

# Advice for Writing a Scientific Abstract

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*“Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subject only in outline, but that every word tell.”* - William Strunk, Jr.

The goal of an abstract is to

1. get your abstract accepted for your preference of a talk or poster.
2. attract people to your talk or poster.
3. convey major points of your paper so that the reader gets the point.

Here are a few points that we discussed in class:

- The title is the most-read part of the abstract: think about what you want to emphasize. Robert A. Day (in “How to write and publish a scientific paper”) defines a good title as: *“the fewest possible words that adequately describe the contents of the paper”*. Avoid starting the title with “Studies on”, “Investigations on” or “Observations on”.
- Get rid of unnecessary words:
  - Avoid use of qualifiers such as “rather”, “quite”, “very”, “little” or “pretty”.
  - Avoid redundant word combinations such as “*end* result”, “*complete* stop”, “*future* plans” or “*new* innovation”.
  - Avoid combining words of opposite meaning such as “clearly ambiguous”, “same difference” or “partially complete”.
  - Use shorter, simpler words where possible: e.g. replace “in order to” with “to”, “based on the fact that” with “because”, “is capable” with “can” or “a number of” with “many”.
  - Avoid slang: e.g. use “such as” or “as” instead of “like”.

- Use passive voice if it helps put the emphasis of the sentence in the stress position, otherwise, use active voice.
- Do not overstate, because it makes the reader suspicious. Avoid using words such as “exciting”, “important” or “of great interest”. Let readers decide this on their own (although you can lead them there :-).
- If the purpose of your abstract is to make numbers available for many people, including the numbers in your abstract is fine; numbers can be distracting if the purpose of the abstract is to describe a process.
- Place numerical results in parenthesis to provide detailed information without distracting the reader.
- Spell out numbers of sites, experiments, model runs, etc., especially if there are other numbers in the abstract.
- Do not list everything you measured if you only discuss a few items.
- “From 1997-2003” is a non-parallel construction to indicate a block of time; instead write “From 1997 to 2003”.
- Hyphenate noun modifiers for clarity.
- Keep the subject and the verb close to each other.
- Use appropriate metaphors that are understandable to readers in all countries.
- Use acronyms sparingly. Do not define acronyms if you use them only once in the abstract.
- “However” is a coordinating conjunction and should not be used to start a sentence. The exception being when “However” is used as a noun and acts a subject :-).
- “Both” is effective in preparing the reader for two separate ideas.

*“A well prepared Abstract enables the readers to identify the basic content of a document quickly and accurately, to determine its relevance to their interest, and thus decide whether they need to read the document in its entirety.”* - American National Standards Institute, 1979, American national standards for writing abstracts.