

Journal of Undergraduate Research Writing Style Guide

Note: For specialized formats not listed here, please contact the *Journal of Undergraduate Research* Program Manager, Shannon Dunphy Lazo, at Shannon.dunphy@science.doe.gov

HEADING INFORMATION

1. ***Titles.***
 - a. Titles should be succinct descriptions of the research done.
 - b. Capitalize the first and last words and all major words of the title only (title case)
 - c. Do not use any acronyms in the title.
 - d. The title should not end with a period.
2. ***Author Listing - for Abstracts only.***
 - a. All authors and their institutional information should start a new line after the title.
 - b. All authors' names (students and mentors) should be in title case.
 - c. List student authors first.
 - d. Authors from a single institution are to be arranged alphabetically by last name and followed by the group's institutional information.
 - e. Institutional information is enclosed in parentheses and includes the school or laboratory name, the city followed by a comma, the state's two-letter postal service abbreviation followed by a space and the ZIP-code. Make sure the zip code has 5 digits (the preceding zero should be included).
 - f. A comma separates the institutional information from the next name.
 - g. The complete list of authors and their institutional information ends with a period.

Example: One student, one mentor

Pharmacodynamic Responses of Target Tissues Exposed to Various Concentrations of the Organophosphate Insecticide Diazinon in Rats
Joe Student (Somewhere College, Somewhere, FL 33333), Ima Scientist
(National Renewable Energy Laboratory, Golden, CO 80401).

Example: Multiple students from different institutions, one mentor

Binding Studies of Actinides and Lanthanides Using a Novel Phosphorous-Based Ligand System
Cuthbert Martyr (University of the Virgin Islands, Charlotte Amalie, VI 00802),
Kia Richards (Stony Brook University, Stony Brook, NY 11790), Gregg Lumet-
Ta (Pacific Northwest National Laboratory, Richland, WA 99352).



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Example: One student, multiple mentors

Preliminary Crystal Structure Analysis of Proteins with Oxidoreductase Functions
Christopher Vu (University of Houston, Houston, TX 77204), Priscilla Cooper,
Jill Fuss and Susan Tsutakawa (Lawrence Berkeley National Laboratory,
Berkeley, CA 94720).

Example: Multiple students, one mentor OR FaST team (multiple students, one faculty member), one mentor

Metabolic Engineering of *Alicyclobacillus acidocaldarius* via Electroporation for
the Production of Biodegradable Plastics
Charlyn James, Melanie Torres and Sharon Wezensky (University of Washington,
Seattle, WA 98195), Robert Michaels (Argonne National Laboratory, Argonne,
IL 60439).

FORMATTING**3. Dashes.**

There are different types of dashes you may need to use in your paper. Each has its own use and requirements.

- a. An **em dash** — indicating a break in a sentence like this — is created by using either MS Word’s em dash character, typing two hyphens, or typing <Alt 0151>. Use a space on either side.
- b. An **en dash** is used to represent the words “to,” “through” or “and.” It is never surrounded by spaces. Create an en dash by using either MS Word’s en dash character, or typing <ALT 0150>. Use it:
 - i. between page numbers (pp. 5–10)
 - ii. in reference numbers ([5]–[10])
 - iii. for figure citations (Figs. 2–4)
 - iv. with years (1996–1999)
 - v. between university name and campus (University of California–Berkeley)
 - vi. a range of values (10–20 cm)
 - vii. in chemical abbreviations such as Ni–Al–Si

Note: When indicating a range, if the word “from” is used, the word “to” must be used rather than an en dash (from 5 to 50 times).

4. Hyphenation.

- a. Do not use hyphenation to break a long word at the end of a line; turn off the hyphenation function in MS Word.
- b. Use a hyphen in compound words and names.
(Catherine Zeta-Jones, Miami-Dade County, Bose-Einstein theory).
- c. Use a hyphen to separate numbers that are not inclusive such as telephone numbers (1-631-555-1212).

