

# Chemistry



*Editing Wikipedia can be daunting for newcomers, especially as a student editor contributing to Wikipedia for the first time as a class assignment. This guide is designed to help you create or expand articles about chemistry on Wikipedia.*

## Be accurate

You're contributing to a resource millions of people use to inform themselves about the world of science. Your work for this class will be read by thousands of people, so it's important to be accurate.

By documenting and sharing your knowledge about chemistry, you'll help Wikipedia provide a wider spectrum of information about the world. With great power comes great responsibility!

## Understand the guidelines

Take time to read and understand the suggestions here to make the most of your contributions to Wikipedia.

If you post something that doesn't meet these guidelines, it may take up valuable volunteer time that could have been spent making your contributions, or other content, even better. If you aren't comfortable with these guidelines, talk to your instructor about an alternative, off-wiki assignment.

## Engage with editors

Part of the Wikipedia experience is receiving and responding to feedback from other editors. Don't wait until the last day to make a contribution, or you may miss comments, advice, and ideas. Volunteers from the Wikipedia community might respond or ask questions about your work. If they do, make sure to acknowledge it. Discussion is a crucial part of the Wikipedia process.

## Watch out for close paraphrasing

Use your own words. Plagiarizing by copying-and-pasting, or close paraphrasing — when most of the words are changed, but the structure and meaning of the original text remains — is against the rules.

Plagiarism is a violation of your university's academic honor code. Plagiarism on Wikipedia will be caught by other editors, and there will be a permanent online record of it tied to your account. Even standard resources or authors, such as educational resources from organizations like the Chemical Safety Board and abstracts of articles in chemistry journals, are under copyright and should never be directly copied.

The best way to avoid plagiarism is to make sure you really understand your material, and write about it in your own words. If you aren't clear on what close paraphrasing is, contact your university's writing center.

## Be bold!

Take the time to understand the rules and guidelines, and soon you'll be contributing important knowledge to a resource you and millions of other people use every day.

# Prepare your article

## Choosing an article

Choose topics with lots of literature in peer-reviewed sources that don't have good coverage on Wikipedia. Check an article's Talk page for its rating: "Start-class" or "stub" articles need your help! Avoid "Featured" or "Good" articles.

## Using reliable sources

Wikipedia calls for "secondary sources." These sources summarize one or more primary or secondary sources, usually to provide an overview of the topic. These include:

- Literature reviews and systematic reviews from reliable journals, such as the *Journal of the American Chemical Society* or *Chemical Reviews*.
- Monographs, chemical encyclopedias and specialist textbooks from reliable publishers, such as Oxford University Press, Cambridge University Press, or Wiley.

### Exercise caution when using:

- blog posts
- popular press articles
- sources that aren't peer reviewed

For more on good sources, see | *shortcut*

[WP:SOURCE](#).

### What's a shortcut?

The text [WP:SOURCE](#) is what's known on Wikipedia as a *shortcut*.

You can quickly type shortcuts like this into Wikipedia's search bar to pull up specific pages.

## Structuring your article

Every article is unique, but here are some rough guidelines for chemistry articles. You can add, remove, or reorder sections for your own topic.

### Writing about chemical compounds

- **ChemBox:** If you use one, place it at the very beginning of the article (*see next page*).
- **Lead section:** A short article summary.
- **Properties:** What does it look like? Use standard conditions for temperature and pressure (STP).

- **Occurrence:** Where is this compound found in nature? Especially focus on natural sources that may be used for commercial or industrial purposes, such as quarries or mines.
- **Preparation:** What are the processes for producing or purifying the compound? Don't include step-by-step instructions.
- **Uses:** How is it usually used? Focus on lab, household, commercial, and industrial uses.
- **Reactions:** Emphasize notable reactions; avoid obscure or poorly documented ones.
- **History:** Sometimes the compound's discovery or first synthesis is notable (Teflon, for example). You can also include historically important industrial uses here.
- **Suppliers:** Don't include supplier info, unless there's a notable single-market supplier.

### Writing about compound classes

- **Lead section:** A short article summary.
- **Structure and bonding:** How are the atoms arranged in a molecule? What are the lengths and angles of bonds between atoms, and the strength of the chemical bond? (For strength, tell us the bond-dissociation energy, or BDE). If there's more than one stable molecular configuration, mention it.
- **Nomenclature:** If the compound is known by a common name, include the IUPAC name and popular and/or historical names.
- **Properties:** What does it look like? Use standard conditions for temperature and pressure (STP).
- **Reactions:** Discuss important reactions and factors that affect reactivity.

