

Taylor & Francis Reference Style P

ACS

ACS (American Chemical Society) references are cited in the text by italic numbers in parentheses, and listed at the end of the article in number order.

Further guidance is available in *The ACS Style Guide* published by OUP and the American Chemical Society.

EndNote for Windows and Macintosh is a valuable all-in-one tool used by researchers, scholarly writers, and students to search online bibliographic databases, organize their references, and create bibliographies instantly. There is now an EndNote output style available if you have access to the software in your library (please visit <http://www.endnote.com/support/enstyles.asp> and look for TF-P ACS).

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1. How to cite references in your text.

Start with 1, and number consecutively throughout the paper, including references in the text and those in tables, figures and other non-text components. If a reference is repeated, do not give it a new number; use the original number. The author's name may be made part of the sentence.

Jensen (3) reported oscillation...

When authors are named, if a reference has two authors, give both names. If more than two, give only the first, followed by 'et al.'

Allison and Perez (4) reported...

Johnson et al. (6) reported...

To cite more than one reference by the same principal author and various co-authors, use the principal author's name followed by 'and co-workers' or 'and colleagues'.

Pauling and colleagues (27–29) reported...

When citing more than one reference at one place by number, list the numbers in ascending order and separate them by commas and spaces, or with an en-dash if part of a consecutive series:

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

were reported (3–5, 10)...

Cite the reference in a logical place in the sentence.

2. How to organize the reference list.

Collate all references at the end of the paper in numerical order. Numbers are in parentheses but not in italics before each reference.

(1) Chauvin, Y.; Gilbert, B.; Guibard, I. *Vib. Spectrosc.* **1991**, *1*, 299–304.

(2) Lu, Y., Pignatello, J.J. *Environ. Sci. Technol.* **2004**, *38*, 5853–5862.

Do not include items that are not cited in the article.

Repeating fields of information

Provide complete references so that they can be properly linked. Do not use *ibid.* or *idem.* If two or more references with the same authors are cited, it is not acceptable to combine them into a single reference.

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.

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.

3. Beilstein reference.

Treat Beilstein references as periodical references.

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

4. Book.

Author name

Separate the names of multiple authors by semicolons. List names in inverted form: surname, then first initial, middle initial and qualifiers.

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

Organization or committee as author

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.

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.

Editor name

If a book has no primary authors, place the editor in the author name field. Separate editor names by commas.

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

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

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

Chapter in edited book

The chapter title is an optional element. Please consult the journal style sheet for your journal to see if titles are required.

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

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

Book titles (and the following semicolon) are in italics.

Edition

Reagent Chemicals, 10th ed.;

Publisher name

Do not abbreviate publishers' names, except for those created by the publishers (e.g. AIChE, ASTM, IUPAC). 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

Give the city and state for US cities, or the city and country for others, unless the city is a major city and could not be confused with others of the same name. use the two-letter abbreviations for states.

Birmingham, UK

Boca Raton, FL

Cambridge, MA

Cambridge, UK

Chichester, UK

Dordrecht, Netherlands

Elmsford, NY

Englewood Cliffs, NJ

London

New York

Princeton, NJ

Springfield, MA

Washington, DC

Year

Add the year at the end of the reference.

Volume information

Use the following abbreviations and spelled out forms:

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.)

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 volume 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.

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, give the complete page range.

pp 562–569.

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, add it as in the following 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.R. Schleyer).

Book in a language other than English

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

Translated chapter

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

Organic Syntheses collected volumes

These should be treated as books.

Kirk-Othmer Encyclopedia

Include the article title followed by a full stop (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 should be styled as books. Use the regular citation format for a book reference, but include information pertaining to the series.

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.

If a volume or part number is given for a series of books instead of a series number, cite this information.

Wiberg, K. In *Investigations of Rates and Mechanisms of Reactions*; Lewis, E.S., Ed.; Techniques of Chemistry, Vol. VI, Part 1; Wiley & Sons: New York, 1974.

Online book

Include online location and access date. For a reference work updated with new content, include the date on which sections were posted or updated.

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).

Online encyclopedia

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

5. Chemical abstract.

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

Mohamed, A.M.; Hawata, A.; *Eur. J. Org. Chem.* **2002**, 2039–2045; *Chem. Abstr.* **2003**, 138, 4195.

6. CD-ROM or DVD.

Follow information for book or periodical as appropriate.

Periodical

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.

Book

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

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

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.

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

7. Computer program.

Computer programs can be dealt with as a book citation, but without chapters or pages.

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

Commercial software or database

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

8. Conference paper, proceedings, poster session.

Full citation of published abstracts and proceedings

This is as a book citation but the title field includes additional information.

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; they do not usually have editors and 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 location are not required.

Harwood, J.S. Direct Detection of Volatile Metabolites Produced by Micro-organisms. *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. 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, unless CASSI has 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).

Unpublished conference paper

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.

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

Unpublished conference presentation online (e.g. poster session)

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).

On CD-ROM

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.

