M.Sc. Chemistry Practical Inorganic Chemistry (Paper- 4106) Semester- IV

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Writing a Review Article ?

Please use DU e-resources as given in
DU website to download your required papers

What is a review article?

- A critical, constructive analysis of the literature in a specific field through summary, classification, analysis, comparison.
- A scientific text relying on previously published literature or data.
- New data from the author's experiments are not presented (with exceptions: some reviews contain new data)

What is the function of a review article?

- To organize literature
- To evaluate literature
- To identify patterns and trends in the literature
- To synthesize literature
- To identify research gaps and recommend new research areas

Which types of review articles exist?

- **Narrative review:** Selected studies are compared and summarized on the basis of the author's experience, existing theories and models. Results are based on a qualitative rather than a quantitative level.
- **Best evidence review:** A focus on selected studies is combined with systematic methods of study-selection and result exploration.
- **Systematic review:** Findings from various individual studies are analyzed statistically by strict procedures. Meta-Analyses are used to pool the results of individual studies

Elements of a review article

Title: between eight to 12 words

- Helping readers to decide whether they should read the text or not

List of authors: Declare intellectual ownership of the work,

- provide contact information

Abstract: Informs about the main objectives and result of the review article

- usually 200 to 250 words

Introduction: Provides information about the context, indicates the motivation for the review, defines the focus, the research question and explains the text structure

- Between 10% and 20% of the core text

It is usually easier to write this after the main body…

Introduce your topic by highlighting the **core scientific facts** that are well backed up and widely accepted

Highlight the **importance** of the review – are you assessing potential clinical relevance? Gap in research area? New perspective?

What is the **core aim** of this review? To compare and contrast conflicting evidence? To identify under-examined aspects of the topic?

Tell the reader ***what you are going to talk about… list your topics in order!***

Body: Main Part of the Review Article

- Methodological approaches
- Models or theories
- Extent of support for a given thesis
- Studies that agree with another versus studies that disagree
- Chronological order
- Geographical location
- 70 to 90% of the core text

Conclusions

- Answer the research question set in the introduction
- 5 to 10% of the core text

References

- Shows interested readers how to find the literature mentioned in the text.
- A range between 50-100 references

Overall Steps to be followed

1. Narrow the topic, define a few research questions or hypotheses
2. Search for literature sources, refine topic and research questions during the search
3. Read, evaluate, classify and make notes
4. Redefine the focus and the research questions, define the take-home message
5. Compose a preliminary title

6. Find a structuring principle for the article (e.g. Chronological, subject matter, experimental procedure)
7. Prepare an outline, find headings for the sections in the text body
8. Plan the content of each paragraph in the different sections
9. Prepare tables, concept maps, figures

10. Draft the methods section (if needed)
11. Draft the body sections
12. Draft the conclusions
13. Draft the introduction
14. Draft the abstract
15. Revise drafts of different sections, abstract & title, tables, figures & legends
16. Revise citations and references
17. Correct grammar, spelling, punctuation
18. Adjust the layout

USEFUL LINKS

https://www.nature.com/natrevchem/articles?type=review-article
https://pubs.acs.org/journal/chreay

https://slideplayer.com/slide/1404676/

https://scholar.google.com/
https://www.ncbi.nlm.nih.gov/pubmed/

Reference

Plaxco KW. The art of writing science.
Protein Sci. 2010 Dec;19(12):2261-6. doi: 10.1002/pro.514.

Kotsis, S.V., & Chung, K. C. (2010). A guide for writing in the scientific forum. *Plastic and reconstructive surgery*, *126*(5), 1763–1771. https://doi.org/10.1097/PRS.0b013e3181ef8074

Additional Help

All chemical structures should be drawn with ChemDraw, which is available for free from Southwestern.
(To format your drawings, go to "File" then "Apply Document Settings from" and select "ACS Document 1996".

This will set the drawing ratios to the standard for ACS documents.) All drawings should be reduced to 80% of normal size. (To do this, highlights your drawings and right click. Select "Scale" and then "Scale by" 80%. Select the radial button to "Scale Atom Labels and Settings.")

It is important that your drawings are neat and organized.

All bond angles should be exactly 60° unless that is not possible based on the structure.
All arrows should be completely aligned with the center of the structures and should be distributed correctly.
(Both "Align" and "Distribute" commands appear beneath the "Object" menu.)