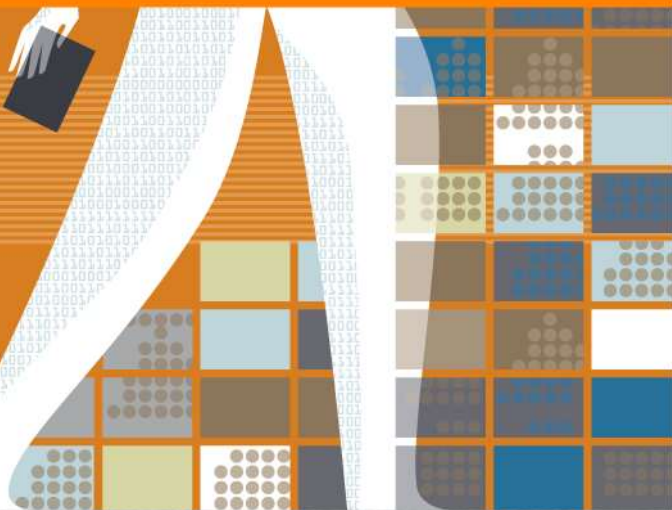


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How to write a scientific manuscript and get it published

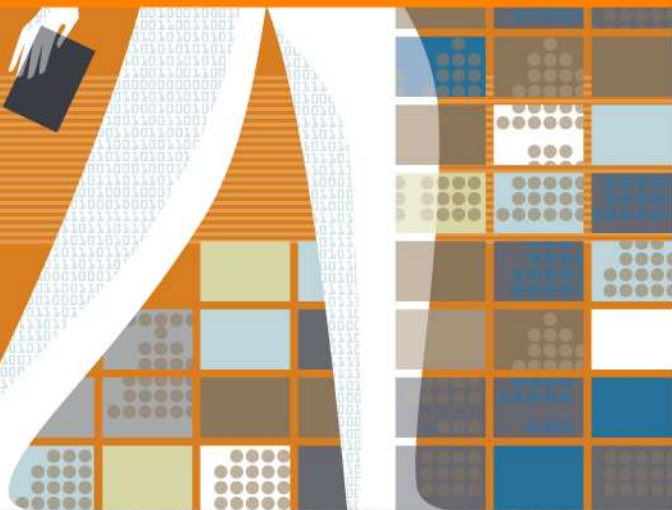
Lucie Boudová, PhD.

December 10th 2015, Mykolas Romeris University




Elsevier Publishing Campus | Publishing Connect

Outline

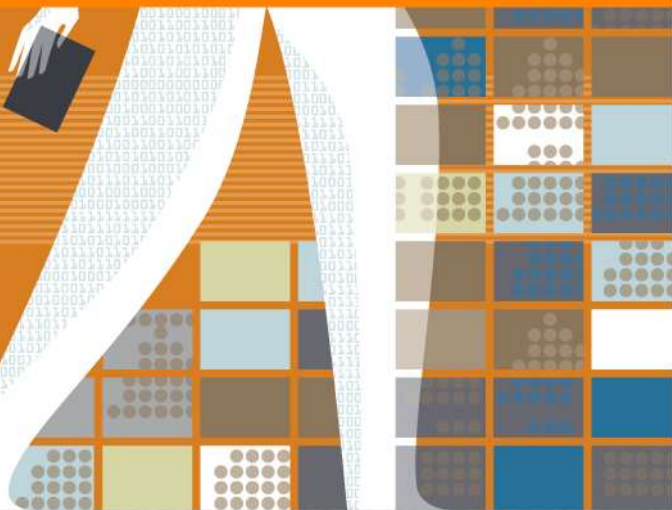


What will we cover?

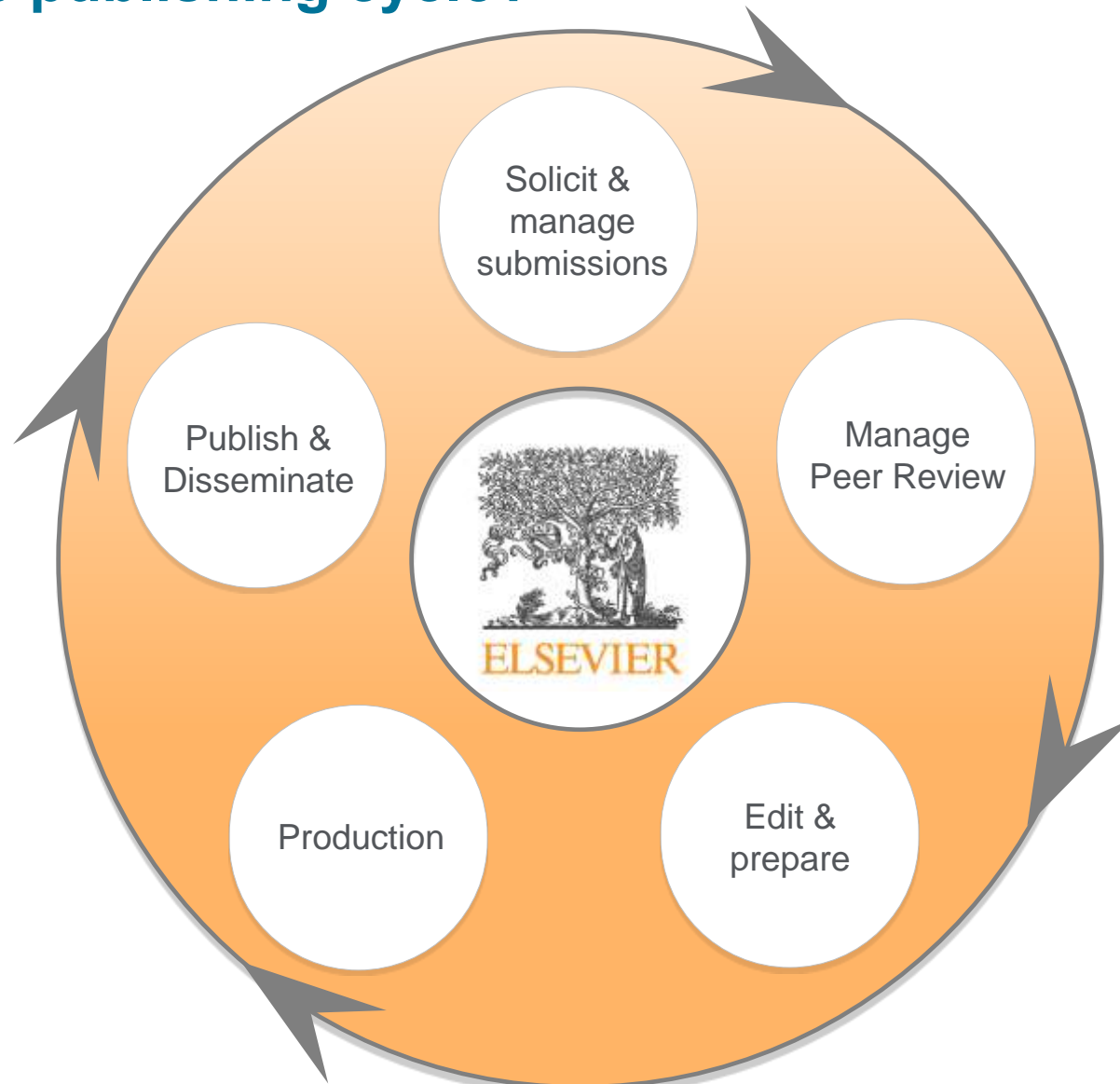
- 
- Setting the scene
 - Before writing your paper
 - Structuring and writing your article
 - English language
 - Submitting your paper
 - The review process
 - Ethics
 - Promoting your research