9. Dataset.

Wang, G.-Y.; Zhu, Z.-M.; Cui, S.; Wang, J.-H. *Data from: Glucocorticoid Induces Incoordination between Glutamatergic and GABAergic Neurons in the Amygdala* [Dataset]. Dryad Digital Repository, 2017. <https://doi.org/10.5061/dryad.k9q7h>

10. Dissertation or thesis.

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.

Electronic thesis

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).

11. Government publication.

Agriculture Fact Book 2000; US Department of Agriculture, US 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, US Government Printing Office: Washington, DC, 2005.

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

12. Internet.

Website

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_hoime.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).

US Environmental Protection Agency. <http://www.epa.gov> (accessed Nov 7, 2004).

Document retrieved from website

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).

Electronic list or newsgroup

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).

Email

Cite as personal communication.

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

13. Journal article.

Author names

Include all author names, with surname first, then initials. With multiple authors, separate with semicolons. List the first ten authors followed by 'et al.'.

Cotton, F.A.; Lin, P.B.

Schafer, F.W., Jr.

Fishman, W., II.

Organization or committee as author

Acronyms for very well-known organizations may be used.

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.

Article title

This is an optional element. Please consult the journal style sheet for your journal to see if titles are required. Not all examples in this guide give article titles.

Capitalize main words in titles if used. This means nouns, pronouns, verbs, adjectives, adverbs, subordinating conjunctions but not coordinating conjunctions ('and', 'but', 'or', 'nor', 'yet', 'so') or articles ('a', 'an', 'the'). Capitalize the 'to' in infinitives. Capitalize the first and last words of a title, regardless of the part of speech.

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

Journal title

Abbreviate according to the Chemical Abstracts Service Source Index (CASSI), and italicize. One-word titles are not abbreviated.

Journal published in a language other than English

Cite either by the non-English title or by a translated form.

Nippon Ishikai Zasshi or *J. Jpn. Med. Assoc.*

Nouv. J. Chim. or *New J. Chem.*

Year of publication

The year and following comma are bold.

Volume number

Volume number and following comma are italic.

Polym. Sci., Part A: Polym. Chem. **2005**, 43, 5394–5413.

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

Lancet **1983**, No. 2, 29.

Issue number

For periodicals in which each issue begins with page 1, include issue information (number or date) in the publication volume field. Issue information is roman, enclosed in parentheses, and follows the volume number and a space.

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

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

Supplement

Eur. J. Cancer **2005**, 40 (Suppl. 1), 781.

Eur. J. Anaesthesiol. **2005**, 22 (Suppl. S36), 1–35.

Pagination

Give the complete page range, using all digits, with an en dash in between (2–15, 44–49, 103–107, 1376–1382, 11771–11779).

Article printed in the English translation of a non-English 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. *J. Struct. Chem. (Engl. Transl.)* **2004**, 45 (5), 778–785; *Zh. Strukt. Khim.* **2004**, 45 (5), 822–829.

Two or more companion publications

Separate 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.

Online article

For articles based on the print version of the journal, if you have viewed the online version only, add [Online] after the journal title.

Fine, L. Einstein Revisited. *J. Chem. Educ.* [Online] **2005**, *82*, 1601–1608.
<http://jchemed.chem.wisc.edu/Journal/Issues/2005/Nov/abs1601.html> (accessed Oct 15, 2005).

Article online in advance of print issue

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).

Online-only journal

Zloh, M.; Esposito, D.; Gibbons, W.A. Helical Net Plots and Lipid Favourable Surface Mapping. *Internet J. Chem.* [Online] **2003**, *6*, Article 2.
<http://www.ijc.com/articles/2003v6/2/> (accessed Oct 13, 2004).

14. Nonscientific magazine or newspaper.

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

15. Patent.

Ensure that the patent stage is indicated and that the pattern of the number follows that of the original document. If possible, include the title and *Chemical Abstracts* reference as well.

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.

Sheem, S.K. Low-Cost Fiber Optic Pressure Sensor. US Patent 6,738,537, May 18, 2004.

16. Preprint.

For articles retrieved from preprint servers:

Ward, D.W.; Nelson, K.A. Finite Difference Time Domain (FDTD) Simulations. 2004, arXiv:physics/0402096.arXiv.org e-Print archive. <http://arxiv.org/abs/physics/0402096> (accessed Oct 13, 2004).

17. Software.

With producer location

Hecht, K.; McKinnon, R.; Podkowiak, T.; Roman, M.; Schmidt, J.; Vivier, S.; Werst, E.; Wyman, J. *Spectrum*, version 6.06; Avenir Health: Glastonbury, CT, 2021.
<https://avenirhealth.org/Download/Spectrum/SpecInstall.EXE> (accessed Feb 26, 2021).

Without producer location (archive, especially)

Short, W. M. *MultiWordNet*, version 0.1.3; Python Package Index, 2020.
<https://pypi.org/project/multiwordnet/0.1.3/#files> (accessed Feb 26, 2021).

18. Technical report.

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

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

19. Unpublished work.

Material in any stage preceding actual publication falls under this classification, as do personal communication and work not destined for publication. For material accepted for publication, use the phrase 'in press'.

Tang, D. *Chem Phys.*, in press.

For material 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.

Work not intended for publication

Permission must be obtained before citing personal communication.

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

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

Messages sent by email are not considered personal communication.