Some general suggestions for writing manuscripts or reports.

For more detailed and comprehensive help, the ACS Style Guide is an excellent resource.

See also The Chicago Manual of Style; online at: http://www.chicagomanualofstyle.org/16/contents.html

The complete document is daunting, but it contains an extensive list of good vs common usage at: http://www.chicagomanualofstyle.org/16/ch05/ch05_sec220.html

I’m not sure I agree with everything in The Economist Style Guide, but it’s fun to read as well as being instructive: http://www.economist.com/research/styleguide/. (Temporarily offline.)

These are good resources for virtually any specific stylistic or usage questions, but you should also check the Authors’ Instructions for your intended journal before you do too much writing.

Some specific hints and guidelines:

- Use the correct forms for proprietary equipment and procedures, and trademarks where appropriate. SpeedVac rather than speedvac and ZipTip rather than zip tip. A good idea when in doubt is to go to the manufacturer’s website.

- Make sure unit abbreviations are correct (although these can vary from journal to journal). Microliter, e.g., should be μL rather than μl. Be sure that these are consistent throughout the manuscript; one that I worked on recently had 4 different versions scattered throughout the experimental section: 6μL, 6 μL, 6μL, 6 μl.

- Avoid over-use of unnecessary phrases such as ‘Our results indicate that…’. Or ‘In this study…’

Fairly common: ‘In this study we have investigated the secreted protein profile…’

Better: ‘We have investigated the secreted protein profile…’

Perhaps better still: ‘We investigated the secreted protein profile…’

A Google search on some of these phrases produced the following numbers:

‘our results indicate that’: 323,000
‘in this study’: 2,550,000
‘in this report’: 2,380,000
‘we have investigated’: 355,000

- Minimize repetition. Try not to use the same words repeatedly and - difficult as it may be - try not to repeat the same format in successive paragraphs in the experimental section of your
manuscript. If syntheses of two very similar compounds are virtually identical, for example, see if they can be combined into one section.

- Left-align rather than justify the text. The irregular spaces that arise with justification are irritating and sometimes difficult to read. (Abstracts, though, are fairly common and reasonable exceptions to this.)

- Active voice is usually preferable over passive voice.

Fairly common: ‘Both isomers have been shown to be strong polymerase inhibitors (reference)’

Better: ‘Both isomers are strong polymerase inhibitors (reference)’

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Acronyms and abbreviations.

Make sure that acronyms and abbreviations are defined either in a separate section or the first time they’re used.

The excitement factor.

- Don’t assert (especially in the title) that results are ‘new’ or ‘novel’ or ‘the first example of…’ unless this is both true and important. Don’t overuse descriptors such as ‘facile’, ‘efficient’, etc. (see the ‘letters’ section of C&EN, April 4, 2005: http://pubs.acs.org/isubscribe/journals/cen/83/i14/html/8314lett.html).

- Don’t overuse superlatives. It’s generally better to say something like ‘We were surprised by this result…’ rather than ‘We were exceedingly surprised by this result…’.

Capitals.

In manuscript titles, and section headings, only the first word should be capitalized (unless this is required in the style guide for the intended journal).

Chemical names should not usually be capitalized (except at the beginning of a sentence), e.g., benzene is correct here while Benzene is incorrect. Benzene is correct here.

Which vs that.

- This one is tricky, but be careful how you use ‘which’ and ‘that’. They don’t mean quite the same thing and can’t always be used interchangeably, e.g, ‘Which is the correct tool?’ ‘That one.’ vs ‘That is the correct tool.’ ‘Which one? THAT one?’
Some nice guidelines are online at http://www.grammarbook.com/grammar/whoVwhVt.asp

**Stereotypical science writing vs efficiency and clarity.** Remember, the objective is to inform, not to impress.

- Use simple words (most of the time) whenever possible; avoid several syllables where one will serve.

Scientificese: ‘facilitate’ Better: ‘help’
Scientificese: ‘utilize’ Better: ‘use’
Scientificese: ‘possesses’ Better: ‘has’
Scientificese: ‘methodology’ Better: ‘method’
Scientificese: ‘whereas’ should probably be left to legal documents or proclamations.

Choices can sometimes be complicated because the meanings may actually be different.

‘Help’ means assist, ‘facilitate’ is closer to ‘make easier’; not quite the same as ‘assist’.

‘Method’ means method; ‘methodology’ means the study of methods. You don’t develop a methodology to analyze something; you develop a method.

‘Possesses’ and ‘has’ mean more or less the same thing, but ‘use’ and ‘utilize’ don’t. ‘Use’ means to employ objects for the purposes for which they were intended; "utilize," means to employ objects for unintended purposes, e.g., to make or render useful; to convert to use.

**Figures.**

Preparing publication-quality figures can be daunting, especially at the last minute, so try to get good at this well before planning to submit a report or manuscript. Be sure to read the Authors’ Guidelines for the journal that you’re planning (or hoping) to use. Universally, though, these emphasize appropriate font faces and sizes and line thickness. Most of the mass spec and LC data systems can copy or export to PowerPoint, where you can ungroup them and then manipulate the text and graphics. I’ll be happy to help with this.

All figures and schemes should ultimately be in PowerPoint in a format that can be ungrouped. ChemDraw structures should be pasted individually into PowerPoint and arranged and annotated there. The figures then usually need to be saved/exported into other formats, e.g., TIFF or JPEG, for submission to the journals. Graphic Converter (http://www.graphicconverter.net) is a useful and relatively inexpensive software package that will open from and save to virtually any graphic file-type, although it’s available only for Macintosh computers.