobalamins in the Reductive Dehalogenation of Chlorinated Ethylenes. *J. Am. Chem. Soc.* [Online early access]. DOI: 10.1021/ja047915o. Published Online: Dec 8, 2004. http://pubs.acs.org/cgi-bin/asap.cgi/jacsat/asap/html/ja047915o.html (accessed Dec 8, 2004).

RECOMMENDED FORMAT FOR PERIODICALS PUBLISHED ONLY IN ELECTRONIC FORMAT

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [Online] **Year,** *Volume,* Article Number or other identifying information. URL (accessed Month Day, Year).

A periodical published only in electronic format may include additional electronic features, data, or commentaries. Use the reference style for periodicals, and include the direct URL of the article as well as the date accessed. Volume and page numbers are often not relevant. If they are not used, include the article number, DOI, or other identifying information.

Zloh, M.; Esposito, D.; Gibbons, W. A. Helical Net Plots and Lipid Favourable Surface Mapping of Transmembrane Helices of Integral Membrane Proteins: Aids to Structure Determination of Integral Membrane Proteins. *Internet J. Chem.* [Online] **2003,** *6,* Article 2. http://www.ijc.com/articles/2003v6/2/ (accessed Oct 13, 2004).

RECOMMENDED FORMAT FOR ARTICLES RETRIEVED FROM PREPRINT SERVERS

Author 1; Author 2; Author 3; etc. Title of Article. Year, Article Number. Name of Repository. URL (accessed Month Day, Year).

Ward, D. W.; Nelson, K. A. Finite Difference Time Domain (FDTD) Simulations of Electromagnetic Wave Propagation Using a Spreadsheet. 2004, arXiv:physics/0402096. arXiv.org e-Print archive. http://arxiv.org/abs/physics/0402096 (accessed Oct 13, 2004).

Online Books

Books published online generally correspond to printed versions, and the reference styles are similar. Online location and access date should always be included when citing online books. Reference works published online are often updated with new content, and the dates on which sections were posted or updated should also be included.

RECOMMENDED FORMAT FOR ONLINE BOOKS WITHOUT EDITORS

Author 1; Author 2; Author 3; etc. *Book Title* [Online]; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination. URL (accessed Month Day, Year).

Tour, J. M. *Molecular Electronics: Commercial Insights, Chemistry, Devices, Architecture and Programming* [Online]; World Scientific: River Edge, NJ, 2003; pp 177–180. http://legacy.netlibrary.com/ebook_info.asp?product_id=91422&piclist=19799,20141,20153 (accessed Nov 7, 2004).

RECOMMENDED FORMAT FOR ONLINE BOOKS WITH EDITORS

Author 1; Author 2; Author 3; etc. Chapter Title. In *Book Title* [Online]; Editor 1, Editor 2, etc., Eds.; Series Information (if any); Publisher: Place of Publication, Year; Volume Number, Pagination. URL (accessed Month Day, Year).

Oleksyn, B. J.; Stadnicka, K.; Sliwinski, J. Structural Chemistry of Enamines: A Statistical Approach. In *The Chemistry of Enamines* [Online]; Rappoport, Z., Ed.; The Chemistry of Functional Groups; Patai, S., Rappoport, Z., Series Eds.; Wiley & Sons: New York, 1994; Chapter 2, pp 87–218. http://www3.interscience.wiley.com/cgi-bin/summary/109560980/SUMMARY (accessed April 24, 2005).

RECOMMENDED FORMAT FOR ONLINE ENCYCLOPEDIAS

Article Title. *Encyclopedia Title*, edition [Online]; Publisher, Posted Online Posting Date. URL (accessed Month Day, Year).

Alkanolamines from Nitro Alcohols. *Kirk-Othmer Encyclopedia of Chemical Technology* [Online]; Wiley & Sons, Posted March 14, 2003. http://www.mrw.interscience.wiley.com/kirk/articles/alkaboll.a01/frame.html (accessed Nov 7, 2004).

Web Sites

Aside from online periodicals and books, general Web sites containing a wide variety of information might need to be cited. Some sites are accessible by anyone, but many are accessible only by subscription. Reference styles for FTP and Telnet sites are similar to those for Web sites. Specific examples are given here for general Web sites and databases, stand-alone documents, unpublished conference proceedings, and electronic theses.

RECOMMENDED FORMAT FOR GENERAL WEB SITES

Author (if any). Title of Site. URL (accessed Month Day, Year), other identifying information (if any).

Use the title found on the Web site itself; add the words "Home Page" for clarification when needed. Data retrieved from Internet-based databases should include a data entry number. Stand-alone databases should be cited as computer programs (see p 323).

ACS Publications Division Home Page. http://pubs.acs.org (accessed Nov 7, 2004).

Chemical Abstracts Service. STN on the Web. http://stnweb.cas.org (accessed Nov 7, 2004).

International Union of Pure and Applied Chemistry Home Page. http://www.iupac.org/dhtml_home.html (accessed April 24, 2005).

Library of Congress Home Page. http://www.loc.gov (accessed April 24, 2005).

Northern Illinois University. Department of Chemistry and Biochemistry Home Page. http://www.chembio.niu.edu (accessed Nov 7, 2004).

Sheffield Chemistry Software Archive (Macintosh). ftp://ftp.shef.ac.uk/pub/uni/academic/A-C/chem (accessed April 24, 2005).

U.S. Environmental Protection Agency. http://www.epa.gov (accessed Nov 7, 2004).

RECOMMENDED FORMAT FOR DOCUMENTS RETRIEVED FROM INSTITUTIONAL OR AGENCY WEB SITES

Author 1; Author 2; Author 3; etc. Title of Document, Year. Title of Site. URL (accessed Month Day, Year).

If an article is contained within a large and complex Web site, such as that for a university or a government agency, the host organization and the relevant program or department should be identified before giving the direct URL of the article and accession date.

Chou, L.; McClintock, R.; Moretti, F.; Nix, D. H. Technology and education: New wine in new bottles: Choosing pasts and imagining educational futures, 1993. Columbia University Institute for Learning Technologies Web site. http://www.ilt.columbia.edu/publications/papers/newwine1.html (accessed Aug 24, 2000).

RECOMMENDED FORMAT FOR ONLINE UNPUBLISHED CONFERENCE PRESENTATIONS

Author 1; Author 2; etc. Title of Presentation. Presented at Conference Title [Online], Place, Date; Paper Number. Title of Site. URL (accessed Month Day, Year).

Works presented at conferences or meetings can be cited in several formats, as discussed earlier in this chapter. Generally, published abstracts or proceedings can be cited as online books or as online periodicals. Materials from oral presentations, posters, or demonstrations that do not contain publication information should be cited as follows.

Manly, S. Collective flow with PHOBOS. Presented at the 20th Winter Workshop on Nuclear Dynamics [Online], Trelawny Beach, Jamaica, March 15–20, 2004. University of Rochester, DSpace Web site. http://hdl.handle.net/1802/228 (accessed Oct 13, 2004).

RECOMMENDED FORMAT FOR ELECTRONIC THESES

Author. Title of Thesis. Level of Thesis [Online], Degree-Granting University, Location of University, Date of Completion. URL (accessed Month Day, Year).

