A Quick Guide to Reference Citations Using the ACS Guide to Scholarly Communication (2020)

Listing sources of information at the end of a paper is an important part of professional scholarship and writing. Many disciplines have specific requirements for the layout of these references. In chemistry the standard is the *ACS Guide to Scholarly Communication*, published by the American Chemical Society. Part 4 of that publication is devoted to references and contains many examples. **This Guide is not a substitute for the *ACS Guide to Scholarly Communication***. It includes most commonly asked questions, but it doesn't have every possible document type or variation that could occur.

Online Databases and Repositories

Recommended Format:

Author 1; Author 2;…; Author 10; et al. Title of Database Item. *Title of Database*, database version (if any). Publisher or Organization, date. DOI or URL (accessed YYYY-MM-DD)
n.d. means no date.

Example:

Schroeder, G. Communicating Science (or Anything Else) Online, *Slideshare*, December 17, 2014. https://www.slideshare.net/grayschroeder2/communicating-science-or-anything-else-online (accessed 2019-02-22)

Citing unauthored content within a database:

Tin. *PubChem*, National Centre for Biotechnology Information, n.d. https://pubchem.ccbi.nlm.nih.gov/element/Tin (accessed 2021-12-14)

Ammonium Thiocyanate. *NIST Chemistry Webbook*, *NIST, Standard Reference Database 69.* U.S. Department of Commerce, National Institute of Standards and Technology, n.d. https://webbook.nist.gov/cgi/cbook.cgi?ID=C1762954&Units=Si (accessed 2019-03-17) (CAS RN: 1762-95-4)

4-Bromo-2-fluorotoluene. *SDBSWeb*. National Institute of Advanced Industrial Science and Technology. n.d. https://sdbs.db.aist.go.jp (accessed 2019-03-17) (CAS RN: 51436-99-8)

Books:

There are many different variations on how to properly cite books. Whether or not the book is in a series, has an editor, is cited in its entirety or only in part, has different editions, etc. can all cause variations in the format.

Recommended formats for Books with Authors:

Author 1; Author 2;…; Author 10; et al. Chapter Title. In *Book Title*, edition number, Series title, Vol. number (if any); Publisher: Place of publication, year; pagination.

Author 1; Author 2;…; Author 10; et al. *Book Title*, *edition number*, Series title, Vol. number (if any); Publisher: Place of publication, year.

The place of publication needs to be included only for smaller or specialized publishers.

Examples:

Print Book:

Petrucci, R. H.; Herring, F. G.; Madura, J. D.; Bissonnette, C. Group 1: The Alkali Metals. In *General Chemistry: Principles and Modern Applications*, 11th ed; Pearson, 2017

Beall, H.; Trimbur, J. *A Short Guide to Writing about Chemistry,* 2nd ed.; Longman, 2001; pp 17–32.

Berg, J. M.; Tymoczko, J. L.; Gatto, G. J., Jr.; Stryer, L. *Biochemistry*, 9th ed.; W. H. Freeman, 2019

Bard, A. J.; Faulkner, L. R. Double-Layer Structure and Absorption. In *Electrochemical Methods: Fundamentals and Applications*, 2nd ed.; John Wiley & Sons, 2001; pp 534 – 579.

Ebook:

McNair, H. M.; Miller, J. M.; Snow, N. H. *Basic Gas Chromatography*, 3rd ed.; Wiley, 2019. DOI: 10.1002/9781119450795

Recommended formats for Books with Editors:

Author 1; Author 2;…; Author 10; et al. Chapter Title. In *Book Title*, edition number, Editor 1, Editor 2, [continue until all editors are listed], Eds.; Series title, Vol. number (if any); Publisher: Place of publication, year; pagination.

Author 1; Author 2;…; Author 10; et al. In *Book Title*, *edition number*, Editor 1, Editor 2, [continue until all editors are listed], Eds.; Series title, Vol. number (if any); Publisher: Place of publication, year.

The place of publication needs to be included only for smaller or specialized publishers.

Examples:

Almlof, J.; Gropen, O. In *Relativistic Effects in Chemistry*. In *Reviews in Computational Chemistry*; 2nd ed. Lipkowitz, K.B., Boyd, D.B., Eds.; Longman, 2001; pp 17–32.

Book Sets:

Books published in a finite series or a set number of volumes are called terminal series or book sets. Common examples include a set of encyclopedias or a multivolume reference work.

Recommended formats for Book Sets:

Author 1; Author 2; …; Author 10; et al. Article Title. In *Book Set Title*, edition number; Editor 1, Editor 2, [continue until all editors are listed], Eds.; Publisher: Place of Publication, year; Volume number, pagination.

