



ACS Style Guide: WHAT IS IT?

ACS Style refers to the citation format of the American Chemical Society which includes over more than 50 journals. ACS style guide represents best practices within the field of chemistry. This citation style guide is based on the 3rd edition of The ACS Style Guideline: Effective Communication of Scientific Communication.

MANUSCRIPT FORMATTING: ACS recommend the following manuscript formatting:

- ACS style focuses more on precision and unambiguous writing. Sentences need to have a clear meaning that easily flows from one to the next. If not, misinterpretations might confuse the reader.
- The style recommended by the ACS is taken from already established sources such as The **Chicago Manual of Style**, **Words into Type** and the **United States Government Printing Office Style Manual**

Grammar, Punctuation and Spelling

Grammar, Punctuation and Spelling are covered in Chapter 9 of the ACS Style Guidelines, pp. 105-134.

- **Subject Verb agreement** – The subject and its verb have to agree in number. For instance, two singular subjects joined by “and” must use a plural verb, unless the plural form of the subject is used in singular effect which then uses a singular verb.
 - Ex: Growth and isolation of M13 virus were described. (plural verb)
 - Ex: Research and development is attracting a growing number of young scientists. (singular verb)
- **Awkward Omissions of Verbs and Auxiliary Verbs** – All subjects within a compound sentence must use the proper verb and auxiliary verb.
 - Ex: The eluant was added to the column, and the samples were collected in 10 mL increments.
- **Dangling Modifiers** – These are modifying words or phrases used with the intent to modify other words but fail to do so. These can be accidentally created when writing in passive voice and must be avoided.
 - Ex: When confronted with these limitations, the experiments were discontinued. (incorrect)
 - Ex: When confronted with these limitations, we discontinued the experiments.
 - In light of these limitations, the experiments were discontinued. (correct)

- **Reflexive Pronouns** – Only use reflexive pronouns to refer back to a noun or pronoun in the same sentence.
 - Ex: Please send your manuscript to the associate editor or myself. (incorrect)
 - Ex: Please send your manuscript to the associate editor or me. The associate editor herself will review your manuscript. (correct)

Editorial Style

Editorial Style are covered in Chapter 10 of the ACS Style Guidelines, pp. 135-202.

- **Titles and Headings**
 - In titles, capitalize main words but do not capitalize coordinating conjunctions (“and”), articles (“a”), or prepositions.
 - Capitalize “as” not as a preposition but as a subordinating conjunction
 - Do not capitalize descriptors of the chemical name but do capitalize the first English word
 - Capitalize genus names but do not capitalize the species name
- **Greek Letters**
 - Use Greek letters for chemical and physical terms, not the spelled-out words

Numbers, Mathematics and Units of Measurements

Numbers, Mathematics and Units of Measurements covered in Chapter 11 of the ACS Style Guidelines, pp. 203-232.

- **Numbers**
 - Uses spaces between numerals and their unit
 - Number below 10 should be written out while number 10 and above can use their numeral value. Exceptions to this are:
 - Numbers are in a series of each other (ex. 1, 5 and 10 experiments)
 - Very large numbers (ex. 1 billion)
 - Numbers modifying a noun (ex. Activity was found in 4 pairs, but not 20 pairs.)
 - Spell out the numeral if it starts the sentence
 - Use numbers in the sense of math (exp. 5-fold)

Names and Numbers Compound for Chemical Compounds

Names and Numbers Compound for Chemical Compounds covered in Chapter 9 of the ACS Style Guidelines, pp. 233-254.

- **Locants and Descriptors**
 - Use hyphens when numerals act as locants, such 6-aminobenzothiazole

- Use italics for chemical element symbols that reference an attachment to an atom
 - But do not use italics if it is used as a noun or adjective
- Use italics for H if it denotes an added or indicated hydrogen
- Use Greek letters and not the written word for chemical names
- Names should not be capitalized unless they are the first word in the sentence
- Commas are used between numeral, chemical elemental symbol and Greek locants with no spaces after the comma.
 - Numeral precede Greek letters, unless they are used as different locants which must be separated between commas with no space afterwards
- Use hyphens to separate locant and configurational descriptors from each other and the syllabic portion of the name

ACS STYLE: GENERAL FORMAT FOR CITATIONS

Internal Citations

There are three ways to do in text citations:

1. By using superscript numbers, which appear outside the punctuation if it applies for the whole sentence or clause
 - Ex. Oscillation in the reaction of benzaldehyde with oxygen was reported previously.³
2. By using endnotes at the end of the sentence. These endnotes are always done in italics.
 - Ex. 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 inside the punctuation
 - Ex. The primary structure of this enzyme has also been determined (Finnegan et al., 2004).

If there are two authors, give both names joined by and. If more than two authors, list first name followed by et al. with no comma before but after.

- Allison and Perez (12)
- (Johnson et al., 2005)

When citing more than one author, list alphabetically and separate with a semicolon

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

When citing the same author more than once, use the years published by the author separated by commas. If the author has more than one reference in the same year, add lowercase letters to differentiate them.

- (Trapani, 2003, 2005; Zillman, 2004)
- (Knauth, 2005a, 2005b)

Numerical citations rules:

- With numerical reference citations, start with 1 and work your way down in order
- To cite more than one paper with the same leading author, follow with “with coworkers” (or colleagues)
 - Cram and colleagues (27–29)
- When citing with more than one reference with different authors, list in ascending order with commas separated
 - in the literature^{2,5,8}

References

Print Source

Books

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.

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

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.

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

Journals

Note: Articles found online will also use this format as well.

With title

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

Klingler, J. Influence of Pretreatment on Sodium Powder. *Chem. Mater.* **2005**, 17, 2755–2768.

With no title

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

Klingler, J. *Chem. Mater.* **2005**, 17, 2755–2768.

Government Publications

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

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

Nonscientific magazines and newspapers

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

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

Online

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).

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

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).

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).

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).

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)

General Websites

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

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