

### DOCUMENTING SOURCES ACS (American Chemical Society) STYLE

The following guidelines for citing sources and for constructing a reference list are taken from *The ACS Style Guide: A Manual for Authors and Editors*, 3<sup>rd</sup> ed; Coghill, Anne M. and Garson, Lorrin R., Eds.; American Chemical Society: Washington, DC, 2006. This manual is shelved in Ready Reference by the call number, R 808.02 Am35A.

#### SECTION I: REFERENCES - Citing in Text

- The three accepted styles for in-text citations are listed below, with examples:

1. superscript numbers

Oscillation in the reaction of benzaldehyde with oxygen was reported previously.<sup>3</sup>

2. italicized numbers in parentheses on the line of text

Oscillation in the reaction of benzaldehyde with oxygen was reported previously (3)

3. author's name and date of publication

The primary structure of this enzyme has been determined (Dardel et al., 1984).

- With numerical reference citations (as in the first two examples), start with 1 and number consecutively throughout the paper. If a reference is repeated, do not give it a new number; use the original reference number. Use only numbers, not combinations of numbers and letters (1 and 2, not 1a and 1b).
- When citing more than one reference at one place, 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 a dash for three or more.

...in the literature<sup>2,5,8</sup>

...in the literature (2, 5, 8)

...were reported<sup>3-5,10</sup>

...were reported (3-5, 10)

- Even when references are cited by number, you may also use an author name in the text, directly followed by the reference number.

Jensen (3) reported oscillation in the reaction of benzaldehyde with oxygen.

- In both systems, if a reference has two authors, give both names (Allison and Perez<sup>12</sup>); if there are more than two authors give only the first name listed and "et al." [Jones et al. (12)].

- If citing more than one reference by the same principal author and various coauthors, use the principal author's name followed by "and co-workers" [Brown and co-workers (10, 11)]. If it is necessary to distinguish among several references by the same authors published in the same year, add a, b, c after the date (Jones and Smith, 1980c; Steele et al., 1986b).
- Cite the reference in a logical place in the sentence.

recent investigations (cite)  
 as described previously (cite)  
 recently were demonstrated (cite)

a molecular mechanics study (cite)  
 Marshall and Levitt's approach (cite)  
 the procedure of Riesberg et al. (cite)

## SECTION II: REFERENCES - Listing

- Collate all references at the end of the manuscript in numerical order if cited by number and in alphabetical order if cited by author.
- The author is responsible for the accuracy and completeness of all references. The author should check all parts of each reference listing against the original documents.
- A reference must include certain minimum data: for journals--author, abbreviated journal title, year of publication, volume number, and initial page of cited article (the complete span is better); for books--author or editor, book title, publisher, city of publication, and year of publication.
- For material other than books and journals, enough information must be provided so that the source can be identified and located.
- In page spans, use all digits. 2-15      44-49      108-117      2022-2134

### Miscellaneous Citation Information

The *ACS Style Guide* states on page 305, "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."

Examples:

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.

## BOOKS

- In publishers' names, delete words such as "Company," "Inc.," "Publisher," and "Press."
- In the following examples, book titles appear in italics, so they should be underlined in the manuscript.
- Use the following abbreviations and spelled-out forms as indicated, and follow the capitalization shown.

Abstract (spell out)	p, pp (for page, or pages, with no periods)
Chapter (spell out)	paper (spell out)
ed. (for edition)	Part (spell out)
Ed., Eds. (for editor, editors)	Vol. (for a specific volume, Vol. 4)
No. (for number)	vols. (for number of volumes, 4 vols.)

### Books Without Editors

Chum, H. L.; Baizer, M. M. *The Electrochemistry of Biomass and Derived Materials*; ACS Monograph 183; American Chemical Society: Washington, DC, 1985; pp 134-157.

Stothers, J. B. *Carbon-13 NMR Spectroscopy*; Academic: New York, 1972; Chapter 2.

Bockris, J. O.; Reddy, A. K. N. *Modern Electrochemistry*, Plenum: New York, 1970; Vol. 2, p 132.

Littman, M.; Yeomans, D. K. *Comet Halley: Once in a Lifetime*; American Chemical Society: Washington, DC, 1985; p 23.

### Books With Editors

*Mapping Strategies in Chemical Oceanography*; Zirino, A., Ed.; Advances in Chemistry 209; American Chemical Society: Washington, DC, 1985.

Geacintov, N. E. In *Polycyclic Hydrocarbons and Carcinogenesis*; Harvey, R. G., Ed.; ACS Symposium Series 283; American Chemical Society: Washington, DC, 1985; pp 12-45.