Lozano, P. C. Studies on the Ion-Droplet Mixed Regime in Colloid Thrusters. Ph.D. Thesis [Online], Massachusetts Institute of Technology, Cambridge, MA, January 2003. http://theses.mit.edu/Dienst/UI/2.0/Describe/0018.mit.etheses%2f2003-1 (accessed Nov 7, 2004).

Electronic Lists and Newsgroups

RECOMMENDED FORMAT FOR ELECTRONIC LISTS AND NEWSGROUPS

Mailing List or Newsgroup Name, other information, electronic address (accessed Month Day, Year).

Chemical Information List Server, CHMINF-L@iubvm.ucs.indiana.edu (accessed Oct 13, 2004).

Computational Chemistry List, solvent discussion in archived messages of September 2003, chemistry@ccl.net (accessed Nov 10, 2004).

Molecular Diversity for Basic Research & Drug Discovery, mol-diversity@listserv.arizona.edu (accessed Nov 10, 2004).

Electronic Mail Messages

Whether the message was personal and sent only to you or whether it was posted in a newsgroup, it is not published. E-mail messages should be cited the same as any other personal communication. Include the year and the professional affiliation of the author.

RECOMMENDED FORMAT FOR ELECTRONIC MAIL MESSAGES

Author. Affiliation, City, State. Personal communication, Year.

Solla, L. R. Cornell University, Ithaca, NY. Personal communication, 2005.

CD-ROMs and DVDs

The reference style for information published in CD-ROM or DVD format follows that for periodicals and books as appropriate, and the designation "CD-ROM" or "DVD" is included in brackets.

RECOMMENDED FORMAT FOR CD-ROM AND DVD PERIODICALS

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [CD-ROM or DVD] **Year,** *Volume,* pagination or other identifying information.

Fleming, S. A.; Jensen, A. W. Substituent Effects on the Photocleavage of Benzyl–Sulfur Bonds. Observation of the "*Meta*" Effect. *J. Org. Chem.* [CD-ROM] **1996,** *61,* 7044.

RECOMMENDED FORMATS FOR CD-ROM AND DVD BOOKS

Author 1; Author 2; etc. Chapter Title. In *Book Title,* Edition Number [CD-ROM or DVD]; Editor 1, Editor 2, etc., Eds.; Publisher: Place of Publication, Year; Volume Number.

Author 1; Author 2; etc. Chapter Title. *Book Title,* Edition Number [CD-ROM or DVD]; Publisher: Place of Publication, Year; Volume Number.

Vining, W. J.; Kotz, J.; Harman, P.; Vining, W.; McDonald, A.; Ward, J. *General Chemistry,* 3rd ed. [CD-ROM]; Thomson Brooks/Cole: Florence, KY, 2002.

Rowley, D.; Ramaker, D. *Standard Deviants Chemistry DVD Pack* [DVD]; Goldhil Educational: Camarillo, CA, 2000.

Many books in CD-ROM or DVD format are reference works, so they have no authors, editors, or chapter titles.

The Merck Index, 13.4 [CD-ROM]; Wiley: New York, 2005.

Green Chemistry: Meeting Global Challenges [DVD]; American Chemical Society: Washington, DC, 2003.

RECOMMENDED FORMAT FOR CONFERENCE PROCEEDINGS ON CD-ROM OR DVD

Author 1; Author 2; etc. Title of Presentation. In *Title of Conference,* Location of Meeting, Date of Meeting [CD-ROM or DVD]; Publisher: Place of Publication, Year; other identifying information.

Vasaru, G. Sources of Tritium. In *Proceedings of the 2nd International Conference on Nuclear Science and Technology in Iran,* Shiraz, Iran, April 27–30, 2004 [CD-ROM]; Conference Permanent Committee, Ed.; Shiraz University: Shiraz, Iran, 2004.

Computer Programs

References to computer programs must be treated on a case-by-case basis. Five common presentations of computer programs are possible:

1. book format, with the name of the program as the title
2. technical report format
3. *CASSI* format
4. free style, as a simple listing of program title and author of program
5. thesis style

Book Format

RECOMMENDED FORMAT

Author 1; Author 2; etc. *Program Title,* version or edition; Publisher: Place of Publication, Year.

The recommended format is the same as that for a book citation, except that there are no chapters or pages. The name of the computer program, with any descriptors, is considered the title and is set in italic type. If you wish to include additional information about a program that is important for the reader to know, you may add it at the end of the reference with or without parentheses or append it to the title in parentheses before the semicolon.

Binkley, J. S. *GAUSSIAN82;* Department of Chemistry, Carnegie Mellon University: Pittsburgh, PA, 1982.

Main, P. *MULTAN 80: A System of Computer Programs for the Automated Solution of Crystal Structures from X-ray Diffraction Data;* Universities of York and Louvain: York, England, and Louvain, Belgium, 1980.

RECOMMENDED FORMAT FOR COMMERCIAL SOFTWARE AND DATABASES

Program Title, version or edition; comments; Publisher: Place of Publication, Year.

References to data should include the data entry number or other identifying information at the end of the citation. The date of access can also be included if the database is updated frequently. If the data retrieved are calculated data, also cite the software used for the calculation (for example, ACD/Labs).

Mathematica, version 5.1; software for technical computation; Wolfram Research: Champaign, IL 2004.

MDL CrossFire Commander, version 7; Elsevier MDL: San Leandro, CA, 2004; BRN 635994.

Scifinder Scholar, version 2004.2; Chemical Abstracts Service: Columbus, OH, 2004; RN 107-21-1 (accessed Dec 20, 2005); calculated using ACD/Labs software, version 8.14; ACD/Labs 1994–2006.

Technical Report Format

RECOMMENDED FORMAT

Author. *Title of Report;* Technical Report Number; Publisher: Place of Publication, Year; Pagination (if any).

In a citation to a computer program as a technical report, a report or technical report number is included. As with book format, the name of the computer program is considered the title of the technical report.

Beurskens, P. T.; Bossman, W. P.; Doesburg, H. M.; Gould, R. O.; van der Hark, Th. E. M.; Prick, P. A. J. *DIRDIF: Direct Methods for Difference Structures;* Technical Report 1980/1; Crystallographic Laboratory: Toernooiveld, Netherlands, 1980.

Johnson, C. K. *ORTEP-II: A Fortran Thermal Ellipsoid Plot Program for Crystal Structure Illustrations;* Report ORNL-5138; National Technical Information Service, U.S. Department of Commerce: Springfield, VA, 1976.

CASSI Format

Because of the broad base from which *Chemical Abstracts* indexes work, computer programs, in the form of technical reports, may be referenced. In such cases, *CASSI* format would be appropriate.

Johnson, C. K. *Oak Ridge Natl. Lab., [Rep.] ORNL (U.S.)* **1978,** ORNL-5348.

Free Style

When only minimal information (e.g., author and program name) is available, present the information as simply as possible.

Programs used in this study included local modifications of Jacobson's ALLS, Zalkins's FORDAP, Busing and Levy's ORFEE, and Johnson's ORTEP2.

Lozos, G.; Hoffman, B.; Franz, C. SIMI4A, Chemistry Department, Northwestern University.

Thesis Style

Sheldrick, G. M. SHELX-76: Program for Crystal Structure Determination. Cambridge University, 1976.