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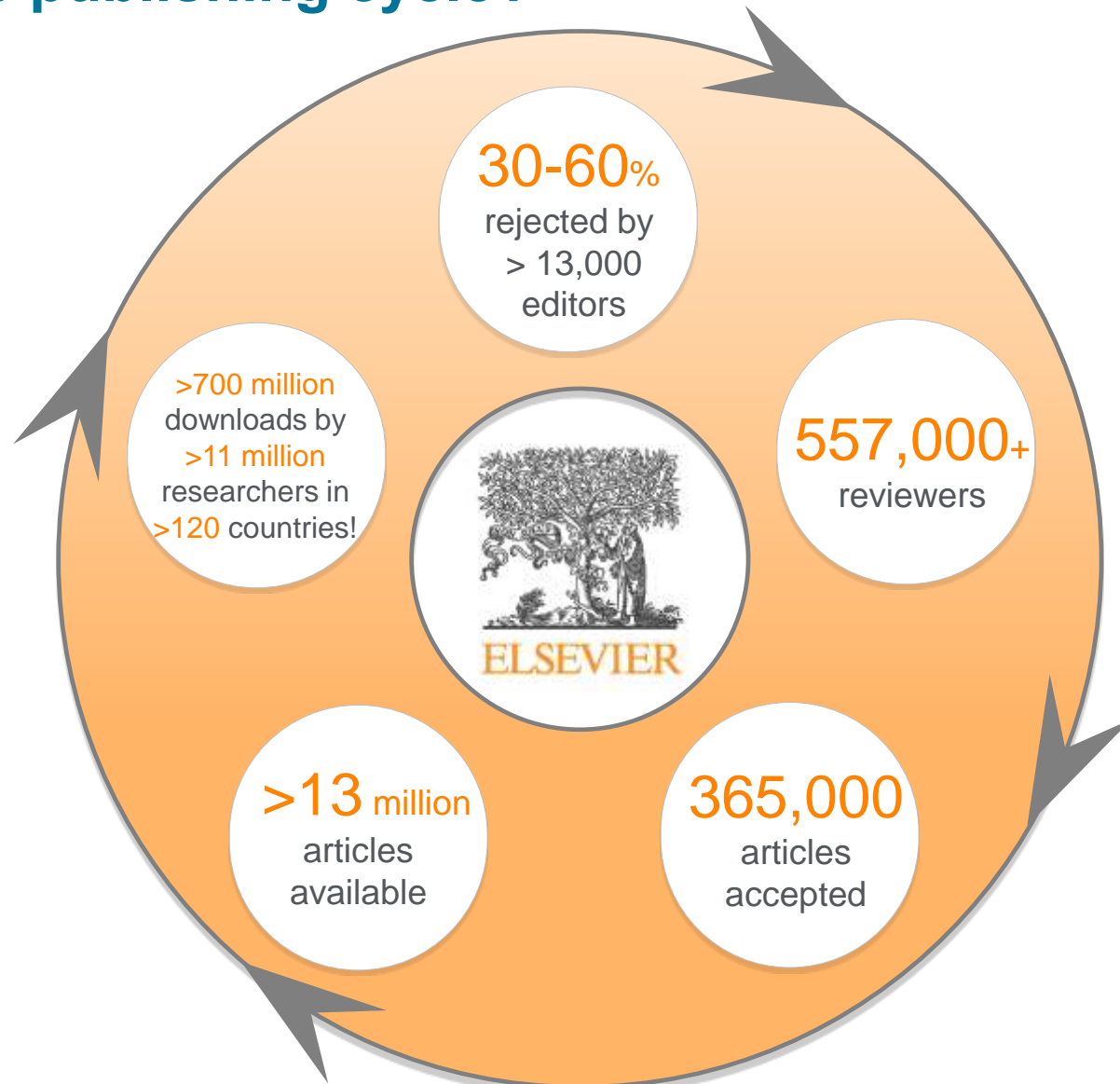
Setting the scene



What is the publishing cycle?

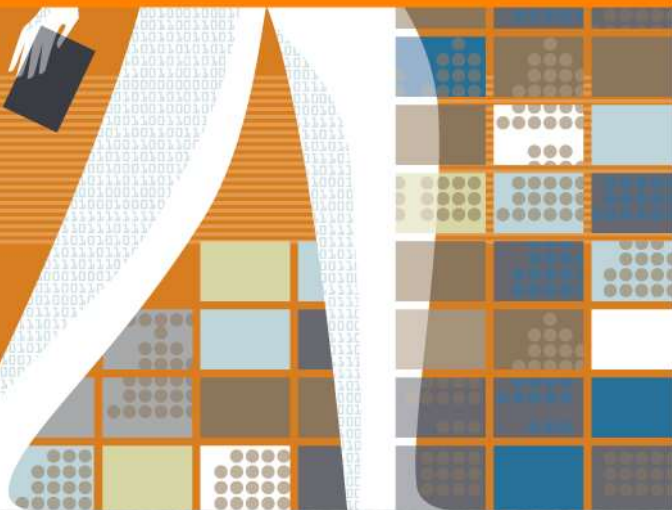


What is the publishing cycle?

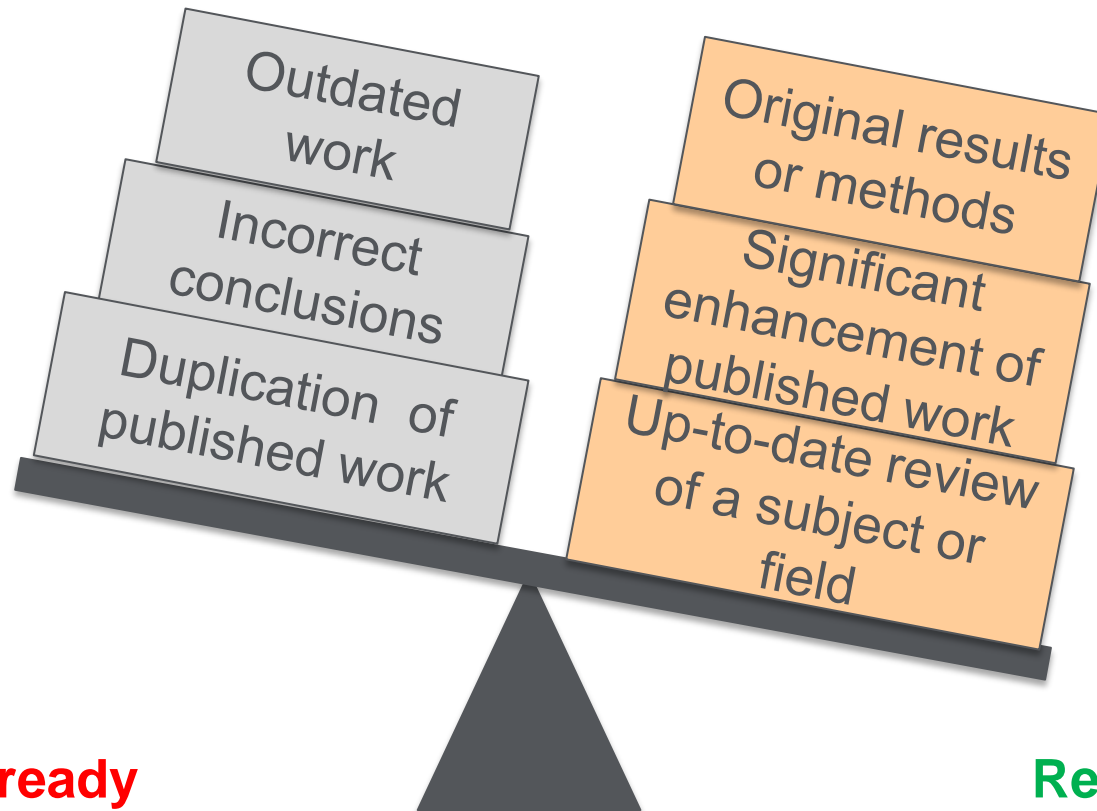


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Before writing your paper



Am I ready to publish?