### What's a lead section?

The lead section is the first section of a Wikipedia article. A good lead summarizes the entire article in 2-3 paragraphs, offering context for important aspects of the topic. The first sentence usually starts with the chemical's common name in bold, and a description:

**Hydrochloric acid** is a clear, colorless, highly pungent solution of hydrogen chloride (HCl) in water.

For a style guide on chemical articles, check out | *shortcut* [WP:MOSCHEM](#).

# Develop your article

## Safety sections

When you write an article, avoid the urge to add a section listing risks associated with the chemical. Every chemical can pose a laundry list of safety hazards, so safety sections are rarely useful. Even when chemicals are behind newsworthy events, such as a factory explosion, it likely doesn't belong in the chemical's article. **Never** offer medical advice. Occasionally, well-sourced toxicology information might be useful. See | *shortcut* [WP:MOSCHEM/SAFE](#).

## Depict information accurately

Unlike most school assignments, Wikipedia doesn't permit original research. Wikipedia is an encyclopedia, a place to find a summary of what other literature says. It's not the place for interpreting or analyzing that literature.

Don't combine statements from different sources to suggest a conclusion that isn't *explicitly* stated by those sources.

For example, it's perfectly OK to state the dissociation constants of a sodium salt. But don't take the highest and lowest values you find and present the range of dissociation constants for sodium salts as the difference between these values. You need a source to say this is true.

You can find out more about Wikipedia's policies on Original Research at | *shortcut* [WP:NOR](#).

## Add structure illustrations

If you'd like to create and share images of chemical structures or reaction schemes, check out | *shortcut* [WP:CSDG](#) for details on how to upload them (don't upload freehand drawings).

Though facts about chemical structures aren't copyrightable, you should never upload images scanned from books. Also, it's helpful to use chemical notation with no English text. That way, your illustration can be used across multiple language versions of Wikipedia!

Upload your images to Wikimedia Commons, not Wikipedia. You can find more details in our "Illustrating Wikipedia" brochure, linked from your course page.

## What is a ChemBox?

A ChemBox is a helpful addition to chemical articles on Wikipedia. It gives an overview of the chemical at a glance.

Copy the template below from | *shortcut* [Template:CHEMBOX](#). Paste the "Small, simple form" to the very start of your article.

```
{{Chembox
| ImageFile =
| ImageSize =
| ImageAlt =
| IUPACName =
| OtherNames =
| Section1 = {{Chembox Identifiers
| CASNo =
| PubChem =
| SMILES =
}}
| Section2 = {{Chembox Properties
| Formula =
| MolarMass =
| Appearance =
| Density =
| MeltingPt =
| BoilingPt =
| Solubility =
}}
| Section3 = {{Chembox Hazards
| MainHazards =
| FlashPt =
| AutoignitionPt =
}}
}}
```

Never delete *anything* from the template — just skip fields you don't know. Add what you can to the right of the equal sign on each line (Don't touch the "Section1," "Section2," "Section3" text). Most fields are self-explanatory, and can be found in a reliable source of chemical information such as SciFinder, ChemSpider, or EINECS. Cite these sources just like any other fact in your article.

The ImageFile line contains only the file name of the image from Wikimedia Commons. For example:

```
ImageFile = Aluminium_oxide2.jpg
```

For more, see | *shortcut* [WP:CHEMBOX](#).

# Wrapping up

## Useful tips

As you start writing, keep these guidelines in mind:

- **Never offer medical advice.** This includes information about poisons or emergencies related to chemical compounds. If your work includes *any* statements about human health, you must follow a very strict set of sourcing guidelines. See more at | *shortcut* [WP:MEDRS](#).
- It's aluminium, not aluminum! Wikipedia uses international standard spellings, in line with IUPAC. For guidance on capitalization, prefixes and spelling in chemistry articles, see | *shortcut* [WP:CHEMNAME](#).
- When mentioning technical terms for the first time, provide a short plain-English explanation in parentheses, if possible.
- Let the facts speak for themselves. Don't write to lead or persuade.

## Final thoughts

- Don't procrastinate! Writing good, reliable Wikipedia articles takes time. Don't wait until the last minute. If you get stuck, always ask your instructor for extra time, rather than adding content to Wikipedia that doesn't meet these guidelines.
- Add pages you work on to your watchlists, and check back over time. It can be interesting to see how your article grows. You may also have comments and suggestions from other editors, and want to get involved in new developments.

## Have more questions?

Do you have more questions about finding good sources, notability, or, really, anything at all? You can always ask the Wikipedia Content Expert listed on your course page. You can also post a question to Wikipedia volunteers at the Teahouse: | *shortcut* [WP:TH](#).

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