Collating References

Collate all references at the end of the manuscript in numerical order if cited by number and in alphabetical order if cited by author. Do not include items in the reference list that are not cited in the manuscript. Check the publication for which you are writing. Some publications do not allow multiple references to be listed as one numbered entry; they prefer that each numbered entry include only one unique reference.

To collate references according to the author–date style, use the following format.

1. Alphabetize in order of the first authors' surnames.
2. When the same first author is common to multiple references,
   - Group the single-author references first. List them chronologically. To distinguish among references having the same year, add a lowercase letter (a, b, c, etc.) to the year.
   - Group the two-author references next. List them chronologically. To distinguish among references having the same year, add a lowercase letter (a, b, c, etc.) to the year.
   - Group all multiple-author (three or more) references last. List them chronologically. To distinguish among references having the same year, add a lowercase letter (a, b, c, etc.) to the year.

Hamilton, F. J. *Biochemistry* **2003,** *42,* 78–86.

Hamilton, F. J. *J. Agric. Food Chem.* **2004a,** *52,* 1622–1633.

Hamilton, F. J. *J. Org. Chem.* **2004b,** *69,* 298–306.

Hamilton, F. J.; Salvo, P. A. *J. Agric. Food Chem.* **2005,** *53,* 918–924.

Hurd, R. *J. Magn. Reson.* **1999,** *87,* 422.

Mills, M. S.; Thurman, E. M. *Anal. Chem.* **2001,** *73,* 1985–1990.

O'Connor, D. J. *Environ. Eng. ASCE* **2002,** *114,* 507–522.

Rahwan, R. G., Witiak, D. T., Eds. *Calcium Regulation by Calcium Antagonists;* ACS Symposium Series 201; American Chemical Society: Washington, DC, 2004.

Scarponi, T. M.; Moreno, S. P. *Biochemistry* **2002,** *41,* 345–360.

Scarponi, T. M.; Adams, J. S. *J. Pharm. Sci.* **2003,** *92,* 703–712.
Serpone, N.; Pellizetti, E. *Photocatalysis: Fundamentals and Applications;* Wiley & Sons: New York, 2004.
Tewey, L. P.; Rodriguez, R. E.; Jennes, A. C. *J. Agric. Food Chem.* **2001,** *49,* 1879–1886.
Tewey, L. P.; Rodriguez, R. E.; Fortunato, B. D.; Jennes, A. C. *Ind. Eng. Chem. Res.* **2002a,** *41,* 465–472.
Tewey, L. P.; Hiroshi, C. Y.; Allen, P. R.; Lowe, D. L. *Biochemistry* **2002b,** *41,* 11689–11699.
Tewey, L. P.; Rolland, H. J.; Harwood, C. C. *J. Org. Chem.* **2002c,** *67,* 3548– 3556.
Tewey, L. P.; Allen, P. R.; Levy, M. S. *J. Am. Chem. Soc.* **2003,** *125,* 2520.

Do not use the Latin terms ibid. (in the same place) or idem (the same) because the actual reference source cannot be searched on electronic databases.

Reference/Citation Managers

Software programs are available to assist with the process of collecting and collating references. With such programs, researchers can create personal electronic collections or libraries of references and tailor the formatting to any number of uses and publishing guidelines. Citations are parsed into searchable databases of component fields, and formatting templates draw on the data to produce reference lists in a variety of reference styles. The process is further enhanced by filters designed to correctly interpret the variety of incoming reference formats. Filters, fields, and templates are customizable to accommodate additional sources and styles.

Additional features have been developed to improve the convenience of these tools, including connection scripts for hundreds of public-access and subscription-based bibliographic databases and increased variety of field types to accommodate figures, cross-linking, personal annotation, etc. Plug-ins are available for word-processing packages to format citations within the text, reference lists, and lists of figures as authors write. There are also networking options for cooperative reference building and linking to full-text versions of references.

Researchers can search literature databases either directly or through a reference manager interface; import text, images, and figures from journal articles, Web sites, and other reference managers; arrange reference lists in numerous collections or libraries; search and retrieve records by any field; format footnotes, endnotes, and stand-alone bibliographies; share and co-edit these lists with colleagues; and export citations in hundreds of publication-specific styles in several languages. These software packages assist the research process from initial literature searching to writing and editing final publications.

Leading reference management programs include EndNote, Reference Manager, ProCite, RefWorks, and Biblioscape. EndNote, Reference Manager, and

ProCite are currently all owned by Thomson Scientific and are available as stand-alone software packages for both Windows and Macintosh platforms. RefWorks is a Web-based program with individual accounts that can be accessed across platforms from any point of Internet access. Biblioscape is available in a variety of stand-alone and Web-based options. For the most part, these programs cover the gamut of research disciplines and are fairly well populated with filters and templates specific to the chemistry literature. Reviews of these and other bibliographic management software tools are regularly available in the library literature.

The Thomson Scientific products were developed independently and still retain distinctive characteristics in their functionality. EndNote focuses on the reference input and output needs of the individual researcher, with hundreds of connection scripts and filters and more than 1000 citation style templates. EndNote is updated regularly and has a growing number of enhanced features available. Reference Manager has traditionally targeted collaborative reference sharing between colleagues, with networking options that allow multiple users to work on the same reference list for a project. Some of these features are now becoming available in EndNote as well. Reference Manager is only available for the Windows platform. ProCite has focused on managing reference collections with larger numbers of fields and reference types and more advanced grouping and searching techniques. ProCite has not been updated since version 5 in 2001.

RefWorks is published by RefWorks.com and emphasizes the convenience and collaborative nature of Web-based software. The program and updates are provided on the RefWorks server, and users' bibliographic data are stored there as well. Multiuser accounts are available for collaborative work. The options for filters, fields, reference types, and templates are less developed in RefWorks than in the other tools discussed here and do not include filters or templates for ACS journal styles.

Biblioscape is published by CG Information, founded by scientists specifically to manage scientific and electronic information. Biblioscape is a suite of products with different sets of features designed for a variety of users, including undergraduate and graduate students, researchers, and librarians. Options include Web access, intranet, and freeware editions. More than 1000 output styles are available, including the ACS journal styles.

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APPENDIX 14-1

CASSI Abbreviations for the 1000+ Most Commonly Cited Journals

This appendix lists the *Chemical Abstracts Service Source Index,* or *CASSI,* abbreviations for more than 1000 of the most commonly cited journals. Note that some journals of the same name are published in more than one city. Authors should check the journal name carefully and include the city to prevent misunderstanding.