Not ready

Work has no scientific interest

Ready

Work advances the field

What makes a strong manuscript?



- Clear and useful message
- A logical manner
- Readers grasp the research

Editors, reviewers and readers all want to receive well presented manuscripts that fit within the aims and scope of their journal.

What article type should I choose?



Full articles

- Substantial, complete and comprehensive pieces of research
Is my message sufficient for a full article?



Letters or short communications

- Quick and early communications
Are my results so thrilling that they should be shown as soon as possible?



Review papers

- Summaries of recent developments on a specific topic
- Often submitted by invitation

What about if I have a methods, data or software paper?

- Adaptations and customizations to methods
(**Example journal: MethodsX**)
- Published datasets: available for sharing and reuse
(**Example journal: Data in Brief**)
- Articles that acknowledge the impact of software on research
(**Example journal: SoftwareX**)



How do I choose the right journal?

- Aim to reach the intended audience for your work

1. Shortlist a handful of candidate journals

- Check your reference list
- Supervisor and colleagues can provide good suggestions
- Search in databases, check quality indicators

2. And investigate them:

- ? Aims & Scope
- ? Accepted types of articles
- ? Readership
- ? Peer review process (single blind, double blind, open)
- ? Speed of publication
- ? Subscription versus Open Access

- Choose only one journal, as simultaneous submissions are prohibited

Are there any tools available to help me find the right journal?

<http://journalfinder.elsevier.com/>

The screenshot displays the Elsevier Publishing Campus interface. At the top, the Elsevier logo is on the left, followed by a search bar with the placeholder text 'Type here to search on Elsevier.com' and a magnifying glass icon. To the right of the search bar are links for 'Advanced search', 'Follow us:' with social media icons for Facebook, LinkedIn, Twitter, and Google+, and a 'Help & Contact' link.

Below the header is a navigation bar with the following links: 'Journals & books', 'Solutions', 'Authors, editors & reviewers', 'About Elsevier', 'Community', and 'Store'.

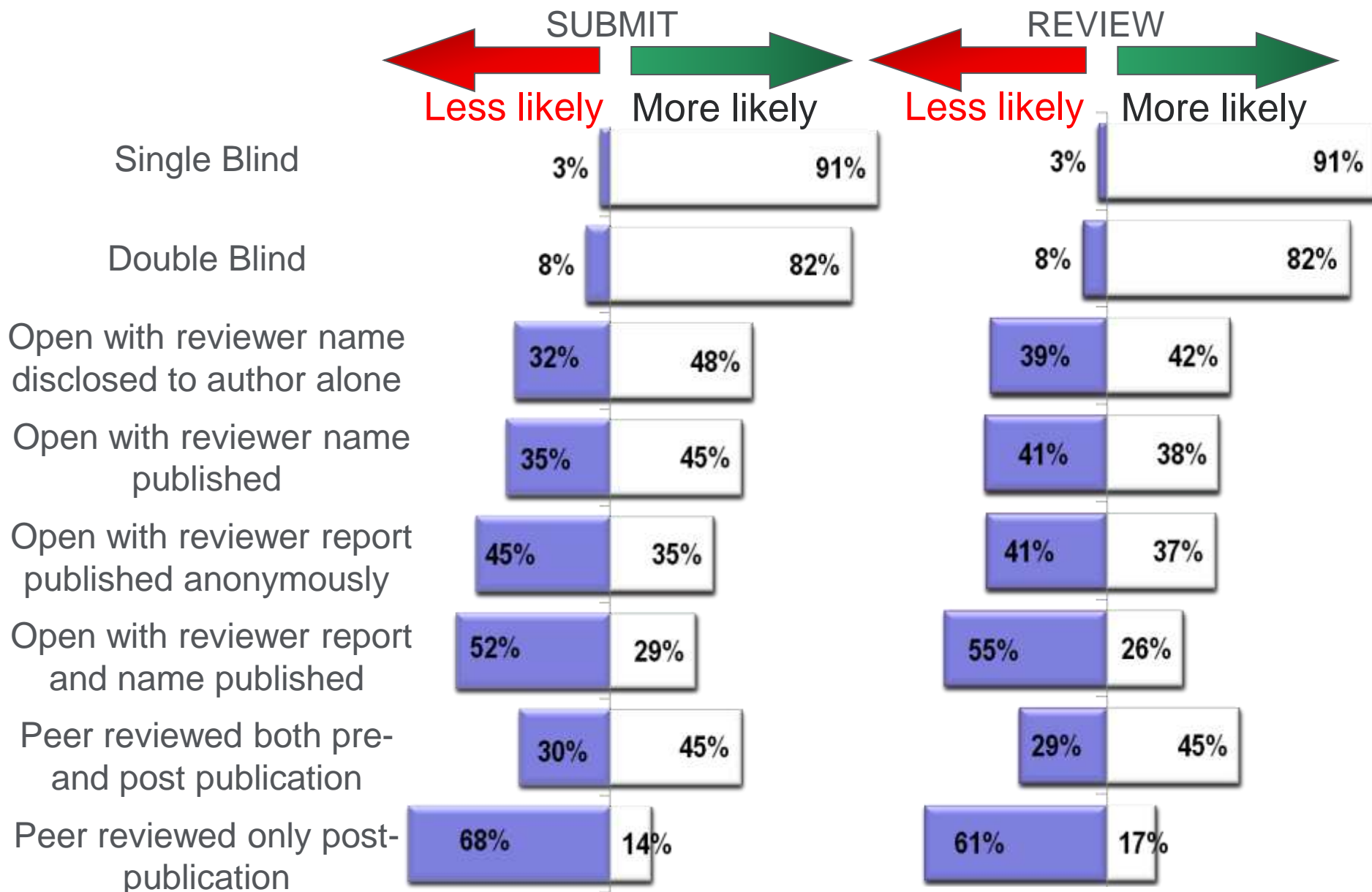
The main content area is divided into two columns. The left column, titled 'For Authors', contains a list of links: 'Journal authors' home', 'Author Rights', 'Ethics', 'Agreements', 'Open access', 'Author services', 'Authors' Update', 'Early career researchers', 'Book authors' home', 'Sharing your article', 'Journal and article metrics', and 'Promote your article'. The right column, titled 'Elsevier for authors', features a section 'How to publish in an Elsevier journal' with a paragraph explaining the publishing process. Below this is a horizontal flowchart with five steps: 'Publishing process', 'Find a journal', 'Prepare your paper', 'Submit paper', and 'Check status'. Under the 'Find a journal' step, there are two options: 'Match your abstract to a journal' with a 'Start matching' button, and 'Search for a journal by name' with a 'Search for a Journal' button and a search input field.

