

updated 26 May 2009
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GENERAL GUIDELINES FOR WRITING RESEARCH PAPERS

Research Paper format:

1. Make an outline using the general headings below. **Show me your outline.**
2. Decide in consultation with me exactly which figures and tables are to be used in the paper, and make the figures and tables.
3. Write a first draft of the paper according to your outline, including the figures and tables we decided upon.
4. *Make sure the style of references and organization of the paper corresponds exactly to the journal's rules.* These are published on the journal websites under "author's guidelines" or some similar title, and are a little different for each journal.
5. **Important: Use the endnote/cross-reference feature of Word** (see Insert menu) to list your references as **endnotes** in your document. (Do not use the separate "Endnote" program)

FORMAT:

Introduction

1. Literature background: what has been done in this area by others and by our group - do a literature search using as a minimum Scifinder Scholar, Google Scholar, and ACS publications on-line! Do another literature search after you finish your first draft to make sure you have all relevant papers. Be specific, this section should be 1-3 pages only. (*Refer to all important articles related to your work, not just electrochemical papers or papers that feature your approach.*)
2. Reasons for the work; briefly. Why is it important in a *global* sense, and a specific sense.
3. Goals of the work; possible applications of the work- stress what is new
4. One sentence at the end of the intro stating the major finding of the work in general terms

Experimental

- Give important details only; refer to literature and our own papers for known procedures. Give full details only for new procedures. Full procedures can be placed into supporting information files of the journal.

USE SEPARATE SECTIONS - ONE FOR RESULTS AND ONE FOR DISCUSSION

Results

- break up into sections, one for each type of experiment
- Use Kalaidagraph for all graphs, insert them as TIF files if the journal allows that format (e.g. ACS journals) - this is our official group graphics program, to avoid confusion
- discuss results in Tables and Figures with just enough interpretation to make the reader understand the basic result, save detailed interpretations for the discussion section.

Discussion

- discuss the detailed interpretations of your experiments here
- try to integrate all the experimental results into a set of relevant conclusions
- end with a summary paragraph giving the central most important findings in a general way

Addition points to keep in mind:

There are also certain rules that need to be adhered to when writing papers and reports to make them clear and exciting. Here are a few:

1. Refer to and briefly summarize the recent literature in your introduction. Here is where you "sell" the importance of the paper to the editor and reviewers. Do a final lit. search *again* before you start to write the intro. (you should be doing this before and all through your projects)
2. 1. Figure captions and tables should contain ALL the information needed to understand them without the reader having to refer extensively to the text. This means scan rates, film composition, solution pH, concentrations, frequencies, wavelengths, etc. for figures, and units and brief experimental details .
3. In the first draft, do not omit important experiments or data. The revision process can be used to take out or archive data that does not need to be in the paper. If in doubt, keep it in the first draft, and we can edit it out later if necessary.
4. Use examples and summarize data to an extent to make the paper a reasonable size, while not leaving out important data. If you have done the same experiment under many conditions, summarize the results in a paragraph or two, and say that similar results were found for other systems studied, if that is the case. See our other papers to assess suitable numbers of graphs and tables.
5. Many good journals now allow a "Supporting Information" file to be submitted with the paper that can contain additional data, and full experimental details, and that will be published on the Web. This can be used as a way to keep the paper at a reasonable length.