5. Lists in a sentence. Do not use a comma before the word “and” in a list of three or more items.

(red, white, and blue)

6. Page Setup, Margins and Font Choices.

- a. Papers should be double-spaced.
- b. Abstracts should be single spaced and contained in one paragraph.
- c. Submissions must have one inch for all margins, one column and left justification only; i.e., ragged right. Use MS Word’s *align left* option.
- d. Use Times New Roman font, size 12 points.

7. Paragraph indentation.

Do use a blank line between paragraphs. Do not use indents at the beginning of the paragraph.

8. Spaces after a period.

Use a single space, not two spaces, at the end of a sentence.

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9. ***Special characters.***

For special characters or symbols (degree sign, prime, dashes, exponentials), insert the symbol found in MS Word.

10. ***Spelling and Grammar.***

For spelling references, consult *Webster's New World Dictionary*, 4th edition. Where there are variant spellings offered by this dictionary, always choose the first spelling. For guidance on grammar and usage not included in these guidelines, consult *The Chicago Manual of Style*, 15th edition.

11. ***Word Processing Software.***

Abstracts and papers must be submitted in MS Word only.

TEXT AND WORD USAGE**12. Acronyms.**

- a. Spell out the acronym the first time it appears in an abstract and again the first time it appears in the body of the paper, followed by the acronym in parentheses. (Argonne National Laboratory (ANL))
- b. Form the plural of an acronym using “s” only and the possessive using an apostrophe. (many CDs and ACLU’s case)
- c. Acronyms may be used in captions.

13. Plurals.

- a. Plurals of units of measure do not use an “s”; otherwise, the general rules of forming plurals apply. (125 m)
- b. Plural forms of calendar years do not use an apostrophe. (1980s, not 1980’s)
- c. To avoid confusion, the plural forms of math variables do use the apostrophe. (y’s)

14. Italics and Latin words

- a. Italicize all variables. ($mx + b = y$ where $m = 7$, $E = mc^2$)
- b. The Latin names of plants and animals (scientific terminology, genus and species) are italicized. The genus name is capitalized and the species name is lowercase. While genus and species are italicized, phyla, orders and so forth are not. After the first use of the genus name, it may be abbreviated to a single capital letter in italics. (*Escherichia coli* at first use and *E. coli* thereafter).
- c. i.e., e.g., These abbreviations for the Latin *id est* (“that is”) and *exempli gratia* (“for example”) do not require italics, have no spaces after the periods and are always followed by a comma.
- d. Do not italicize commonly used Latin words and abbreviations.
(a priori ab ovo ad hoc ca. de facto
de novo et al. in toto in vitro in vivo
passim per se via vice versa)
Because of its specialized use in quoted matter, *sic* is best italicized.
(The House of Representatives shall chuse [*sic*] their Speaker ...)

15. Numbers - Ratios and Units.

- a. Spell out units in text without quantities. (The weight is recorded in kilograms.)
- b. Spell out single-digit numbers and use numerals for all others. When a number begins a sentence, it should be spelled out or the sentence may be rewritten to avoid starting with a number. Good sense should be used when single digit numbers are part of a collection of numbers larger than 10, when numbers are accompanied by units or when ease of reading would benefit from their use.

Maintaining consistency within the immediate context should also be a guiding principle.

- c. Always add a zero before decimals.
(0.01 0.123)
- d. For ordinals, use the superscripted form (except for dates as noted in e. below)
(10th 1st 100th nth)
- e. Dates are written with the superscripted form when stating the date “of a month” but no ordinal if the month is listed first.
(the 10th of July July 10)
- f. A space, not a comma, separates groups of three digits, whether to the left or the right of the decimal point.
(10 000 not 10,000)
- g. No spaces before and after a colon or forward slash in a ratio.
(23:45 or 23/45)
- h. Use a space between a number and the unit (except as noted in i. below)
(45 km 5.3 L 220 V 85 g)
- i. When expressing temperature in Kelvin units, do not insert a space between the number and K (Kelvin).
(28K)
- j. No space is used between a number and the percent sign.
(100%)
- k. A space separates the number from the degree sign and scale used for degrees Celsius. Use Word’s degree sign, or <Alt-0176> (not a superscripted “o”).
(27 °C 10 °C 10.5 °C)

16. *Citing multiple references.*

When citing multiple references, list numbers in separate brackets.