How important is the Impact Factor (IF)?

- It indicates how many times the more recent papers in a journal are cited on average in a given year
- It is influenced by editorial policies of journals
- It varies by field and the turnover of research in that field
- It varies by the types of papers published

$$\text{IF year } x = \frac{\text{cites in year } x \text{ to source items published in years } x-1 \text{ and } x-2}{\text{number of source items published in years } x-1 \text{ and } x-2}$$

What are the different kinds of review that exist?




Do I need to bother with the Guide for Authors?

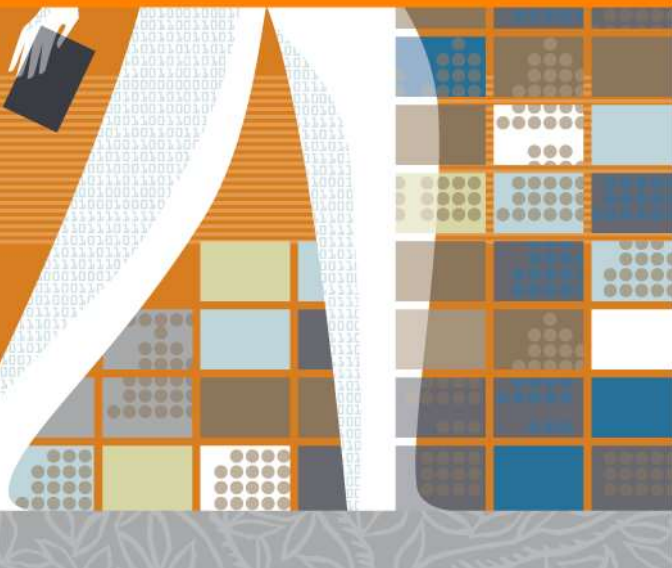
- Find it on the journal homepage of the publisher, e.g. **Elsevier.com**
- Keep to the Guide for Authors in your manuscript
- It will save your time

The screenshot shows the Elsevier website interface. At the top, the Elsevier logo is on the left, followed by a search bar, 'Advanced search' link, and social media icons. Below this is a navigation bar with links: 'Journals & books', 'Solutions', 'Authors, editors & reviewers', 'About Elsevier', and 'Community'. The main content area features the journal 'Combustion and Flame' with its cover image, title, and description. To the right of the journal information is a vertical menu with options: 'Guide for Authors', 'Submit Your Paper', 'Track Your Paper', 'Order Journal', and 'View Articles'. An orange box highlights this menu, and an orange arrow points from it to a larger, detailed view of the 'Guide for Authors' menu on the right side of the image. This detailed view shows the same menu items with additional icons on the right. Below the journal information, there is a 'Journal Metrics' section with 'Source Normalized Impact per Paper (SNIP): 2.674' and 'SCImago Journal Rank (SJR): 3.193'. A 'Journal Insights' section is also visible, along with a 'Recent Open Access Articles' section featuring a link to 'Rate-Controlled Constrained Equilibrium'.

Recap – before writing your paper:

- 
- Determine** if you are ready to publish your work
 - Decide** on the best type of manuscript
 - Choose** the target journal
 - Check** the Guide for Authors

Structuring and writing your paper



What general structure should a research article have?

- Title
- Abstract
- Keywords



- Introduction
- Methods
- Results and Discussion



- Conclusion
- Acknowledgements
- References
- Supporting materials



What tips do you have for: the title?

- Should attract reader's attention
- Should be concise
- Should be specific and informative
- Should identify the main issue
- Should use formal language
- Should NOT use technical jargon or rarely-used abbreviations

Editors and reviewers do not like titles that make no sense or fail to represent the subject matter adequately. Additionally, if the title is not accurate, the appropriate audience may not read your paper.



Combustion and Flame

Available online 9 March 2015

In Press, Corrected Proof — Note to users



**The effect of oxidation pressure on the equilibrium nanostructure
of soot particles**

What tips do you have for: the keywords?

- Are the labels of the manuscript
- Are used by indexing and abstracting services

Article title	Keywords
“An experimental study on evacuated tube solar collector using supercritical CO ₂ ”	Solar collector; supercritical CO ₂ ; solar energy; solar thermal utilization

- Should be specific
- Should use only established abbreviations (e.g. DNA)

Check the Guide for Authors for specifics on which keywords should be used.

What tips do you have for: the abstract?

- Keep it as brief as possible
- Summarize the problem, methods, results, and conclusions
- Make sure it is clearly written and easy to understand
- Make sure it is accurate and specific while also being catchy

Take the time to write the abstract very carefully. Many authors write the abstract last so that it accurately reflects the content of the paper.

What tips do you have for: the introduction?

- Provide a brief and concise context
- Explain the problem
- Mention existing solutions and limitations
- Identify what the work is trying to achieve
- Provide a perspective consistent with the nature of the journal

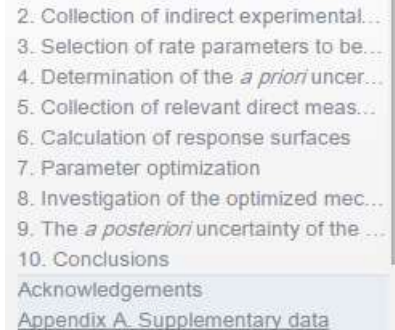
Write a unique introduction for every article. DO NOT reuse introductions.

What tips do you have for: the methods?

- Describe how the problem was studied
- Include detailed information
- Do not describe previously published procedures
- Identify the equipment and materials used

What tips do you have for: the results?

- Include only data of primary importance (use supplementary data for the rest)
- Use sub-headings to keep results of the same type together
- Be clear and easy to understand
- Highlight the main findings
- Feature unexpected findings
- Provide statistical analyses
- Provide visualisations



2. Collection of indirect experimental...
3. Selection of rate parameters to be...
4. Determination of the *a priori* uncer...
5. Collection of relevant direct meas...
6. Calculation of response surfaces
7. Parameter optimization
8. Investigation of the optimized mec...
9. The *a posteriori* uncertainty of the ...
10. Conclusions
Acknowledgements
Appendix A. Supplementary data

Appendix A. Supplementary data



Supplementary data 1.

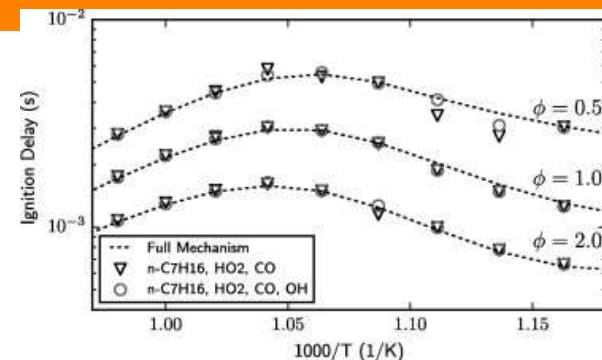
Supplementary material.

