Writing for Publications

SEH Research Culture Session

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Context

- Very prolific publication track record
  - Since 2006 as a Ph.D. candidate
  - 5 book chapters
  - 42 journal articles
  - 21 conference proceedings
  - 8 publications under review and 5-6 in preparation

- Quality
  - Increasing impact factors (IF)
    - Average IF of ~7.5 for 2012
    - Highest IF of 23.9
    - IF >9.0 for seven journal articles
Why Publish?

- Not publishing = work was not done!
  - Record for posterity
  - Thesis readership?
  - Critical feedback – shapes the publication and thesis
  - Career and future opportunities
  - Need to publish EVERYTHING you do, in the best possible outlet

- Negative results?
  - That is a result!
  - You had a reason for doing it
    - Why were the results ‘unexpected’? Explanation = publication.
Writing and Publishing

- Writing approaches
  - ‘Start-to-finish’
    - Possible but challenging
    - Needs complete focus and well-planned mental picture
  - ‘Outward spiral’
    - Starting at the crux of the paper: results
    - Spiralling outward: discussion, experimental, conclusions, introduction, abstract

- Publishing journal articles
  - Standard: highly structured
  - High impact: selling key outcomes, not details
Starting to Write

- Trust your ‘style’ and stick to it
- If you struggle to write, fill up sections with bullet points
  - Ensure you place these points in a systematic order to make the next iteration easier
  - Expanding bullet points into sentences produces your paragraph
- Stick to what fits the manuscript
  - Keep it coherent
  - Marginally related content is ‘supplementary information’
Every section in an article needs to have a logical progression of thought and content.

Abstract: 5 lines

- ‘Why’ is it important?
- ‘What’ did you do?
- ‘How’ did you do this?
- ‘What’ did you find?
- ‘What’ are the implications of the findings?
Logical Sequence | 2/3

- **Introduction**
  - Very general – broad field  \textit{piezoelectrics}
  - Specific area  \textit{lead-free}
  - Specialised concepts  \textit{alkali loss}
  - Scope of the work with novelty  \textit{oxygen partial pressure for control of alkali loss}

- **Experimental or Materials and Methods**
  - Brief overview for experts
  - Follow with more details for non-experts and for future researchers to repeat the work
    - For high impact journals, use ‘supplementary information’ to cover these extra ‘details’
Logical Sequence | 3/3

- **Results and Discussion**
  - Present a story
  - Be logical
  - Back with evidence
  - Present as hypothesis, the test, and the outcome(s)

- **Conclusions**
  - Highlight key outcome – be specific
  - Finish positively – stress on impact
  - Be concise
Bring it all Together

- Convert bullet points to paragraphs
- Do the sections flow neatly on to the next?
- Get feedback
  - Take every bit on board
  - Do not be lazy!
  - Be selective with feedback on ‘style’
    - Do not make it a mix of styles
- Proof-read carefully
Final Draft

- FIGURES!
  - Are they perfect(!) and consistent?

- Sentences
  - Minimal jargon
  - ‘Active’ style and paragraph start
  - Most concise form?

- Format
  - Have you followed the journal style?
  - Page length and figure quality requirements?
  - Reference styles? Units? Scientific notations?
Submission

- Cover Letter
  - Increasingly important
  - Not just “see attached manuscript”!
  - Highlight novelty and key findings in 1-2 paragraphs (preferably a bullet point list)
  - Suggest appropriate reviewers
    - Not friends! *Appropriate* reviewers
  - Include *expected* statements on ‘not under consideration elsewhere’

- Inform co-authors of progress
- Keep track of your submission
Review

“**The reviewer is always right**”
- As told by a *Nature Materials* editor and others
- It could be a failure to convey something effectively or taking things for granted

**Response letter**
- Take a step back: be impersonal and clinical
- Respond ‘point-by-point’
  - Indicate ‘Comment’ and ‘Response’
- For almost every comment, make at least 1 modification (even re-writing a line) in the manuscript
- Provide a manuscript version indicating changes
Outcome

- Rejected
  - Try again until you succeed
    - Improve and submit elsewhere
  - Remember: if you do not publish, you did not do the research

- Accepted
  - Congratulations! 😊
  - Do not stop there!
    - Can you promote this outcome?
    - Have copies at the next conference you attend
    - Does the journal consider cover art suggestions?
    - Is it media worthy?
Summary

To publish and publish well, you are aiming for

- Novelty
- Clear motivation
- Clarity
- Coherence
- Impact
- Appeal
- Relevance

ABSTRACT
INTRODUCTION
METHODS
RESULTS AND DISCUSSION
CONCLUSIONS
QUALITY OF FIGURES
REFERENCES
Extra Resources

- “Writing and Publishing”
  - http://www.biggerbrains.com/a-career-in-academic-research-a-perspective-on-writing-and-publishing

- “Plan & Publish, or Perish: Tips for Writing Well”
  - Dr. Amanda S. Barnard
  - http://mams.rmit.edu.au/ryl0wql50c8q.pdf

- “Whitesides' Group: Writing a Paper”
  - Prof. George M. Whitesides
  - http://dx.doi.org/10.1002/adma.200400767
Thank You!

Questions?