Kolar, G. F. In *Chemical Carcinogens*, 2nd ed.; Searle, C. E., Ed.; ACS Monograph 182; American Chemical Society: Washington, DC, 1984; Vol. 2, Chapter 14.

Jennings, K. R. In *Mass Spectroscopy*; Johnstone, R. A. W., Senior Reporter; Specialist Periodical Report; The Chemical Society: London, 1977; Vol. 4, Chapter 9.

## THESES

- Give the person's name, the level of thesis, the university, and the date as specifically as possible.

Kanter, H. Ph.D. Thesis, University of California at San Francisco, Dec. 1984.

Fleissner, W. Ph.D. Dissertation, University of Tennessee, 1984.

## PATENTS

- Give the person's name, the patent number, and the year. If possible, include the *Chemical Abstracts* reference as well.

Norman, L. O. U.S. Patent 4 379 752, 1983.

Jordan, O. D. Br. Patent 2 081 298, 1982

Lyle, F. R. U.S. Patent 5 973 257, 1985; *Chem. Abstr.* **1985**, 65, 2870.

- **JOURNALS**

“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.” (The ACS Style Guide, page 291) Examples of entries with and without article titles:

Huffman, J. C.; Lewis, L. N.; Caulton, K. G. A Donor Semibridge? Molecular Structures of Dicyclopentadienyldivanadium Tetracarbonyl Triphenylphosphine and Dicyclopentadienyldivanadium Pentacarbonyl. *Inorg. Chem.* **1980**, 19, 2755.

Rose, L. M.; Hyka, J. *Ind. Eng. Chem. Process Des. Dev.* **1984**, 23, 429-437.

- In references to journals that begin every issue with page 1, include the issue number in parentheses following the volume number.

Stinson, S. C. Innovation fuels growing market for antibacterial drugs. *Chem Eng. News* **1986**, 64 (25), 26.

- Indicate when reference is made to an abstract of an article. If possible, give both the original article and the abstract, separated by a semi-colon.

Roe, D. D. *Zh. Fiz. Khim.* **1985**, 72, 1234; *Chem. Abstr.* **1985**, 78, 122a.

- Indicate when a reference is to the English translation of an article printed in a non-English language journal. If possible, also include reference to the original article.

Doe, A. B. *J. Gen. Chem. USSR (Engl. Transl.)* **1985**, 55, 2050; *Zh. Obshch. Khim.* **1985**, 55, 2100.

## **GOVERNMENT PUBLICATIONS**

Government publications can be pamphlets, brochures, books, maps, journals, and almost anything that can be printed. They may have authors or editors, who may be individuals or offices, or they may be unauthored. The following are examples of the most commonly cited types. Book and journal titles are set in italic type; titles of other publications and laws are set in Roman face and in quotes.

*Energy Alternatives and the Environment*: 1979; U.S. Environmental Protection Agency. Office of Research and Development. Office of Environmental Engineering and Technology. U.S. Government Printing Office: Washington, DC, 1979; EPA-600/9-80-009.

Sherma, J.; Beroza, M. *Manual of Analytical Quality Control for Pesticides and Related Compounds*; U.S. Environmental Protection Agency. U.S. Government Printing Office: Washington, DC, 1979; EPA-600/1-79/008.

Interdepartmental Task Force on PCBs. *PCBs and the Environment*; U.S. Government Printing Office: Washington, DC, 1972; COM 72.10419.

"Toxic Substances Control Act"; Public Law 94-469, 1976.

*Pesticides Analytical Manual*; U.S. Department of Health, Education, and Welfare. Food and Drug Administration. U.S. Government Printing Office: Washington, DC, 1982, Vol. 1.

*National Handbook of Recommended Methods for Water Data Acquisition*; Office of Water Data Coordination, U.S. Geological Survey: Reston, VA, 1977; Chapter 5.

*Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Power Plants*; NUREG 75/014; Nuclear Regulatory Commission: Washington, DC, 1975.

*Fed. Regist.* **1984**, 50, 1984.

"The Measurement of the Catalytic (Activity) Concentration of Seven Enzymes in NBS Human Serum SRM 909"; *NBS Spec. Publ. (U.S.)* 1983, No. 260-88.

### **State and Local Government Publications**

Tofflemire, T. J.; Quinn, S. O. "PCBs in the Upper Hudson River"; Technical Report No. 56; New York State Department of Environmental Conservation: Albany, NY, 1977.