[Help with PDF files](#)

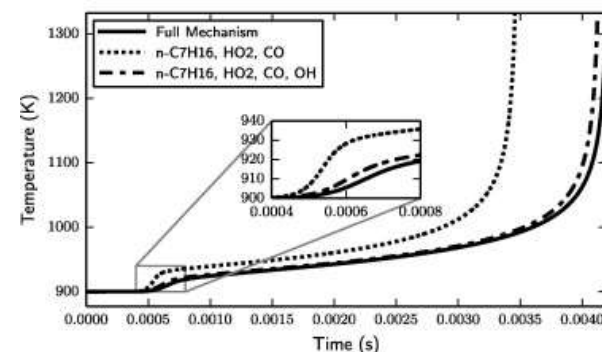
<http://www.elsevier.com/connect/a-5-step-guide-to-data-visualization>

What tips do you have for: figures?

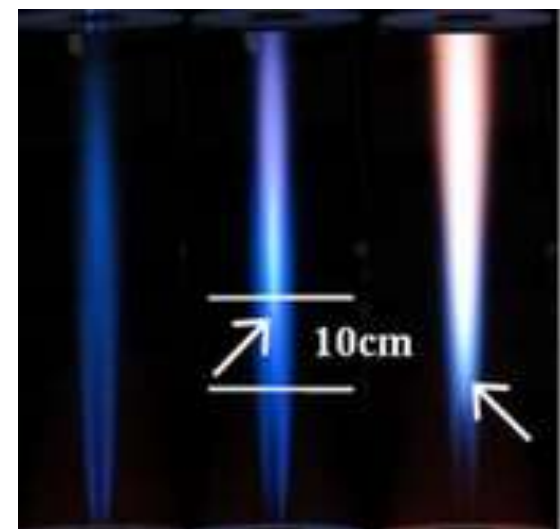
- The legend should enable the figure to stand alone.
- Use colour ONLY when necessary
- Graphs: un-crowded plots; restrict data sets (symbols to distinguish); well-selected scales; axis labels; label size.
- Photos: scale marker; do not manipulate the image to enhance the results.



(a) Constant volume ignition delays at 20 atm



(b) Temperature trace of constant-volume autoignition simulation at 900 K, 20 atm, $\phi = 0.5$



What tips do you have for: tables?

Needs a table

During the encoding task, significant activation clusters were detected in the left middle frontal gyrus (MFG) extending into the inferior frontal gyrus (IFG) (BA 9/45/47; Talaraich coordinates: $-40, 14, 28$), left MFG (BA 8; $-40, 22, 50$), left superior frontal gyrus (BA 6; $-24, -8, 64$), right IFG (BA 47; $28, 28, -2$), left LTL (BA 22; $-62, -22, 2$), right cerebellum ($30, -70, -16$) together with right fusiform/lingual gyrus (BA 18; $18, -88, -14$), left cerebellum/vermis ($-6, -60, -16$) (Fig. 1, top row) as well as the left ($-30, -12, -18$) and right hippocampus ($34, -12, -16$) (Fig. 2, left panel). During the retrieval task, when performance was not considered, significant activation clusters were detected in the left IFG (BA 47; $-28, 24, -4$), left MFG/IFG extending into the anterior cingulate cortex (BA 9/44/24; $-36, 12, 28$), right IFG (BA 44; $56, 16, 24$ and BA 47; $36, 20, -10$), left supramarginal gyrus (BA 40; $-34, -46, 42$), right putamen and caudate ($16, 10, 2$), right cerebellum ($36, -74, -18$) together with right fusiform/lingual gyrus (BA 18; $28, -90, -6$) and vermis ($-2, -62, -40$) (Fig. 1, middle row) as well as the right hippocampus ($26, -4, 22$) (Fig. 2, right panel). During retrieval, brain activation related to accurate memory performance was observed in the left LTL (Fig. 1, bottom row), with peak activation in the middle temporal gyrus (BA 21 and 22; $-50, -38, -4$) extending into the superior and inferior temporal gyri. No activation clusters were detected in the prefrontal cortex, hippocampus, or other MTL structures. No brain regions showed negative correlations with behavioral performance.

Does not need a table

Table 1. Effect of aeration on growth of *Streptomyces coelicolor*

Temp (°C)	No. of expt	Aeration of growth medium	Growth ^a
24	5	+ ^b	78
24	5	-	0

^a As determined by optical density (Klett units).

^b Symbols: +, 500-ml Erlenmeyer flasks were aerated by having a graduate student blow into the bottles for 15 min out of each hour; -, identical test conditions, except that the aeration was provided by an elderly professor.

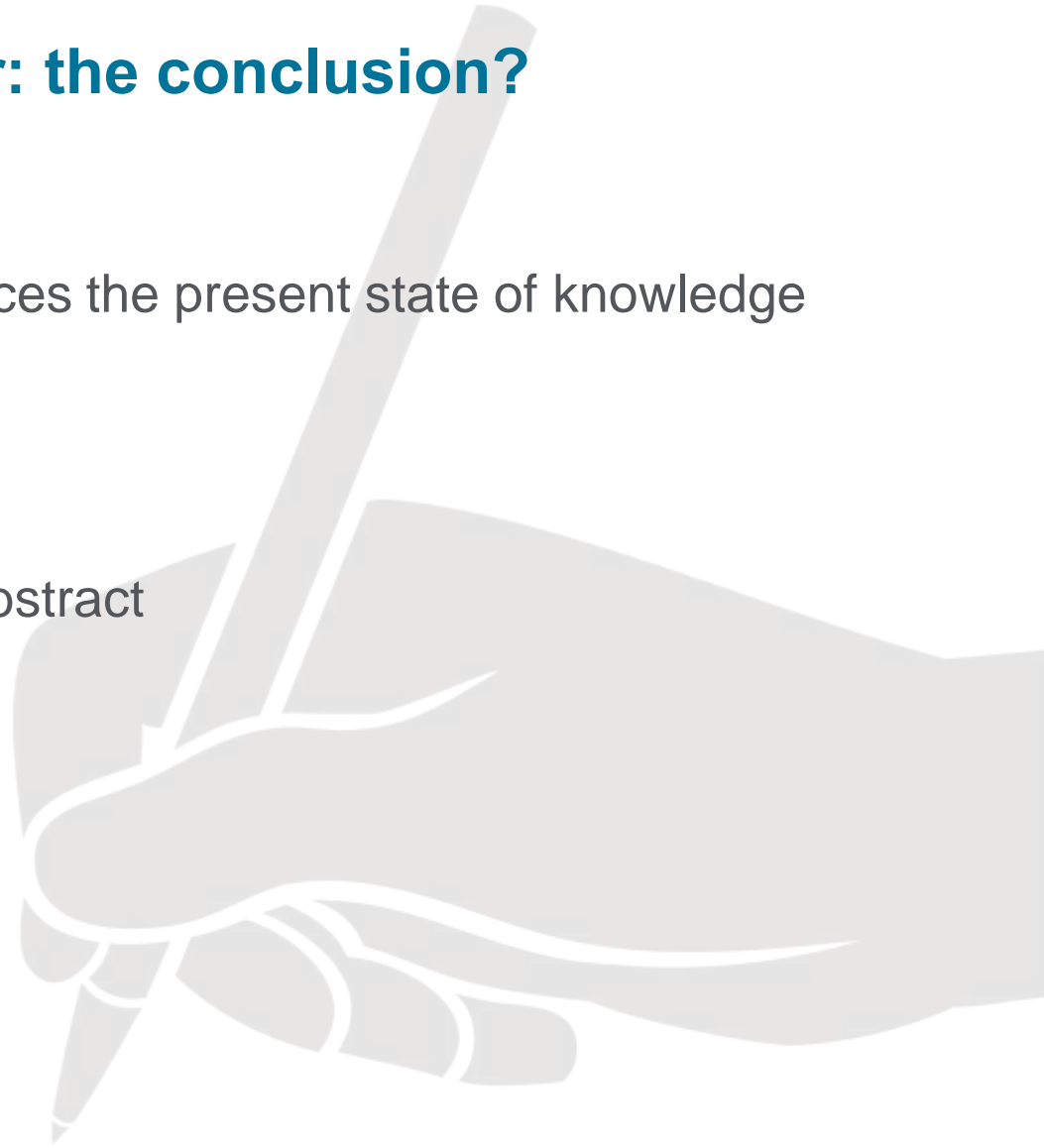
Growth medium aeration was essential for the growth of S. coelicolor. At room temperature (24° C) in stationary cultures, bacterial growth was not measurable, whereas in aerated cultures, substantial growth was evident (78 Klett units).