ACS Symp. Ser.
Acta Crystallogr., Sect. C: Cryst. Struct. Commun.
Acta Crystallogr., Sect. D: Biol. Crystallogr.
Acta Crystallogr., Sect. E: Struct. Rep. Online
Acta Hortic.
Acta Mater.
Acta Pharmacol. Sin.
Acta Phys. Pol., B
Adv. Exp. Med. Biol.
Adv. Mass Spectrom.
Adv. Mater. (Weinheim, Ger.)
Adv. Sci. Technol. (Faenza, Italy)
Adv. Space Res.
Adv. Synth. Catal.
AIChE J.
AIDS (London, U.K.)
AIDS Res. Hum. Retroviruses
AIP Conf. Proc.
Alcohol.: Clin. Exp. Res.
Aliment. Pharmacol. Ther.
Am. Heart J.
Am. J. Cardiol.
Am. J. Clin. Nutr.
Am. J. Hum. Genet.
Am. J. Obstet. Gynecol.
Am. J. Pathol.
Am. J. Physiol.
Am. J. Respir. Cell Mol. Biol.
Am. J. Vet. Res.
Am. Mineral.
Anal. Bioanal. Chem.
Anal. Biochem.
Anal. Chem.
Anal. Chim. Acta
Anal. Lett.
Anal. Sci.
Analyst (Cambridge, U.K.)
Anesth. Analg. (Hagerstown, MD, U.S.)
Anesthesiology
Angew. Chem., Int. Ed.
Anim. Genet.
Ann. N.Y. Acad. Sci.
Ann. Neurol.
Annu. Rep.—Conf. Electr. Insul. Dielectr. Phenom.
Annu. Tech. Conf.—Soc. Plast. Eng.
Anti-Cancer Drugs
Anticancer Res.
Antimicrob. Agents Chemother.
Antioxid. Redox Signaling

Appl. Biochem. Biotechnol.
Appl. Catal., A
Appl. Catal., B
Appl. Environ. Microbiol.
Appl. Geochem.
Appl. Microbiol. Biotechnol.
Appl. Opt.
Appl. Organomet. Chem.
Appl. Phys. A: Mater. Sci. Process.
Appl. Phys. B: Lasers Opt.
Appl. Phys. Lett.
Appl. Radiat. Isot.
Appl. Spectrosc.
Appl. Surf. Sci.
Aquaculture
Aquat. Toxicol.
Arch. Biochem. Biophys.
Arch. Environ. Contam. Toxicol.
Arch. Pharmacal Res.
Arch. Virol.
ARKIVOC (Gainesville, FL, U.S.)
Arterioscler., Thromb., Vasc. Biol.
Arthritis Rheum.
Asian–Australas. J. Anim. Sci.
Asian J. Chem.
Astron. Astrophys.
Astron. J.
Astron. Soc. Pac. Conf. Ser.
Astrophys. J.
Astrophys. J., Suppl. Ser.
Atherosclerosis (Amsterdam, Neth.)
Atmos. Chem. Phys.
Atmos. Environ.
Aust. J. Chem.
Azerb. Khim. Zh.
Bandaoti Xuebao
Behav. Brain Res.
Biochem. Biophys. Res. Commun.
Biochem. Eng. J.
Biochem. J.
Biochem. Pharmacol.
Biochem. Soc. Trans.
Biochem. Syst. Ecol.
Biochemistry
Biochemistry (Moscow, Russ. Fed.)
Biochim. Biophys. Acta
Bioconjugate Chem.
Bioinformatics
Biol. Chem.
Biol. Pharm. Bull.
Biol. Psychiatry
Biol. Reprod.
Biol. Trace Elem. Res.
Biomacromolecules
Biomaterials
Bioorg. Med. Chem.
Bioorg. Med. Chem. Lett.
Biophys. Chem.
Biophys. J.
Biopolymers
Bioresour. Technol.
Biosci., Biotechnol., Biochem.
Biosens. Bioelectron.
BioTechniques
Biotechnol. Bioeng.
Biotechnol. Lett.
Biotechnol. Prog.
Blood
BMC Bioinf.
Bone (San Diego, CA, U.S.)
Bone Marrow Transplant.
Br. J. Anaesth.
Br. J. Cancer
Br. J. Clin. Pharmacol.
Br. J. Haematol.
Br. J. Nutr.
Br. J. Pharmacol.
Brain Res.
Breast Cancer Res. Treat.
Bul. Stiint. Univ. "Politeh." Timisoara Rom., Ser. Chim. Ing. Mediului
Bull. Chem. Soc. Jpn.
Bull. Environ. Contam. Toxicol.
Bull. Exp. Biol. Med.
Bull. Korean Chem. Soc.
Bunseki Kagaku
C. R. Chim.
Cailiao Kexue Yu Gongcheng Xuebao
Can. J. Chem.
Cancer (New York, NY, U.S.)
Cancer Biol. Ther.
Cancer Cell

Cancer Chemother. Pharmacol.
Cancer Epidemiol., Biomarkers Prev.
Cancer Genet. Cytogenet.
Cancer Lett. (Amsterdam, Neth.)
Cancer Res.
Cancer Sci.
Carbon
Carbohydr. Polym.
Carbohydr. Res.
Carcinogenesis
Cardiovasc. Res.
Catal. Commun.
Catal. Lett.
Catal. Today
Cell (Cambridge, MA, U.S.)
Cell Biol. Int.
Cell Cycle
Cell Death Differ.
Cell. Mol. Life Sci.
Cell. Signalling
Cem. Concr. Compos.
Cem. Concr. Res.
Ceram. Eng. Sci. Proc.
Ceram. Int.
Ceram. Trans.
Cereal Chem.
Chem. Biol.
Chem. Commun. (Cambridge, U.K.)
Chem. Eng. J. (Amsterdam, Neth.)
Chem. Eng. News
Chem. Eng. Process.
Chem. Eng. Res. Des.
Chem. Eng. Sci.
Chem.—Eur. J.
Chem. Geol.
Chem. Heterocycl. Compd. (New York, NY, U.S.)
Chem. Ing. Tech.
Chem. Lett.
Chem. Mater.
Chem. Nat. Compd.
Chem. Pet. Eng.
Chem. Pharm. Bull.
Chem. Phys.
Chem. Phys. Lett.
Chem. Res. Chin. Univ.
Chem. Res. Toxicol.
Chem. Rev. (Washington, DC, U.S.)
Chem. Sens.
ChemBioChem
Chemosphere
ChemPhysChem
Chest
Chin. Chem. Lett.
Chin. J. Chem.
Chin. Med. J. (Beijing, China, Engl. Ed.)
Chin. Sci. Bull.
Chromatographia
Circ. Res.
Circulation
Clin. Biochem.
Clin. Cancer Res.
Clin. Chem. (Washington, DC, U.S.)
Clin. Chem. Lab. Med.
Clin. Chim. Acta
Clin. Diagn. Lab. Immunol.
Clin. Endocrinol. (Oxford, U.K.)
Clin. Exp. Allergy
Clin. Exp. Immunol.
Clin. Exp. Pharmacol. Physiol.
Clin. Immunol. (San Diego, CA, U.S.)
Clin. Infect. Dis.
Clin. Sci.
Collect. Czech. Chem. Commun.
Colloid Polym. Sci.
Colloids Surf., A
Colloids Surf., B
Combust. Flame
Commun. Soil Sci. Plant Anal.
Comp. Biochem. Physiol., Part A: Mol. Integr. Physiol.
Comp. Biochem. Physiol., Part B: Biochem. Mol. Biol.
Compos. Sci. Technol.
Comput. Chem. Eng.
Congr. Anu.—Assoc. Bras. Metal. Mater.
Corros. Sci.
Crit. Care Med.
Cryst. Growth Des.
Cuihua Xuebao
Curr. Biol.
Curr. Med. Chem.

