

PART I: Getting the basics down on paper

In a sentence or two, what is the main finding or result (the so-called “punchline”) of the paper?

Fill in any other major results/points in bullet or phrases (add bullets as necessary):

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Motivation for the work is (in one sentence or two):

Current hole in literature that this work addresses (e.g., state of the art, unanswered question or hypothesis):

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Main literature in this area of significance to this work (list 1 - 3 papers that are key to appreciating the significance of your new results and provide a brief phrase explaining what makes them significant, e.g., highlights the state of the art, most recent paper that establishes a new hypothesis you are testing, etc):

- 1.
- 2.
- 3.

PART II: Outlining the paper, by figures

In this section, your goal is to list the figures, tables, and diagrams you think you will need for your paper (whether you have them all or not at this point). You should list them by chronological number and a brief description of the information or main idea that you plan to convey with the figure (e.g., diagram of viral fusion that highlights the difference between hemifusion and pore formation, a table of contact angles corresponding to different surface treatments, etc.). Once this is done, sketch the figures crudely and begin a ppt file that will become the figure file for the paper.

1.

2.

3.

4.

5.

6.

7.

Part III: Outlining the text of the paper

In this section, your goal is to lay out the main topic sentences of each paragraph for each section of the paper. After each topic sentence, you can write a few bullet points that you plan to have within that paragraph as supporting that topic. A general breakdown of the sections is provided below. Ignore the Abstract for now.

Proposed title of the paper (usually limited to less than 15 words, aim for 10; aims to convey the main result in the paper):

Introduction

This section frames the work. Typically at least three things are conveyed in this section: 1) motivation for the work, 2) a brief summary of the prior work, and 3) a brief statement of what you did and what you found (your big result). The outline format is provided below to be modified as needed.

- A. Paragraph 1: Motivation and “setting the stage” for the remaining paper
 - a. Supporting point 1
 - b. Supporting point 2
 - c.
- B. Paragraph 2: Significant prior work and one sentence to describe the major papers to be included in the paragraph. Note that this is generally not exhaustive, unless a review paper, but captures the main work to support your motivation and points in paragraphs 1 and 2.
 - a. Supporting point 1
 - b. Supporting point 2
 - c.
- C. Paragraph 3: Your main results in just a few sentences.
 - a. What you did
 - b. How you did it
 - c. What it means

Materials and Methods

This section is generally the easiest to start. In the Materials section, you simply catalog all the materials you used with the company you purchased them from. In the Methods section, list all the methods you used to conduct the work. Provide a brief description of each method and any analysis methods too. Your section should look something like this:

MATERIALS AND METHODS

Materials. Lipid X was purchased from Avanti Polar Lipids (Alabaster, AL). Lipids were used as received. Virus X was obtained from Charles River Laboratories (Wilmington, MA). The virus had a total protein content of X. Coverslips (No. 1.5) used as supports for lipid bilayers were obtained from VWR. and so on...look to our previous papers for more guidelines.

Supported bilayer formation. Supported bilayers were formed on clean glass coverslips by vesicle fusion. and continue to fill in the details, again referring to our previous papers as a guide.

Results and Discussion

This section goes paragraph by paragraph through each result or figure and supporting work (such as control experiments), and provides commentary about each part. Commentary includes: how the experiment was done briefly as this will be covered in detail in the Methods section, what you found and explaining what is in each figure in detail. Finally what it means.

- A. Result 1
 - a. Supporting point 1
 - b. Supporting point 2
 - c.
- B. Result 2
 - a. Supporting point 1
 - b. Supporting point 2

Summary and Conclusion

In this section, you need to step back and provide either an overall summary of what you learned. Then look at all of your collective results and give the “big picture” what you conclude from it (extrapolate a meaning, tell how it supports your hypothesis, etc). Finally, provide the significance of your work. You end the paper with a paragraph that provides a look forward, meaning what is the impact of this paper and how could this information be used in the future?

- A. Big picture point of the work or collective conclusion synthesized from the work
 - a. Supporting point 1
 - b. Supporting point 2
 - c.
- B. Future work or impact
 - a. Supporting point 1
 - b. Supporting point 2

FINAL NOTES:

- ALWAYS WRITE THE PAPER IN TIMES NEW ROMAN AND USE ARIAL FOR FIGURE FONT. NEVER USE CALIBRI OR WHATEVER DEFAULT YOUR COMPUTER HAS!
- Double spaced pages
- page numbers at bottom middle
- Figures and captions within the text just after the moment of first mention and appropriate for page break. TEXT HERE CAN BE SINGLE SPACED TO DISTINGUISH FROM THE MAIN TEXT.
- Figures should be big and easy to read. They can be adjusted for the column format AFTER the paper is accepted.
- TOC figures and abstracts can be a place holder until we get closer to the final draft. Papers evolve during the writing process and these will as well.