

CHEM 475 CHEMISTRY RESEARCH SEMINAR**Tips for reading a primary article**

- Read the abstract first
 - What is the important result?
 - What methods are used?
- Scan Figures, Schemes and read conclusion
 - Are you familiar with the experimental methods used?
- Read the Introduction
 - Why is this work important?
 - What is new in this work?
 - Are there current or potential applications?
 - Are these results novel or unusual?
 - On what previous work is this research based?
- Results and Discussion
 - Highlight key points of the argument.
 - Identify terms you don't understand
 - Highlight references you may want to look at
 - Outline what specific evidence is used to draw each conclusion
- Other
 - Who funded this work?

Evaluating a primary article

- Critique the science
 - Are there alternate ways to explain the data?
 - Do the authors concede any limitations or weaknesses in their approach?
 - Are methods established or unusual?
 - Are results consistent with or contradictory of others' work?
 - Has error analysis (precision) been addressed appropriately?
 - Do the authors effectively and appropriately cite other research?
 - How does this work relate to previous work by these authors?
 - Is it derivative or ground-breaking?
 - What additional research could complement this work?
- Consider the publication:
 - What is the quality of the publication source?
 - Who are the authors? Are they widely published in this field?
 - How many times has the paper been cited since publication? By whom?
 - Was this paper reviewed or mentioned in the popular press?
 - How long is the article?