Curr. Microbiol.
Curr. Pharm. Des.
Curr. Sci.
Cytogenet. Genome Res.
Cytokine+
Czech. J. Phys.
Dalton Trans.
Desalination
Dev. Biol. (San Diego, CA, U.S.)
Dev. Brain Res.
Dev. Cell
Dev. Dyn.
Development (Cambridge, U.K.)
Di-San Junyi Daxue Xuebao
Diabetes
Diabetologia
Diamond Relat. Mater.
Dianchi
Dianyuan Jishu
Dier Junyi Daxue Xuebao
Diffus. Defect Data, Pt. B
Dig. Dis. Sci.
Disi Junyi Daxue Xuebao
Diyi Junyi Daxue Xuebao
DNA Repair
Dokl. Biol. Sci.
Dokl. Bulg. Akad. Nauk.
Dokl. Earth Sci.
Dopov. Nats. Akad. Nauk Ukr.
Drug Metab. Dispos.
Dyes Pigm.
EAAP Publ.
Earth Planet. Sci. Lett.
Ecotoxicol. Environ. Saf.
Electroanalysis
Electrochem. Commun.
Electrochem. Solid-State Lett.
Electrochemistry (Tokyo, Jpn.)
Electrochim. Acta
Electron. Lett.
Electrophoresis
EMBO J.
EMBO Rep.
Endocrinology
Energy Fuels
Environ. Health Perspect.
Environ. Pollut. (Oxford, U.K.)
Environ. Sci. Technol.
Environ. Technol.
Environ. Toxicol. Chem.
Enzyme Microb. Technol.
Eukaryotic Cell
Eur. Food Res. Technol.
Eur. J. Biochem.
Eur. J. Cancer
Eur. J. Clin. Nutr.
Eur. J. Endocrinol.
Eur. J. Hum. Genet.
Eur. J. Immunol.
Eur. J. Inorg. Chem.
Eur. J. Org. Chem.
Eur. J. Pharm. Biopharm.
Eur. J. Pharm. Sci.
Eur. J. Pharmacol.
Eur. Phys. J. A
Eur. Phys. J. B
Eur. Phys. J. C
Eur. Phys. J. D
Eur. Polym. J.
Eur. Space Agency, [Spec. Publ.] SP
Europhys. Lett.
Exp. Biol. Med. (Maywood, NJ, U.S.)
Exp. Cell Res.
Exp. Eye Res.
Exp. Gerontol.
Exp. Hematol. (New York, NY, U.S.)
Exp. Neurol.
Expert Opin. Invest. Drugs
Expert Opin. Pharmacother.
Farmaco
FASEB J.
FEBS Lett.
Fed. Regist.
FEMS Immunol. Med. Microbiol.
FEMS Microbiol. Lett.
Fenxi Huaxue
Fenxi Kexue Xuebao
Fenxi Shiyanshi
Ferroelectrics
Fish Physiol. Biochem.
Fiz. Khim. Tverd. Tila
Fluid Phase Equilib.

Food Addit. Contam.
Food Chem.
Food Chem. Toxicol.
Food Hydrocolloids
Forensic Sci. Int.
Free Radical Biol. Med.
Free Radical Res.
Fresenius Environ. Bull.
Front. Biosci.
Front. Sci. Ser.
Fuel
Fuel Process. Technol.
Fusion Energy
Fusion Eng. Des.
Gangtie
Gaodeng Xuexiao Huaxue Xuebao
Gaofenzi Cailiao Kexue Yu Gongcheng
Gaofenzi Xuebao
Gaoneng Wuli Yu Hewuli
Gaoxiao Huaxue Gongcheng Xuebao
Gastroenterology
Gen. Comp. Endocrinol.
Gendai Iryo
Gene
Gene Expression Patterns
Gene Ther.
Genes Dev.
Genetics
Genome Res.
Genomics
Geochim. Cosmochim. Acta
Geophys. Res. Lett.
Gongcheng Suliao Yingyong
Gongneng Cailiao
Gongye Cuihua
Green Chem.
Guangpu Shiyanshi
Guangpuxue Yu Guangpu Fenxi
Guangzi Xuebao
Guisuanyan Xuebao
Gut
Gynecol. Oncol.
Haematologica
Handb. Exp. Pharmacol.
Han'guk Hwankyong Uisaeng Hakhoechi
Han'guk Sikp'um Yongyang Kwahak Hoechi
Hecheng Huaxue (1000)
Hecheng Xiangjiao Gongye
Helv. Chim. Acta
Hepatology (Philadelphia, PA, U.S.)
Heterocycles
Horm. Metab. Res.
Huagong Shikan
Huagong Xuebao (Chin. Ed.)
Huanjing Kexue Xuebao
Huanjing Wuran Zhili Jishu Yu Shebei
Huaxue Tongbao
Huaxue Xuebao
Huaxue Yanjiu Yu Yingyong
Hum. Mol. Genet.
Hum. Mutat.
Hum. Pathol.
Hum. Reprod.
Hydrobiologia
Hyomen Gijutsu
Hyperfine Interact.
Hypertension
IEEE Electron Device Lett.
IEEE J. Quantum Electron.
IEEE Trans. Electron Devices
IEEE Trans. Magn.
IEEE Trans. Nucl. Sci.
Igaku no Ayumi
Immunol. Lett.
Immunology
Ind. Eng. Chem. Res.
Indian J. Chem., Sect. A: Inorg., Bio-inorg., Phys., Theor. Anal. Chem.
Indian J. Chem., Sect. B: Org. Chem. Incl. Med. Chem.
Indian J. Environ. Prot.
Indian J. Pharm. Sci.
Infect. Immun.
Inflammation Res.
Inorg. Chem.
Inorg. Chem. Commun.
Inorg. Chim. Acta
Inorg. Mater.
Insect Biochem. Mol. Biol.
Inst. Phys. Conf. Ser.
Int. Conf. Thermoelectr.
Int. Congr. Ser.
Int. DATA Ser., Sel. Data Mixtures, Ser. A

