Chapter 3
Grammar and Punctuation

• Read Chapter 3 to review
• Key points
  – Subject Verb Agreement
    • 3rd person passive voice except facts
  – Chemical Spelling List pg 68-71
  – Possessives
    • Dog’s
    • People’s
    • Compounds’
  – Tricky possessives:
    • Spectrum/spectra
    • Medium/media
  – Commas
    • Separate lists of prepositions
    • In lists
  – Sentences should not end in prepositions
    • for, in etc.
  – Use semicolons and colons rarely
Chapter 7 and 8
Chemical Compounds and Conventions

• Read Chapter 7 and Chapter 8, refer to them as needed for you poster and paper
• IUPAC nomenclature
• Chemical names not capitalized unless at the beginning of a sentence or in a title
  – o,m,p,s, cis, meso, trans, syn, etc. not capitalized
  – Pg 236-238 example names
  – Pg 239-241 how to hyphenate chemical names
• Use Latin or Greek symbols when required, don’t write it out
  – Not alpha, but α
  – Not sigma but σ
• There is no space between the element name and a Roman numeral
  – iron(II) chloride
• Remember that mL is correct, ML or ml are incorrect!
• Symbols pg 269-279
Reporting data

- Mp 123.6 °C (lit. 122-124 °C)
- IR (KBr) $\nu_{\text{max}}$ (cm$^{-1}$): 3020 (s,OH), 2975-2875 (CH, aliphatic)
  - Some journals require more stretch info ($\nu_s$, $\nu_a$) as subscripts
- MS $m/z$ (% relative intensity, ion): 234 (35, M$^+$), 220 (24, M-N)
- UV (water) $\lambda_{\text{max}}$, nm ($\varepsilon$): 324 (10403)
- Chemical reactions should be centered and numbered sequentially throughout the paper
Chapter 4
Editorial Style
Hyphenation

1. Most Prefixes not hyphenated.
2. Hyphenate
   1. pre-2000
   2. non-hydrogen bonding
   3. anti-Markovnikov
3. Most Suffixes not hyphenated
   1. 10-fold
   2. Claisen-like
4. Compound words may or may not be hyphenated
   1. Nouns are hyphenated
      1. Cross-link
      2. Air-dry
   2. Verbs are not
      1. Mix up
   3. Foreign word modifiers
      1. ab initio calculation
      2. in vivo studies
5. Other places to hyphenate:

1. Unit modifiers for nouns
   1. Double-bond
   2. Rate-limiting
   3. Long-lived
   4. First- and second-order reactions

2. Single letter modifiers
   1. T-test
   2. d-orbital

3. Number Modifiers, spelled out
   1. Three-neck flask
Capitalization

1. Text is lowercase, including chemical names, unless proper names.

2. Capitalize the following when followed by numbers:
   a. Figure 2
   b. Chart 1
   c. Scheme 3
   d. Table 1

3. Do not capitalize page #’s
   --on page 7 is listed…
Caps cont.

– Cap eponyms, but not noun.
  • Lewis structure

– Adjectives made from proper names
  • Lorentzian

– Capitalize Genus but not species
  • Aspergillus flavus

– Capitalize trade names
  • Teflon
  • Pyrex

– Don’t cap chemical descriptors even at the beginning of a sentence.
  • trans-Diamminedichloro platinum(II) is an anti-cancer agent.
  • o-xylene
Caps again

• Don’t capitalize
  – model#’s and code#’s
  – names of equipment -- gas chromatograph

• Byline/Affiliation
  – First name, initial, surname (be consistent)
    • Be careful of names of foreign colleagues
  – Institution / address
  – telephone, email etc. often in footnote

• Cap when it is part of a person’s title
  – I believe that Professor Will Lynch is the #1 chemist.
Titles / Headings

• Cap main words and nouns, not coordinating conjunctions
  – Only capitalize “The” when it is the first word
    • The Journal of Organic Chemistry

• Do not cap chemical descriptors, even in headings and titles.
  – Synthesis of trans-Dichloro….
  – Capitalize only the first part of a chemical name
    • Poly(ethylene glycol)

• Surnames used as units are lower case
  – joules, hertz, etc.
  – pH
Italics and Abbreviations

• **Italics**
  – For newly introduced terms
  – Titles of books or Journals
    • *The Journal of Organic Chemistry*
  – Genus and species
    • *Aspergillus flavus*

• **Abbreviations**
  – ACS or CRC defined abbreviations only
  – Case is important!
    • DNA, RNA
    • pH
    • GA
    • mg, mL, kg, kL, ng, nL cm, ps
    • L, M
    • See pg 107-141 for list
Chapter 5
Numbers & Units

Numbers

1. Use numerals with units of time and measure.

2. Always use a space between the number and the unit--except %, angular degrees.
   
   ex: 6 mL, 17 °F, 90°

3. A number used with other than unit of measure, write out if <10.
   
   ex: seven samples, 17 samples.

4. All numbers in series
   
   ex: 2, 4 and 8 flasks

5. Starting sentence - spell number
Numbers cont.

6. With reoccurring chemical names, use bold numbers 1-3.

7. For large numbers use scientific notation.
   ex. 3.47 \times 10^5 \text{ L}, not 347,000 \text{ L}

8. Use #'s before and after decimal
   ex. 0.25 \text{ mL}, not .25 \text{ mL}

9. Use decimals, not fractions
Units of Measure

1. Use metric / SI units.
2. Abbreviate units with numerals.
3. Space between number and unit.
   ex: 15 °C, 10.0 mL (note 0 after decimal)
4. Spell out units with no numeral associated.
5. No ° symbol with K.

Multiplying prefixes and unit tables on pp 166-170.
Chapter 6
References

1. Three ACS methods—in the text
   1. Superscript numbers**
   2. Italic numbers on the line
      and in ().
   3. Author / year of publication
      in ().
      1. space before paren, period after or
         insert in the middle of the sentence
   4. Numbers in [ ] (non-ACS pubs)
2. Start citation with #1 and number
   consecutively by appearance.
3. More than one reference cited at
   location, separate by comma or
   hyphen.
   1. Ex: literature.²,₄,₅ or literature.³-⁷
   2. When more than one reference is
      listed, the oldest is typically first
References cont.

Style
1. Periodicals**
Author 1; Author 2; Author 3 Title of Article. Journal Abbreviation Year, Volume, Inclusive pagination.

--Author style -
Williams, R. R.
Burnett, R. A., Jr.

--Titles not always required, depends on the journal

--Year - BOLD,
--Volume (issue)
References cont.

Style

2. Books without Editors

Author 1; Author 2; Author 3 Chapter Title. Book Title, Edition Number; Publisher; Place, Year: Volume #, pagination. Year, Volume, Inclusive pagination.

3. Books with Editors

Author 1; Author 2; Author 3 Chapter Title. Book Title, Edition Number; Editor 1, Editor 2, Publisher; Place, Year: Volume #, pagination. Year, Volume, Inclusive pagination.
References cont.

Style

4. Internet Sources.
Author (if any), Title of Site. URL (accessed date).