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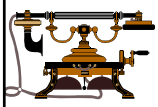

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How to get your paper published…

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Outline

- Purpose of technical paper
- Formulation of the title
- Writing the introduction
- What are expected in EXPERIMENTAL
- Organizing the Results and Discussion
- Are you writing Conclusion or writing Summary
- Abbreviate or not to abbreviate?
- How to write abstract

Title of the paper

- The title of the paper basically defines your scope of the study.
- One paper makes one major point. Don't try to answer all questions in one paper (which is impossible and it dilutes the attention)
- Be short and precise, and to the point! (don't beat around the bushes. Call a spade spade)

To construct a good paper

- Clear definition of problem (to solve, to tackle)
- Clear display of methodology (experimental procedure)
- Digging up the science behind the phenomena (why it happens the way it does? Not just how it happens)
- Clear logic in providing evidence (results) for your argument
- Cover all aspects in argument (imaging in a court of law)

How to write Introduction

- Purpose of the introduction is to "introduce" :
  - What is the problem that you are going to study?
  - Why does it warrant the effort to be studied?
  - Very briefly how you are going to do that? (more elaboration will be in Experimental)
  - What will be expected?

The Introduction is

- To interest the reader of the problem (need to define the problem clearly)
- To provide justification of your effort (otherwise you should not waste taxpayer's money!)
- To arouse the reader's anticipation of results

Writing Experimental

- This section is the details of how you conduct the experiments to yield your results
- Experimental design must be sound, without flaw, must be logical, must provide how you examine errors, etc. Details of the parameters, settings, etc.
- Results must tally with your experiments! You can not provide XPS results but in the experimental section you never talked about how XPS experiments were carried out.

Organizing the Results / Discussion

- There are two ways of doing this. one is to provide all the results first, then discuss them; another way is to provide the results together with the discussion. Each has its own merit
- Personally I prefer the second approach: set a few subtopics to discuss. You may have 100 results, but the topic only requires 10 to illustrate/prove the point, don't cram all 100 in there! Every illustration must be indespensible.
- All the "subtopics" come together to prove your point, the overall purpose of the paper.

Writing an Effective Discussion

- Purpose of Discussion
- Organization of Discussion

Purpose of the Discussion

- To state your interpretations and opinions, explain the implications of your findings, and make suggestions for future research.
- Its main function is to answer the questions posed in the Introduction, explain how the results support the answers and, how the answers fit in with existing knowledge on the topic.
- The Discussion is the heart of the paper and usually requires several writing attempts.

HOW TO WRITE CONCLUSION

1. Look at the **figures** in your RESULTS and DISCUSSION, see which figure can help you draw a conclusion
2. Itemize the conclusions; put a parenthesis in the back of each item of conclusion to remind yourself which figures (results) the conclusion comes from. --- That is very important. If you can not find any figure/result to put there, chances are you should not draw that conclusion! (a conclusion must come from your own results)
3. Finally, take out the parentheses and their contents, take out the itemization. ---- congratulate yourself, now you have a good conclusion.

Summary or Conclusion?

- What is the difference?
- Judging criteria

Difference between summary and conclusion

- a summary is a brief account of what is done (I did this, I did that), that is NOT a conclusion. A paper may not always have conclusions (like a review paper), in that case, you should write a Summary.
- A conclusion is a statement that concludes a research or states a fact

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Judging criteria

- Can it be cited?

  "XPS studies are carried out…" that is a summary;

  "under … conditions, Mg atoms replace some Ca atoms in the crystalline structure to form (Ca,Mg)O2…" that is conclusion.

Do or do not abbreviate?

- The abstract, the paper proper and the conclusion: they are all individual entity
- With each individual entity, if you use it, you must abbreviate it
- If you don't, then don't abbreviate it

How to write abstract

- Why the need for abstract
- What are in an abstract (what people expect in an abstract)

Abstract: a "shrinking" business → write abstract last

1. Shrink your INTRODUCTION section into one or two sentences (this may not necessary for some journals because of length constraint in abstract)
2. Shrink your EXPERIMENTAL PROCEDURE into a few sentences
3. Shrink your RESULTS into one or two sentences
4. Shrink your CONCLUSIONS into one or two sentences
5. Put these sentences together ---- congratulate yourself, you've written a good abstract!

A sure way to get rejected

- Write like a lab report
- Multiple publication (from the same data and pretend they are new each time) – okay to use your own published data, but need to cite it
- Multiple submission (to different journals)
- Make only cosmetic improvements without tackling the core problem, then send back to journal again, and cross the fingers
- "Journal-hopping": not concentrating on substantial improvements, but hop from higher impact journals to lower impact ones (that is NOT the right attitude for research!)

Send to the right journal

- Study the target journal's scope and style, make sure you send to the right journal
- Be persistent (if it is the right journal, don't get discouraged by a few rejections. take the advice, modify, or even re-do the experiment, send again)
- Be sure to highlight the core modifications and results in the Letter to the Editor when you re-submit.

Happy Publishing!

Thank you !

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