Int. Immunol.
Int. Immunopharmacol.
Int. J. Antimicrob. Agents
Int. J. Biochem. Cell Biol.
Int. J. Cancer
Int. J. Food Microbiol.
Int. J. Heat Mass Transfer
Int. J. Hydrogen Energy
Int. J. Mass Spectrom.
Int. J. Mod. Phys. B
Int. J. Mol. Med.
Int. J. Nanosci.
Int. J. Oncol.
Int. J. Parasitol.
Int. J. Pharm.
Int. J. Quantum Chem.
Int. J. Syst. Evol. Microbiol.
Integr. Ferroelectr.
Intermetallics
IP.com J.
ISIJ Int.
Izv. Akad. Nauk, Ser. Fiz.
Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol.
J. Agric. Food Chem.
J. Allergy Clin. Immunol.
J. Alloys Compd.
J. Am. Ceram. Soc.
J. Am. Chem. Soc.
J. Am. Coll. Cardiol.
J. Am. Oil Chem. Soc.
J. Am. Soc. Mass Spectrom.
J. Am. Soc. Nephrol.
J. Anal. Appl. Pyrolysis
J. Anal. At. Spectrom.
J. Anal. Chem.
J. Anim. Sci. (Savoy, IL, U.S.)
J. Antimicrob. Chemother.
J. AOAC Int.
J. Appl. Crystallogr.
J. Appl. Electrochem.
J. Appl. Microbiol.
J. Appl. Phys.
J. Appl. Physiol.
J. Appl. Polym. Sci.
J. Appl. Spectrosc.
J. Bacteriol.
J. Biochem. (Tokyo, Jpn.)
J. Biol. Chem.
J. Biomed. Mater. Res., Part A
J. Biomed. Mater. Res., Part B
J. Biomol. NMR
J. Biosci. Bioeng.
J. Biotechnol.
J. Bone Miner. Res.
J. Cardiovasc. Pharmacol.
J. Catal.
J. Cell. Biochem.
J. Cell Biol.
J. Cell. Physiol.
J. Cell Sci.
J. Ceram. Soc. Jpn.
J. Chem. Ecol.
J. Chem. Educ.
J. Chem. Eng. Data
J. Chem. Eng. Jpn.
J. Chem. Inf. Comput. Sci.
J. Chem. Phys.
J. Chem. Res., Synop.
J. Chem. Technol. Biotechnol.
J. Chin. Chem. Soc. (Taipei, Taiwan)
J. Chromatogr., A
J. Chromatogr., B: Anal. Technol. Biomed. Life Sci.
J. Clin. Endocrinol. Metab.
J. Clin. Invest.
J. Clin. Microbiol.
J. Colloid Interface Sci.
J. Comp. Neurol.
J. Comput. Chem.
J. Comput. Electron.
J. Controlled Release
J. Coord. Chem.
J. Cryst. Growth
J. Dairy Sci.
J. Electroanal. Chem.
J. Electrochem. Soc.
J. Electron. Mater.
J. Endocrinol.
J. Environ. Eng. (Reston, VA, U.S.)
J. Environ. Monit.
J. Environ. Qual.

J. Environ. Radioact.
J. Environ. Sci. Health, Part A: Toxic/Hazard. Subst. Environ. Eng.
J. Essent. Oil Res.
J. Eur. Ceram. Soc.
J. Exp. Biol.
J. Exp. Bot.
J. Exp. Med.
J. Exp. Theor. Phys.
J. Fluorine Chem.
J. Food Prot.
J. Food Sci.
J. Gen. Virol.
J. Geophys. Res., [Atmos.]
J. Hazard. Mater.
J. Hepatol.
J. Heterocycl. Chem.
J. Histochem. Cytochem.
J. Hypertens.
J. Immunol.
J. Immunol. Methods
J. Inclusion Phenom. Macrocyclic Chem.
J. Indian Chem. Soc.
J. Infect. Dis.
J. Inorg. Biochem.
J. Invest. Dermatol.
J. Korean Ceram. Soc.
J. Korean Phys. Soc.
J. Leukocyte Biol.
J. Lipid Res.
J. Liq. Chromatogr. Relat. Technol.
J. Low Temp. Phys.
J. Lumin.
J. Magn. Magn. Mater.
J. Magn. Reson.
J. Mass Spectrom.
J. Mater. Chem.
J. Mater. Process. Technol.
J. Mater. Res.
J. Mater. Sci.
J. Mater. Sci. Lett.
J. Mater. Sci.: Mater. Electron.
J. Mater. Sci.: Mater. Med.
J. Mater. Sci. Technol. (Shenyang, China)
J. Med. Chem.
J. Med. Genet.
J. Med. Virol.
J. Membr. Sci.
J. Metastable Nanocryst. Mater.
J. Microbiol. Biotechnol.
J. Microbiol. Methods
J. Mol. Biol.
J. Mol. Catal. A: Chem.
J. Mol. Catal. B: Enzym.
J. Mol. Cell. Cardiol.
J. Mol. Evol.
J. Mol. Liq.
J. Mol. Spectrosc.
J. Mol. Struct.
J. Nat. Prod.
J. Natl. Cancer Inst.
J. Neurochem.
J. Neuroimmunol.
J. Neurophysiol.
J. Neurosci.
J. Neurosci. Res.
J. Non-Cryst. Solids
J. Nucl. Mater.
J. Nutr.
J. Opt. Soc. Am. B
J. Optoelectron. Adv. Mater.
J. Org. Chem.
J. Organomet. Chem.
J. Pathol.
J. Pharm. Biomed. Anal.
J. Pharm. Pharmacol.
J. Pharm. Sci.
J. Pharmacol. Exp. Ther.
J. Pharmacol. Sci. (Tokyo, Jpn.)
J. Photochem. Photobiol., A
J. Phys. A: Math. Gen.
J. Phys. B: At., Mol. Opt. Phys.
J. Phys. Chem. A
J. Phys. Chem. B
J. Phys. Chem. Solids
J. Phys.: Condens. Matter
J. Phys. D: Appl. Phys.
J. Phys. G: Nucl. Part. Phys.
J. Phys. IV
J. Phys. Org. Chem.
J. Phys. Soc. Jpn.
J. Physiol. (Oxford, U.K.)

J. Plant Physiol.
J. Polym. Sci., Part A: Polym. Chem.
J. Polym. Sci., Part B: Polym. Phys.
J. Power Sources
J. Quant. Spectrosc. Radiat. Transfer
J. Radioanal. Nucl. Chem.
J. Raman Spectrosc.
J. Rheumatol.
J. Sci. Food Agric.
J. Sep. Sci.
J. Solid State Chem.
J. Steroid Biochem. Mol. Biol.
J. Surg. Res.
J. Therm. Anal. Calorim.
J. Thromb. Haemostasis
J. Univ. Chem. Technol. Metall.
J. Urol. (Hagerstown, MD, U.S.)
J. Vac. Sci. Technol., A
J. Vac. Sci. Technol., B: Microelectron. Nanometer Struct.—Process., Meas., Phenom.
J. Vet. Pharmacol. Ther.
J. Virol.
J. Virol. Methods
JAERI—Conf
JETP Lett.
Jiegou Huaxue
Jikken Igaku
Jingxi Huagong
Jingxi Huagong Zhongjianti
Jinshu Xuebao
Jisuanji Yu Yingyong Huaxue
Jixie Gongcheng Cailiao
Jpn. J. Appl. Phys., Part 1
Jpn. J. Appl. Phys., Part 2
Kagaku to Kogyo (Tokyo, Jpn.)
Kagaku to Kyoiku
Kagaku to Seibutsu
KEK Proc.
Key Eng. Mater.
Kidney Int.
Kogyo Zairyo
Kongop Hwahak
Korean J. Chem. Eng.
Lab. Invest.
Lancet
Langmuir
Lect. Notes Phys.
Leuk. Lymphoma
Leuk. Res.
Leukemia
Life Sci.
Liq. Cryst.
Low Temp. Phys.
Lung Biol. Health Dis.
Macromol. Chem. Phys.
Macromol. Rapid Commun.
Macromol. Symp.
Macromolecules
Magn. Reson. Chem.
Mar. Pollut. Bull.
Mater. Chem. Phys.
Mater. Lett.
Mater. Res. Bull.
Mater. Res. Soc. Symp. Proc.
Mater. Sci. Eng., A
Mater. Sci. Eng., B
Mater. Sci. Eng., C
Mater. Sci. Forum
Mater. Sci. Technol.
Mater. Trans.
Meas. Sci. Technol.
Meat Sci.
Mech. Dev.
Med. Hypotheses
Meded.—Fac. Landbouwkd. Toegepaste Biol. Wet. (Univ. Gent)
Metab., Clin. Exp.
Metall. Mater. Trans. A
Meteorit. Planet. Sci.
Methods Enzymol.
Methods Mol. Biol. (Totowa, NJ, U.S.)
Methods Mol. Med.
Microbes Infect.
Microbiology (Reading, U.K.)
Microchim. Acta
Microelectron. Eng.
Microelectron. Reliab.
Microporous Mesoporous Mater.
Miner. Eng.
Mod. Phys. Lett. A
Mol. Biochem. Parasitol.

