

I. Overview of Session 3 S13

II. Research vs. review article

A. Research article

1. One common general form

a. Abstract

b. Introduction

c. Materials and Methods

d. Results (includes Figures with Legends & Tables with Annotations)

e. Discussion

f. References

2. Title, Abstract, Figs. w/ Legends & Tables with Annotations key to reading; and Figs. to writing

B. Review articles

1. No consistent general form

2. One approach for longer review

- a. Title Page**
- b. Table of Contents (Outline)**
- c. Abstract**
- d. Introduction**
- e. Selected subtopics**
- f. Summary (but we will call it Conclusion(s))**
- g. References (include ref. title)**

3. A shorter review, especially if it includes newly published data by the author so it can be more like research article (e.g. “hybrid review/research” article)

III. Major Assignment: How to start

A. Check out most recent reviews in Review volumes (at SJSU Library including online)

1. General

a. Try Google Scholar

<http://libguides.sjsu.edu/content.php?pid=60785&sid=451017>

i. To get more than abstracts typically need SJSU Library Account/Card

ii. For Review article search try keyword followed by the words, Review and review

b. Science

i. Also in Science are “HighWire” journals that include reviews (“review articles only”) for example:

**<http://www.sjsu.edu/> → King Library → Quick Search: eJournals (‘Science New York’) → Science Magazine → *Advanced* → Search All HighWire Journals
OR**

ii. Direct link (first search Science Magazine w/ its own browser then Search All HighWire Journals)

<http://www.sciencemag.org/searchall/>

c. Nature (see Advanced search as alternative)

<http://www.nature.com/nature/index.html>

2. Over all chemistry

a. Chemical Reviews (Note italics for relevant portions already shown above)

i. <http://www.sjsu.edu/> → King Library → Articles & Databases
Page → Browse Databases by Title: A → ACS Publications → Publications A-Z →
Chemical Reviews

OR

ii. Direct link

<http://pubs.acs.org/journal/chreay>

b. Accounts of Chemical Research (can be “hybrid research-review” articles)

c. Major journal in subfield often may have an occasional review or at least research articles that give you ideas (e.g. Organic & Related Chem = JACS <Journal of the American Chemical Society>, Inorganic = Inorganic Chemistry), check respective Table of Contents online

*3. Ex. in biochemistry/biophysics

a. TIBS (Trends in Biochemical Sciences) and direct link is
<http://www.sciencedirect.com/science/journal/09680004>

b. Annu. Rev. Biochem. (Annual Review of Biochemistry) and direct link to menu choice is
<http://arjournals.annualreviews.org/loi/biochem>

***4. Ex. in physical chemistry/chemical physics**

a. Annu. Rev. Phys. Chem. and direct link to menu choice is ALSO APPLICABLE
<http://arjournals.annualreviews.org/action/showJournals>

***5. Other physics**

i. Rev. Mod. Phys. (Reviews of Modern Physics)
<http://www.rmp.aps.org/>

***6. Meteorology**

a. Rev. Geophys. (Reviews of Geophysics) off-campus, apparently not free online

B. Find two at least two complementary reviews; find resulting refs.

C. Actual Major Paper

IV. Next HW assignment has two parts:

A. Two complementary review articles on your topic (can be one from Exercise 1, if still appropriate)

B. Outline of major topic

1. Note sample Outline below based on Table of Contents for original review: Katritzky, A. R., Fara, D. C., Yang, H., Tamm, K., Tamm, T. and Karelson, M. *Quantitative Measures of Solvent Polarity* (2004) Chem. Rev. 104, 175-198.

2. Assume this sample below is just an example of what someone might write if they were only consulting one review article (instead of the two you are required to use) and it is Katritzky et al. (2004)!!!!

Measuring Solvent Polarity

Jane Q. Public

February 7, 2013

I. Abstract

II. Introduction

III. Selected Subtopics

A. Determination of Scales

B. Types of Properties to Define Polarity Scales

1. Equilibrium and Kinetic Measurements

2. Spectroscopic Measurements

3. Multi-parameter Approaches

C. List of Solvent Scales

D. Attempts to Relate Scales to Descriptors

E. Correlation of Solvent Scales

IV. Conclusion

V. References

VI. Figure Legends

VII. Figures and Tables

Sub-Subtopics are shown (in italics) above as an example but are optional for this HW. Also any history of the field is to be noted in subsequent assignments in the II. Introduction section.