"Air Quality Aspects of the Development of Offshore Oil and Gas Resources"; California Air Resources Board: Sacramento, CA, 1982.

## **REPORTS**

Schneider, A. Technical Report No. 1234-56, 1985; ABC Company, New York.

Morgan, M. G. "Technological Uncertainty in Policy Analysis"; final report to the National Science Foundation on Grant PRA-7913070; Carnegie-Mellon University: Pittsburgh, PA, 1982.

## **ABSTRACTS OF MEETING PAPERS**

Baisden, P. A. *Abstracts of Papers*, 188th National Meeting of the American Chemical Society, Philadelphia, PA; American Chemical Society: Washington, DC, 1984; NUCL 9.

Goodman, P. W. *Abstracts of Papers*, International Chemical Congress of Pacific Basin Societies, Honolulu, HI; American Chemical Society: Washington, DC, 1984; Abstract 05F14.

## **MATERIAL PRESENTED ORALLY**

Ford, W. T. Presented at the 189th National Meeting of the American Chemical Society, Miami, FL, April 1985; paper ORGN 79.

Rose, J. J. Presented at the Pittsburgh Conference, Atlantic City, NJ, March 1983; paper 707.

Wilkins, C. L. Presented at the Pacific Conference on Chemistry and Spectroscopy, Pasadena, CA, Oct. 1983.

Castro, M. E.; Russell, D. H. Presented at the 32nd Annual Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, 1984.

## **UNPUBLISHED MATERIALS**

Material accepted for publication but not yet published belongs in lists of literature cited. Strictly speaking, material submitted for publication but not yet accepted and personal communications are not part of the literature and therefore do not belong in lists labeled "Literature Cited", but may be included in footnotes that also include other notes. In ACS books and *Biochemistry*, material submitted but not accepted and personal communications are parenthetical notes in text, not numbered and not included in the "Literature Cited".

- Material accepted for publication but not yet published:

Roe, A. B. *J. Pharm. Sci.*, in press.

- Material submitted but not yet accepted:

Roe, A. B., submitted for publication in *J. Pharm. Sci.*

- Personal communications:

Doe, C. D., The State University of New York at Buffalo, personal communication, 1985.

Doe, C. D., The State University of New York at Buffalo, unpublished results.

## ELECTRONIC SOURCES

### CD-ROMs

The reference style follows that for periodicals and books, and the designation "CD-ROM" is included, as shown below:

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.

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

*ACS Directories on Disc*, Version 3.0 [CD-ROM]; American Chemical Society: Washington, DC, 1996.

*The Merck Index*, 12<sup>th</sup> ed. [CD-ROM]; Chapman & Hall: New York, 1996.

### Computer Software

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

Example:

*Mathematica*; software for technical computation; Wolfram Research: Champaign, IL, 1996.

### Electronic Copies of Articles Retrieved from a Database Provider

Author 1, Author 2, 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).

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 July 30, 2007).

## **INTERNET SOURCES**

The following list provides examples of citations for common types of Internet sources using the format specified by the *ACS Style Guide*. The sequence of the elements for each type of citation is given as a guide. Due to the wide variety of electronic resources, some adaptations might have to be made in citing particular sources. For more information, consult with a reference librarian, or refer to *The ACS Style Guide: A Manual for Authors and Editors*, 2<sup>nd</sup> ed., pages 108-213.

### **Recommended Format:**

Author (if any). Title of Site. URL (accessed date), other identifying information.

- For a subscription-only site, the URL need not be given.
- Use the title found on the electronic site itself: add the words “Home Page”, Gopher Site”, or “Database” for clarification when needed.
- If the URL does not fit on one line, it may be broken according to these rules:
  1. Break after an ampersand, a slash, or a period, but keep two slashes together.
  2. Do not add a hyphen to the end of a line.
  3. Do not break after a hyphen to avoid confusion as to the hyphen’s purpose.

### **Online Periodicals**

#### **Format:**

Author 1; Author 2; Author 3; etc. Title of Article. *Journal Abbreviation* [Online] **Year**, *Volume*, Inclusive Pagination or other identifying information.

Note: Article titles are not essential in reference citations, but they are considered desirable. The page numbers in the citation indicate the location of the article in a particular publication.

#### **Example:**

Craw, J. S.; Hinchcliffe, A. *Electron. J. Theor. Chem.* [Online] **1995**, 1, 8-10.

### **Web Page**

**Format:** Author, if available. Title of page as listed on the site. Address of page (date accessed).

#### **Examples:**

Hsu, D. Chemicool Periodical Table. <http://www-tech.mit.edu/Chemicool/> (accessed Jan. 1999).