Author 1; Author 2; …; Author 10; et al. Chapter Title. In *Book Title*; Editor 1, Editor 2, [continue until all editors are listed], Eds.; Book Set Title, Part number; Publisher: Place of Publication, year; pagination. DOI: number

Author 1; Author 2; …; Author 10; et al. Chapter Title. In *Book Title*; Editor 1, Editor 2, [continue until all editors are listed], Eds.; Book Set Title, Vol. number, Part number; Publisher: Place of Publication, year; pagination. DOI: number

Examples:

Encyclopedia or handbook article in print:

Pohanish, R. P. Acetone. In *Sittig's Handbook of Toxic and Hazardous Chemicals and Carcinogens*, 7th ed.; William Andrew (Elsevier), 2017; Vol. 1, pp 27–30

Article in an online encyclopedia:

Long, J. B. Tin In *Access Science*; Access Science Eds.; McGraw-Hill Education, 2021. DOI: 10.1036/1097-8542.697900 (Last reviewed January 2020)

Lithium-Ion Battery Anodes Produced from Waste Plastic Bags. In *Access Science*; Access Science Eds.; McGraw-Hill Education, 2019. DOI: 10.1036/1097-8542.BR0301191 (Last reviewed March 2019)

Recommended format for Online Books, Series, & Reference Works with Continuously Updated Content:

Author 1; Author 2; …; Author 10; et al. Article Title. In *Book Title*, edition or version number; Editor 1, Editor 2, [continue until all editors are listed], Eds.; Book Series or Set Information; Publisher: Place of Publication, date posted online; pagination. URL (accessed YYYY-MM-DD)

Example:

Caffeine. *The Merck Index Online*. Royal Society of Chemistry, 2013. https://www.rsc.org/Merck-Index/monograph/m2909/caffeine (accessed 2019-03-17). (CAS RN:58-08-2)

Tin. In *CRC Handbook of Chemistry and Physics* Online, 102nd ed (Internet Version 2021); Rumble, J., Ed.; CRC Press/Taylor & Francis: Boca Raton, FL. https://hbcp.chemnetbase.com/faces/contents/ContentsSearch.xhtml (accessed 2021-12-14).

Data or Datasets:

Compilations of chemical data can be found in multiple resources and formats, and online handbooks, databases and websites. The data was obtained from the primary literature. There is no fixed citation format. Therefore, follow the rule "cite what you read", the primary source should be cited only if the article is actually read and used.

However, there may be instances where two sources should be included in the citation. For example, the retrieved data are calculated data, such as spectra supplied by Bio-Rad or Wiley or predicted data calculated using ACD/Labs software, that were retrieved using SciFinder.

The citation format wand elements are based on the type of print or online source where the data were found or retrieved. If the data are from a print or electronic handbook or encyclopedia, format the reference accordingly. If the data are from a journal article, cite the article. Databases, repositories, and other online sources should be cited according to those recommended formats, with DOIs or URLs and access dates.

Example:

Book:

Vanadium (V) Oxide. In *CRC Handbook of Chemistry and Physics*, 93rd ed.; Hanes, W. M., Lide, D. R., Bruno, T. J., Eds.; CRC Press: Boca Raton, FL, 2012; Section 4, p98. (CAS RN: 1314-62-1)

Multivolume book:

Huber, K. P.; Herzberg, G. Iodine. In *Constants of Diatomic Molecules*; Molecular Spectra and Molecular Structure, Vol. 4; D. Van Nostrand: Princeton, NJ, 1979; pp 330-335

Online Database:

Caffeine. *The Merck Index Online*. Royal Society of Chemistry, 2013. https://www.rsc.org/Merck-Index/monograph/m2909/caffeine (accessed 2019-03-17). (CAS RN:58-08-2)

4-Bromo-2-fluorotoluene. *SDBSWeb*. National Institute of Advanced Industrial Science and Technology. n.d. https://sdbs.db.aist.go.jp (accessed 2019-03-17) (CAS RN: 51436-99-8)

Websites:

These are online sources not covered elsewhere in this document.

For many sources, the question is not only how should they be cited but whether they should be cited. Some websites allow individuals to deposit, post, or publish their own content, and then those individuals can just as easily edit or delete that same content. The importance of using and citing content from such websites should be weighed against the likelihood that said content will be accessible in the future.

General Website:
This format maybe sufficient if a home page or high-level page of a website is being cited. Add "Home Page" to the title if applicable. The organization name does not need to be repeated if it is part of the website name.

Recommended format for general websites:

Author or organization (if any). *Title of site*. URL (accessed YYYY-MM-DD).

Example:
U.S. Environmental Protection Agency. *Toxics Release Inventory (TRI) Program*. https://www.epa.gov/toxics-release-inventory-tri-program (accessed 2019-02-21)

ACS Publications Home Page. https://pubs.acs.org/ (accessed 2019-02-21)

Journal Articles:

Recommended Format for Published Journal Article Citations:
Author 1; Author 2;…; Author 10; et al. Title of the Article. *Journal Title Abbreviation* **year of publication**, *volume number* (issue number), page range. DOI: number (explanatory note, if needed.)