Mol. Biol. Cell
Mol. Biol. Evol.
Mol. Brain Res.
Mol. Cancer Ther.
Mol. Cell
Mol. Cell. Biochem.
Mol. Cell. Biol.
Mol. Cell. Endocrinol.
Mol. Cell. Neurosci.
Mol. Cryst. Liq. Cryst.
Mol. Ecol.
Mol. Ecol. Notes
Mol. Endocrinol.
Mol. Genet. Genomics
Mol. Genet. Metab.
Mol. Immunol.
Mol. Med. (Tokyo, Jpn.)
Mol. Microbiol.
Mol. Pharmacol.
Mol. Phylogenet. Evol.
Mol. Phys.
Mol. Plant–Microbe Interact.
Mol. Psychiatry
Mol. Reprod. Dev.
Mol. Ther.
Mon. Not. R. Astron. Soc.
Monatsh. Chem.
Mutat. Res.
N. Engl. J. Med.
Nano Lett.
Nanotechnology
NASA Conf. Publ.
Nat. Biotechnol.
Nat. Cell Biol.
Nat. Genet.
Nat. Immunol.
Nat. Mater.
Nat. Med. (New York, NY, U.S.)
NATO Sci. Ser., II
NATO Sci. Ser., IV
NATO Sci. Ser., Ser. I
Nature (London, U.K.)
Naunyn-Schmiedeberg's Arch. Pharmacol.
Nephrol., Dial., Transplant.
Neuron
Neurobiol. Aging
Neurobiol. Dis.
Neurochem. Int.
Neurochem. Res.
Neurology
Neuropharmacology
Neuropsychopharmacology
NeuroReport
Neurosci. Lett.
Neuroscience (Oxford, U.K.)
New J. Chem.
New Phytol.
Nippon Kessho Seicho Gakkaishi
Nippon Kikai Gakkai Ronbunshu, B-hen
Nongyao
Nongye Huanjing Kexue Xuebao
Nucl. Eng. Des.
Nucl. Fusion
Nucl. Instrum. Methods Phys. Res., Sect. A
Nucl. Instrum. Methods Phys. Res., Sect. B
Nucl. Phys. A
Nucl. Phys. B
Nucl. Phys. B, Proc. Suppl.
Nucleic Acids Res.
Nucleosides, Nucleotides Nucleic Acids
Oncogene
Oncol. Rep.
Opt. Commun.
Opt. Lett.
Opt. Mater. (Amsterdam, Neth.)
Opt. Spectrosc.
Org. Biomol. Chem.
Org. Lett.
Org. Process Res. Dev.
Organohalogen Compd.
Organometallics
Orient. J. Chem.
Oxford Monogr. Med. Genet.
Pain
Pediatr. Res.
Peptides (New York, NY, U.S.)
Pfluegers Arch.
Pharm. Chem. J.
Pharm. Res.
Pharmacol., Biochem. Behav.
Pharmacol. Res.
Pharmazie

Philos. Mag.
Phosphorus, Sulfur Silicon Relat. Elem.
Photochem. Photobiol.
Photochem. Photobiol. Sci.
Phys. At. Nucl.
Phys. Chem. Chem. Phys.
Phys. Fluids
Phys. Lett. A
Phys. Lett. B
Phys. Plasmas
Phys. Rev. A: At., Mol., Opt. Phys.
Phys. Rev. B: Condens. Matter Mater. Phys.
Phys. Rev. C: Nucl. Phys.
Phys. Rev. D: Part. Fields
Phys. Rev. E: Stat., Nonlinear, Soft Matter Phys.
Phys. Rev. Lett.
Phys. Solid State
Phys. Status Solidi A
Phys. Status Solidi B
Phys. Status Solidi C
Physica B (Amsterdam, Neth.)
Physica C (Amsterdam, Neth.)
Physica E (Amsterdam, Neth.)
Physiol. Behav.
Physiol. Genomics
Physiol. Plant.
Phytochemistry (Elsevier)
Planta
Plant Cell
Plant Cell Physiol.
Plant J.
Plant Mol. Biol.
Plant Physiol.
Plant Sci. (Amsterdam, Neth.)
Plant Soil
Planta Med.
Plasma Phys. Controlled Fusion
Plast. Massy
Pol. J. Chem.
Polyhedron
Polym. Degrad. Stab.
Polym. Eng. Sci.
Polym. Int.
Polym. J. (Tokyo, Jpn.)
Polym. Mater. Sci. Eng.
Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)
Polymer
Poult. Sci.
Poverkhnost
Powder Technol.
Pramana
Prepr.—Am. Chem. Soc., Div. Pet. Chem.
Prepr. Ext. Abstr. ACS Natl. Meet., Am. Chem. Soc., Div. Environ. Chem.
Prepr. Symp.—Am. Chem. Soc., Div. Fuel Chem.
Proc.—Annu. Conf., Am. Water Works Assoc.
Proc.—Electrochem. Soc.
Proc. Natl. Acad. Sci. U.S.A.
Proc. SPIE—Int. Soc. Opt. Eng.
Proc.—Water Qual. Technol. Conf.
Process Biochem. (Oxford, U.K.)
Prog. Org. Coat.
Prostaglandins, Leukotrienes Essent. Fatty Acids
Prostate (New York, NY, U.S.)
Protein Expression Purif.
Protein Sci.
Proteins: Struct., Funct., Bioinf.
Proteomics
Psychopharmacology (Berlin, Ger.)
Publ. Australas. Inst. Min. Metall.
Pure Appl. Chem.
Quim. Nova
Radiat. Phys. Chem.
Radiat. Prot. Dosim.
Ranliao Huaxue Xuebao
Rapid Commun. Mass Spectrom.
React. Kinet. Catal. Lett.
Recents Prog. Genie Procedes
Regul. Pept.
Rengong Jingti Xuebao
Reproduction (Bristol, U.K.)
Res. Discl.
Rev. Chim. (Bucharest, Rom.)
Rev. Mex. Astron. Astrofis., Ser. Conf.
Rev. Roum. Chim.
Rev. Sci. Instrum.
RILEM Proc.