International Union of Pure and Applied Chemistry Home Page. [http://www.iupac.org/dhtml\\_home.html](http://www.iupac.org/dhtml_home.html) (accessed July 30, 2007).



## JOURNALS

The following is a short list of the most commonly cited journals related to chemistry. Note that one-word titles are not abbreviated (e.g., **Biochemistry**, **Nature**, **Science**).

<i>Acc. Chem. Res.</i>	<i>J. Agric. Food Chem.</i>
<i>Anal. Biochem.</i>	<i>J. Am. Chem. Soc.</i>
<i>Anal. Chem.</i>	<i>J. Assoc. Off. Anal. Chem.</i>
<i>Anal. Chim. Acta</i>	<i>J. Bacteriol.</i>
<i>Anal. Lett.</i>	<i>J. Biochem. (Tokyo)</i>
<i>Antimicrob. Agents Chemother.</i>	<i>J. Biol. Chem.</i>
<i>Appl. Opt.</i>	<i>J. Chem. Eng. Data</i>
<i>Appl. Phys. Lett.</i>	<i>J. Chem. Soc., Dalton Trans.</i>
<i>Appl. Spectrosc.</i>	<i>J. Chem. Soc., Faraday Trans. 1</i>
<i>Arch. Biochem. Biophys.</i>	<i>J. Chem. Soc., Faraday Trans. 2</i>
<i>Biochem. Biophys. Res. Commun.</i>	<i>J. Chem. Soc., Perkin Trans. 1</i>
<i>Biochemistry</i>	<i>J. Chem. Soc., Perkin Trans. 2</i>
<i>Biochem. J.</i>	<i>J. Chromatogr.</i>
<i>Biochem. Pharmacol.</i>	<i>J. Electroanal. Chem.</i>
<i>Cancer Res.</i>	<i>J. Endocrinol.</i>
<i>Can. J. Biochem.</i>	<i>J. Fluorine Chem.</i>
<i>Can. J. Chem.</i>	<i>J. Heterocycl. Chem.</i>
<i>Chem. Abstr.</i>	<i>J. Lipid Res.</i>
<i>Chem. Biol. Interact.</i>	<i>J. Magn. Reson.</i>
<i>Chem. Eng. News</i>	<i>J. Med. Chem.</i>
<i>Chem. Eng. (N.Y.)</i>	<i>J. Mol. Biol.</i>
<i>Chem. Lett.</i>	<i>J. Org. Chem.</i>
<i>Chem. Listy</i>	<i>J. Pharmacol. Exp. Ther.</i>
<i>Chemotherapy (Tokyo)</i>	<i>J. Pharm. Pharmacol.</i>
<i>Chem. Pharm. Bull.</i>	<i>J. Pharm. Sci.</i>
<i>Chem. Phys.</i>	<i>J. Phys. Chem.</i>
<i>Chem. Phys. Lett.</i>	<i>Lipids</i>
<i>Chem. Rev.</i>	<i>Macromolecules</i>
<i>CHEMTECH</i>	<i>Mol. Pharmacol.</i>
<i>Chem.-Ztg.</i>	<i>Nature (London)</i>
<i>Clin. Chem. (Winston-Salem, N.C.)</i>	<i>Organometallics</i>
<i>Electrochim. Acta</i>	<i>Proc. Natl. Acad. Sci. U.S.A.</i>
<i>Endocrinology (Baltimore)</i>	<i>Proc. Soc. Exp. Biol. Med.</i>
<i>Environ. Sci. Technol.</i>	<i>Pure Appl. Chem.</i>
<i>Eur. J. Biochem.</i>	<i>Science (Washington, D.C.)</i>
<i>Exp. Cell Res.</i>	<i>Spectrosc. Lett.</i>
<i>Experientia</i>	<i>Steroids</i>
<i>Inorg. Chem.</i>	<i>Synth. Commun.</i>
<i>Inorg. Chim. Acta</i>	<i>Tetrahedron</i>
<i>Int. J. Chem. Kinet.</i>	<i>Tetrahedron Lett.</i>

Other commonly used style manuals are available in the library. For information on the **TURABIAN** format see **STUDY GUIDE #11**. For information on the **MLA (Modern Language Association)** format see **STUDY GUIDE #15**. For information on the **APA (American Psychological Association)** format see **STUDY GUIDE #19**. For information on the **CBE (Council of Biology Editors)** format see **STUDY GUIDE #24**. If you need another format or writers' manual, please consult with a librarian.

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