([1], [3], [5] rather than [1, 3, 5] and [1]–[5] rather than [1–5])

17. *Identifying Tables and Figures.*

Capitalize the words Table(s) and Figure(s) when referring to tables and figures in the text of the paper.

18. *Spatial dimensions.*

When abbreviating two-dimension or three-dimension, use 2D or 3D with no space or hyphen between the number and the D.

DOCUMENTATION**20. Citations.**

- a. This journal generally follows the IEEE citations and references format. There are two methods you can use to cite references; using only the number in brackets, or using both the name(s) of the author(s) and the bracketed number. In both cases the citation should be placed at the point where reference is made.
(The method of boiling and then cooling the mixture proved successful [5].
The methods used by Smith [5] proved successful.)
- b. No citations or bibliographic references are to be included in an abstract.

BIBLIOGRAPHY**21. General.**

The bibliography should be ordered alphanumerically, with numbers in brackets, without respect to the type of publication being cited. Use a tab after the bracketed number.

22. Articles in periodicals.

Articles listed shall include the following information in the order shown:

- a. Last name of author or authors and first name or initials, or name of organization.
Initials precede the last name. Use a space between initials.
- b. Title of article in quotation marks
- c. Title of periodical in italics
- d. Volume, number, and, if available, part
- e. First and last pages of article
- f. Month, year of issue (Do not abbreviate May, June and July.)

Basic format:

- [1] J. K. Author, "Name of paper," *Title of Periodical*, vol. x, no. x, pp. xxx-xxx, Month, year.

Examples:

- [1] R. E. Kalman, "New results in linear filtering and prediction theory," *Journal of Basic Engineering*, ser. D, vol. 83, pp. 95-108, Mar. 1961.
- [2] J. U. Buncombe, "Infrared navigation — Part I: Theory," *IEEE Trans. Aerosp. Electron. Syst.*, vol. AES-4, pp. 352-377, Sept. 1944.
- [3] H. Eriksson and P. E. Danielsson, "Two problems on Boolean memories," *IEEE Trans. Electron. Devices*, vol. ED-11, pp. 32-33, Jan. 1959.

23. Books. Books listed shall include the following information in the order shown:

- a. Last name of author or authors and first name or initials, or name of organization
- b. Title of chapter (in quotes)

- c. Title of book (in italics)
- d. Edition number (if applicable)
- e. Place of publication (city)
- f. Name of publisher
- g. Year of publication
- h. First and last page of reference

Basic format:

- [1] J. K. Author, "Title of chapter in the book," in *Title of His Published Book*, xth ed. City of Publisher, Country if not USA: Publisher, year, ch. x, sec. x, pp. xxx–xxx.

Examples:

- [1] B. Klaus and P. Horn, *Robot Vision*. Cambridge, MA: MIT Press, 1986.
- [2] L. Stein, "Random patterns," in *Computers and You*, J. S. Brake, Ed. New York: Wiley, 1994, pp. 55–70.
- [3] R. L. Myer, "Parametric oscillators and nonlinear materials," in *Nonlinear Optics*, vol. 4, P. G. Harper and B. S. Wherret, Eds. San Francisco, CA: Academic, 1977, pp. 47–160.
- [4] M. Abramowitz and I. A. Stegun, Eds., *Handbook of Mathematical Functions* (Applied Mathematics Series 55). Washington, DC: NBS, 1964, pp. 32–33.

24. Internet Sources.

- [1] Computational, Optical, and Discharge Physics Group, University of Illinois at Urbana, "Hybrid plasma equipment model," December 1995, <http://uigelz.ece.uiuc.edu/Project/HPEM-ICP/index.html>.
- [2] D. Poelman (dirk.poelman@rug.ac.be), "Re: questions on transformations," July 5, 1999.

25. Other types of publications.

For instructions on citing sources other than those listed above, refer to *The Chicago Manual of Style*.