Rinsho Men'eki
RNA
Russ. Chem. Bull.
Russ. J. Appl. Chem.
Russ. J. Coord. Chem.
Russ. J. Electrochem.
Russ. J. Gen. Chem.
Russ. J. Genet.
Russ. J. Org. Chem.
Saibo Kogaku
Sci. Total Environ.
Science (Washington, DC, U.S.)
Scr. Mater.
Sekitan Kagaku Kaigi Happyo Ronbunshu
Semicond. Sci. Technol.
Semiconductors
Sens. Actuators, A
Sens. Actuators, B
Sep. Purif. Technol.
Sep. Sci. Technol.
Sepu
Shandong Daxue Xuebao, Yixueban
Shengwu Yixue Gongchengxue Zazhi
Shijie Huaren Xiaohua Zazhi
Shipin Kexue (Beijing, China)
Shiyou Huagong
Shiyou Lianzhi Yu Huagong
Shock
Soc. Automot. Eng., [Spec. Publ.] SP
Soil Biol. Biochem.
Soil Sci. Soc. Am. J.
Sol. Energy Mater. Sol. Cells
Solid State Commun.
Solid-State Electron.
Solid State Ionics
Solid State Sci.
Spec. Publ.—R. Soc. Chem.
Spectrochim. Acta, Part A
Spectrochim. Acta, Part B
Steroids
Stroke
Structure (Cambridge, MA, U.S.)
Stud. Surf. Sci. Catal.
Supercond. Sci. Technol.
Surf. Coat. Technol.
Surf. Interface Anal.
Surf. Sci.
Symp.—Int. Astron. Union
Synlett
Synth. Commun.
Synth. Met.
Synthesis
Talanta
Tanpakushitsu Kakusan Koso
Tech. Phys.
Tech. Phys. Lett.
Tetrahedron
Tetrahedron: Asymmetry
Tetrahedron Lett.
Tetsu to Hagane
Text. Res. J.
Tezhong Zhuzao Ji Youse Hejin
THEOCHEM
Theor. Appl. Genet.
Theriogenology
Thermochim. Acta
Thin Solid Films
Thromb. Haemostasis
Thromb. Res.
Tissue Antigens
Tissue Eng.
Tokyo Daigaku Genshiryoku Kenkyu Sogo Senta Shinpojumu
Top. Catal.
Toxicol. Appl. Pharmacol.
Toxicol. Lett.
Toxicol. Sci.
Toxicology
Toxicon
Trans. Am. Foundry Soc.
Trans. Nonferrous Met. Soc. China
Transition Met. Chem. (Dordrecht, Neth.)
Transplant. Proc.
Transplantation
Trends Opt. Photonics
Trends Pharmacol. Sci.
Tsvetn. Met. (Moscow, Russ. Fed.)
Ukr. Khim. Zh. (Russ. Ed.)
Vaccine
Vacuum
VDI—Ber.
Vet. Microbiol.

Virology
Virus Res.
Vysokomol. Soedin., Ser. A Ser. B
Water, Air, Soil Pollut.
Water Res.
Water Sci. Technol.
Wear
World J. Gastroenterol.
Wuji Cailiao Xuebao
Wuji Huaxue Xuebao
Wuli Huaxue Xuebao
Wuli Xuebao
Xibao Yu Fenzi Mianyixue Zazhi
Xiyou Jinshu
Xiyou Jinshu Cailiao Yu Gongcheng
Yaoxue Xuebao
Yingyong Huaxue
Yingyong Shengtai Xuebao
Youji Huaxue
Z. Anorg. Allg. Chem.
Z. Kristallogr.—New Cryst. Struct.
Z. Metallkd.
Z. Naturforsch., B: Chem. Sci.
Z. Naturforsch., C: J. Biosci.
Zairyo
Zavod. Lab., Diagn. Mater.
Zh. Fiz. Khim.
Zh. Neorg. Khim.
Zhengzhou Daxue Xuebao, Yixueban
Zhongcaoyao
Zhongguo Bingli Shengli Zazhi
Zhongguo Dongmai Yinghua Zazhi
Zhongguo Gonggong Weisheng
Zhongguo Jiguang
Zhongguo Jishui Paishui
Zhongguo Shenghua Yaowu Zazhi
Zhongguo Shengwu Gongcheng Zazhi
Zhongguo Shengwu Huaxue Yu Fenzi Shengwu Xuebao
Zhongguo Shouyi Xuebao
Zhongguo Suliao
Zhongguo Xinyao Zazhi
Zhongguo Xitu Xuebao
Zhongguo Yaolixue Tongbao
Zhongguo Yaoxue Zazhi (Beijing, China)
Zhongguo Yiyao Gongye Zazhi
Zhongguo Yiyuan Yaoxue Zazhi
Zhongguo Youse Jinshu Xuebao
Zhonghua Yixue Yichuanxue Zazhi
Zhongliu Fangzhi Zazhi

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APPENDIX 14-2

A Sample *CASSI* Entry

J*ournal of the* **Am***erican* **Chem***ical* **Soc***iety.* JACSAT. ISSN 0002–7863 (Absorbed Am. Chem. J.). In English; English sum. History: v1 1879+. *w* **126 2004.** *ACS Journals* or *Maruzen.*

AMERICAN CHEMICAL SOCIETY. JOURNAL. WASHINGTON, D. C.

Doc. Supplier: CAS.

AAP; AB 1905+; ABSR; ARaS; ATVA; AU–M 1893–1918,1920–1926,1928+; AkU 1879–1906,1919+; ArU; ArU–M 1923+; AzTeS; AzU 1889+; C; CL; CLSU; CLSU–M 1895–1897,1905,1908+; CLU–M; CLU–P; CMenSR 1916+; CPT; CSf; CSt; CSt–L; CU; CU–A; CU–I 1920+; CU–M; CU–Riv 1907+; CU–RivA; CU–RivP; CU–S; CU–SB; [etc.]

In this example,

- **J***ournal of the* **Am***erican* **Chem***ical* **Soc***iety* is the complete publication title with its abbreviated form indicated by boldface type (*J. Am. Chem. Soc.*).
- **JACSAT** is the CODEN, a six-character, unique title abbreviation used to represent titles in manual or machine-based information systems. The CODEN source is the *International CODEN Directory,* administered by Chemical Abstracts Service. The sixth character of each CODEN is a computer-calculated check character that ensures the reliability of the CODEN in computer-based systems.
- **ISSN 0002–7863** is the International Standard Serial Number (ISSN), assigned by the Library of Congress.
- **Absorbed Am. Chem. J.** is a reference to former titles and to any variant forms of the selected title.
- **In English; English sum.** is the language of the publication, summaries, and tables of contents.
- **History: v1 1879+** is the history of the publication. Volume 1 began in 1879. The + following the year indicates that the publication is still in existence under that title.
- ***w*** means weekly. The frequency of publication could also be *a* for annually, *ba* for biennially (every two years), *bm* for bimonthly (every two months), *bw* for biweekly (every two weeks), *d* for daily, *m* for monthly, *q* for quarterly, *sa* for semiannually (two times per year), *sm* for semimonthly (two times per month), or *sw* for semiweekly (two times per week).

- **126 2004** is the volume–year correlation (i.e., the first volume number of that year, which is the most recent covered by that edition of *CASSI;* volume 126 was the first volume number of 2004).
- ***ACS Journals* or *Maruzen*** is the publisher or source address or abbreviation.
- **AMERICAN CHEMICAL SOCIETY. JOURNAL. WASHINGTON, D. C.** is the AACR entry. This is the abbreviated entry as catalogued according to the *Anglo-American Cataloguing Rules* (2nd ed.). It is included here because of its predominance in library collection records.
- **Doc. Supplier: CAS** means that articles are available through the CAS Document Delivery Service.
- **AAP; AB 1905+; ABSR;** etc., is the library holdings information. Libraries are identified by their *National Union Catalog* symbols, and holdings are shown by inclusive years.