What tips do you have for: the discussion?

- Interpretation of results
- Most important section
- Make the discussion correspond to the results and complement them
- Compare published results with your own

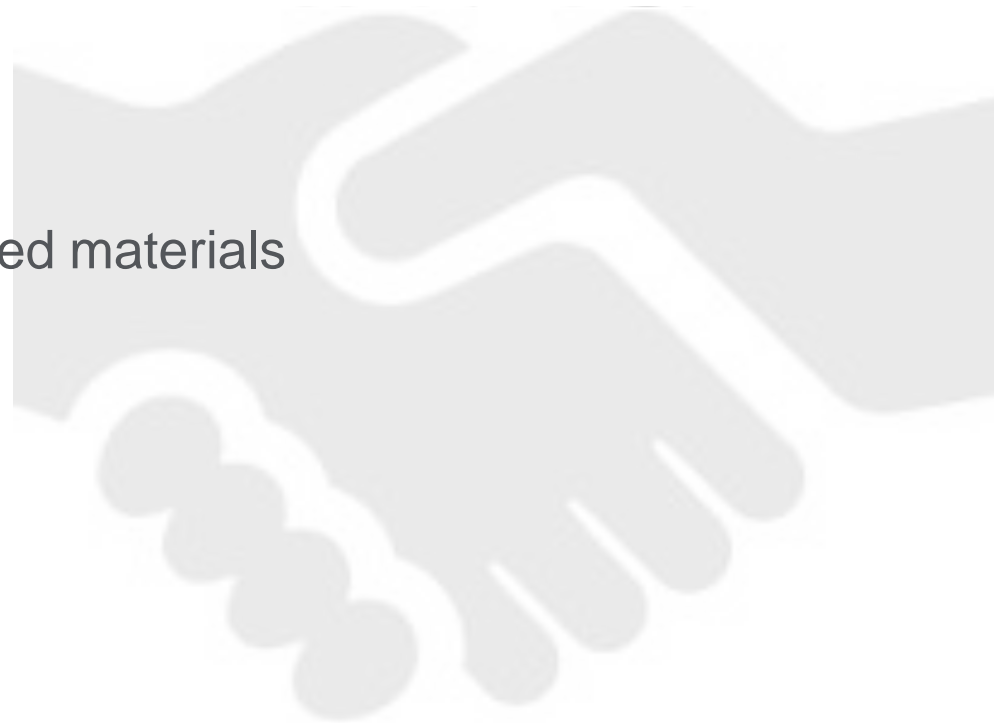
What tips do you have for: the conclusion?

- Explain how your work advances the present state of knowledge
- Suggest future experiments
- Do not repeat results or the abstract



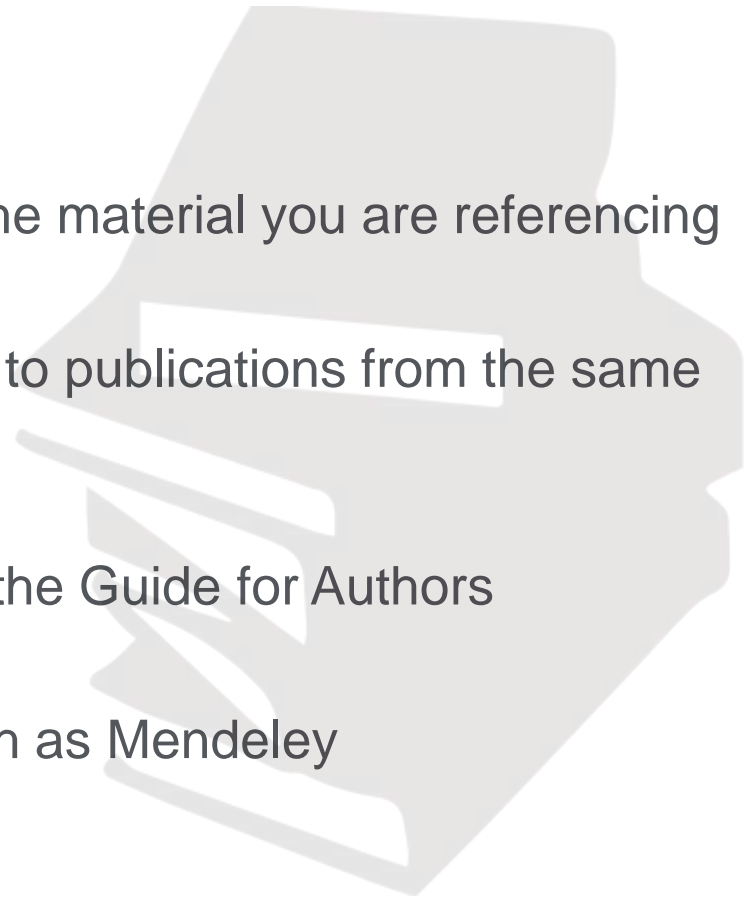
Who should I acknowledge?

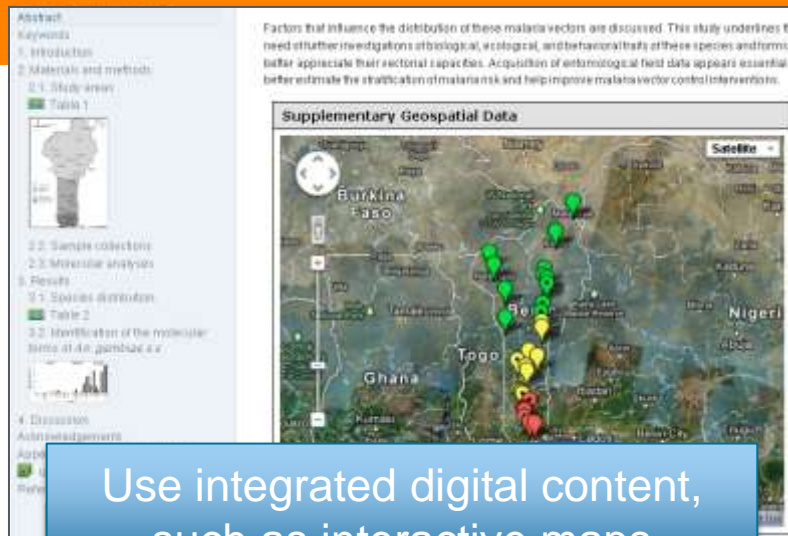
- Advisors
- Financial supporters and funders
- Proof readers and typists
- Suppliers who may have donated materials



What tips do you have for: the references?