Examples:

Labaree, D. C.; Reynolds, T. Y.; Hochberg, R. B. Estradiol-16a-carboxylic Acid Esters as Locally Active Estrogens. *J. Med. Chem.* **2001**, *44* (11), 1802–1814. DOI:10.1021/jm000523h

More than 10 authors:

Vigren, E.; Hamberg, M.; Zhaunerchyk, V.; Kaminska, M.; Semaniak, J.; Larsson, M.; Thomas, R. D.; af Ugglas, M.; Kashperka, I.; Miklaar, T. J.; et al. Dissociative Recombination of Protonated Formic Acid: Implications for Molecular Cloud and Cometary Chemistry. *Astrophys. J.* **2010**, *709* (2), 1429–1434. DOI: 10.1088/0004-637X/709/2/1429

The above format is for published journal articles. The journal title is abbreviated using abbreviations in the Chemical Abstracts Service Source Index (CASSI) – see the following link: https://cassi.cas.org/search.jsp. The journal title field ends in a period only when the last word of the title is abbreviated. Single word titles are not abbreviated. In some cases, a digital object identifier (DOI) is not available. In such cases a universal resource locator (URL) can be used. If the article is in print, the citation ends after the page numbers.

Journal not included in CASSI: include the full, unabbreviated title in the citation.

Example:

Chiang, S.-T. The Theses and the Patent Application. *Zhongguo Tu Shu Guan Xue Hui Bao* **2005**, *75*, 185 – 193 (Article title and Abstract in English, text of article in Chinese)

Articles Released Ahead of Formal Publications:

Some publishers post early versions of articles on their journal websites as soon as the articles are accepted or at some stage in the editorial process. Each publisher has a different name for these. For example, ACS use “Article ASP”, while Elsevier prefers “Articles in Press”.

Recommended format:

Author 1; Author 2;…; Author 10; et al. Title of the Article. *Journal Title Abbreviation* **year of publication**, *volume number* (issue number), page range. DOI: number (accessed YYYY-MM-DD)

Author 1; Author 2;…; Author 10; et al. Title of the Article. *Journal Title Abbreviation*, publication status, page range. DOI: number (accessed YYYY-MM-DD)

Examples:

Volume, issue, and page numbers have been assigned:

Tran, P. L.; Luth, K.; Wang, J.; Ray, C.; Mehta, D.; Moeller, K. W.; Moeller, C. D.; Reid, T. W. Efficacy of a Silver Colloidal Agent against Selected Oral Bacteria *in Vitro*. *F1000Research* **2019**, *8*, *267*. Ver. 1, referees, awaiting peer review. DOI: 10.12688/f1000research.177707.1 (accessed 2019-03-07).

Some elements missing:

Shang, M.; Ren, M.; Zhou, C. Nitrogen Mustard Induces Formation of DNA – Histone Cross-Links in Nucleosome Core Particles. *Chem. Res. Toxicol.* **2019**, Article ASAP. DOI: 10.1021/acs.chemrestox.9b00354 (accessed 2019-11-21)

Articles from Aggregator Sites

Recommended Format:

Author 1; Author 2;…; Author 10; et al. Title of the Article. *Publication Title* **year of publication**, *volume number* (issue number), page range, updated month day, year (accessed YYYY-MM-DD from name of Aggregator)

Author 1; Author 2;…; Author 10; et al. Title of the Article. *Publication Title*, updated month day, year (accessed YYYY-MM-DD from name of Aggregator)

Example:

Lanzotti, A.; Grasso, M.; Staiano, G.; Martorelli, M. The Impact Process Parameters on Mechanical Properties of Parts Fabricated in PLA with an Open-source 3-D Printer. *Rapid Prototyp. J.* **2015**, *21* (5), 604–617. DOI: 10.1108/RPJ-09-2014-0135 (accessed 2019-11-22 from ProQuest: Materials Science & Engineering Collection.)

Safety Data Sheets (formerly Material Safety Data Sheets):

Safety Data Sheets (SDSs) communicate information about hazardous chemicals to users. The SDSs include property data, health hazards, protective measures, and safety precautions.

Recommended format for Safety Data Sheets:

Title, CAS Registry Number; product stock or catalog number; version number; Manufacturer: Location of Company, YYYY-MM-DD. URL (accessed YYYY-MM-DD)

Example:

Manufacturer:
Palladium (II) Acetate; CAS RN: 3375-31-3; A1424; rev 1; TCI America: Portland, OR, 2018-07-06. https://www.tcichemicals.com/eshop/en/us/commodity/A1424/ (accessed 2019-10-07)

Third Party Provider:

Formic Acid, 88%; CAS RN: 64-18-6; A119P-500; rev 4; Fisher Scientific, One Reagent Lane, Fair Lawn, NJ, 2018-01-18. Retrieved from Canadian Centre for Occupational Health and Safety, Web Information Service. http://ccinfoweb2.ccohs.ca/msds/records/6333749.html (accessed 2019-10-07).

CITING REFERENCES IN TEXT

You may cite references in text in the following ways:
By superscript numbers, which appear outside the punctuation if the citation applies to the whole sentence or clause.

The silicon compounds synthesis was reported previously.[3]

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

The silicon compounds synthesis was reported previously (*3*).