- Do not use too many references
- Always ensure you have fully absorbed the material you are referencing
- Avoid excessive self citations or citations to publications from the same region or institute
- Conform to any requirements outlined in the Guide for Authors
- Consider using a reference manager such as Mendeley





Use integrated digital content, such as interactive maps



Embed video

Data for this Article

More information on this application

Data for this article is available at the following data repositories:



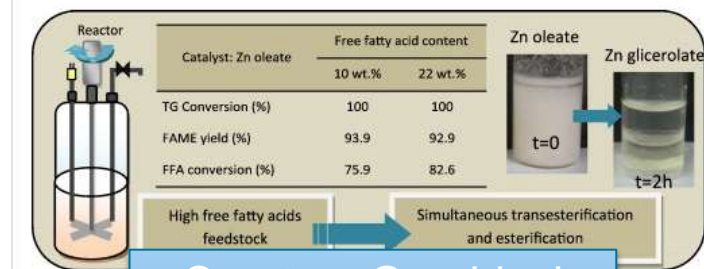
Link to your data at a data repository

Think about how you could enhance your article

Include Highlights

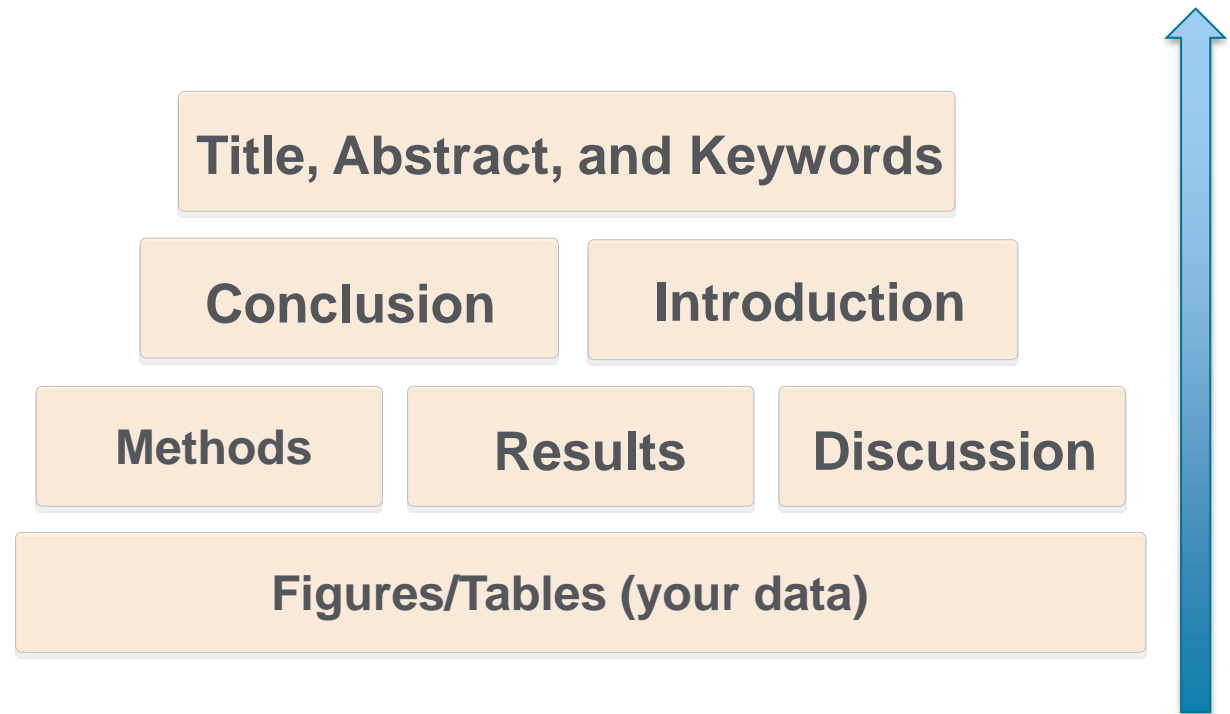
Highlights

- We conducted an experiment with a typical bituminous coal sample to understand the mechanism of growth and shedding of ash deposition.
- Based on video camera observations and measurements of the tube surface temperature, a residual layer remained on the tube after shedding of the ash deposition.
- The distribution of particle packing fraction (PPF), particle size, and chemical composition of the deposit were analyzed by SEM and CCSEM to elucidate the growth mechanism of ash deposition.
- A low-strength powder layer with low PPF and deficiencies of iron and alkaline compositions was formed within the initial ash layer.
- Based on the SEM image of the residual layer remaining after shedding, failure of the ash deposit occurred in the low-strength powder layer.




Create a Graphical Abstract

Building your paper brick by brick

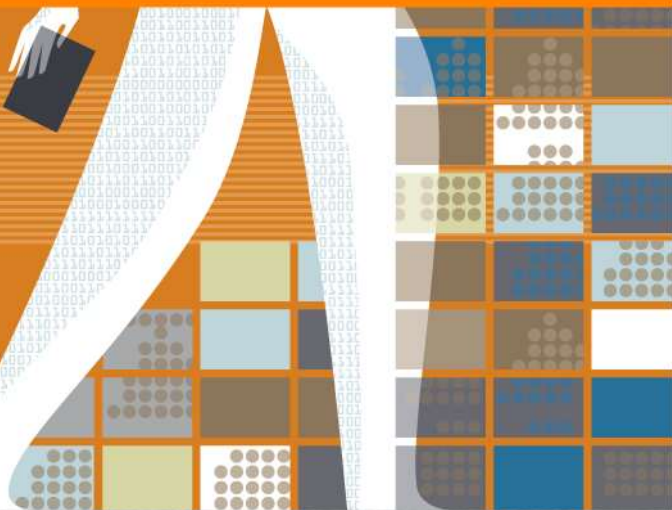


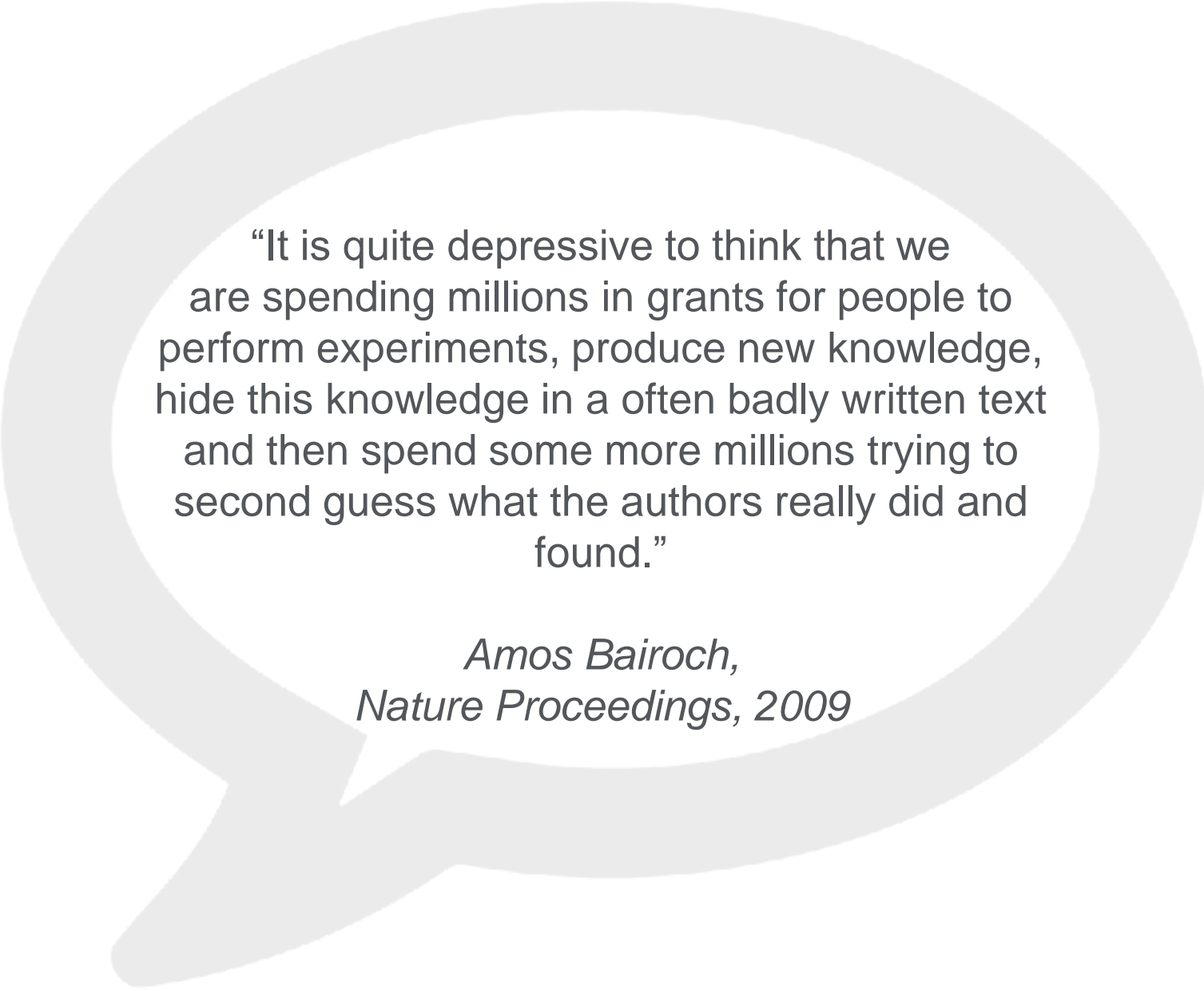
Recap – when writing your paper:

- 
- Start with your **data**
 - Move onto the main part of your article – **methods, results and discussion**
 - Show how your work advances the field via the **conclusion**
Set your work in a broader context via the **introduction**
 - Pay special attention to the **title, abstract and keywords**
 - Credit those who have helped you via **acknowledgements** and the resources you have consulted via **references**
 - Enhance your article** via available content innovation features

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English language





“It is quite depressive to think that we are spending millions in grants for people to perform experiments, produce new knowledge, hide this knowledge in a often badly written text and then spend some more millions trying to second guess what the authors really did and found.”

*Amos Bairoch,
Nature Proceedings, 2009*

Why is language important?

- Without clear and accurate language the meaning of the paper may be misunderstood
- Poor language quality can delay publication or lead to rejection

Do publishers correct language?

No!

It is the author's
responsibility...

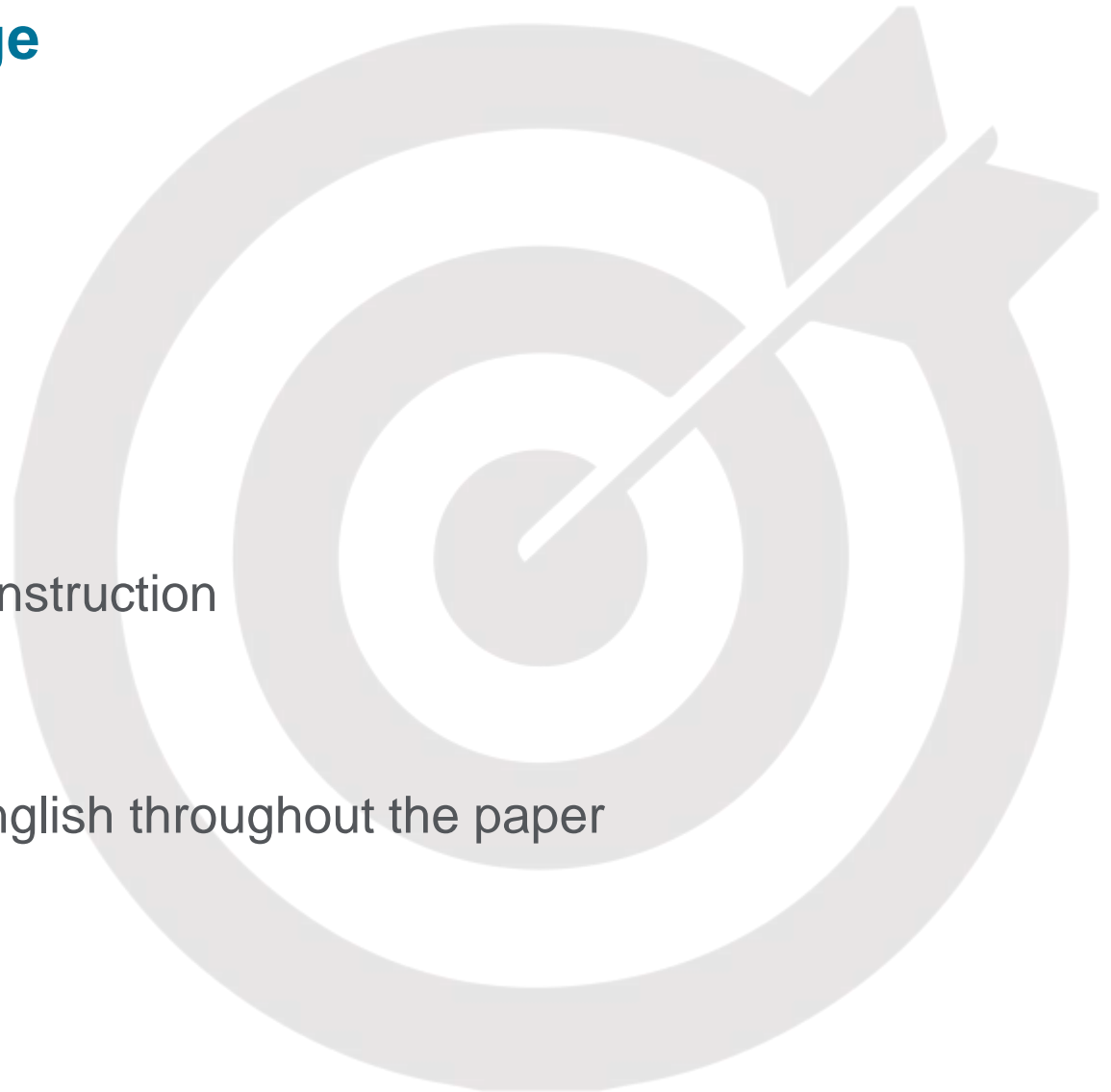
*...but **resources**
are available*

Manuscript language

- Clear
- Objective
- Accurate
- Concise

Common errors

- Incorrect sentence construction
- Incorrect tenses
- Incorrect grammar
- Inconsistent use of English throughout the paper
- Sentences too long

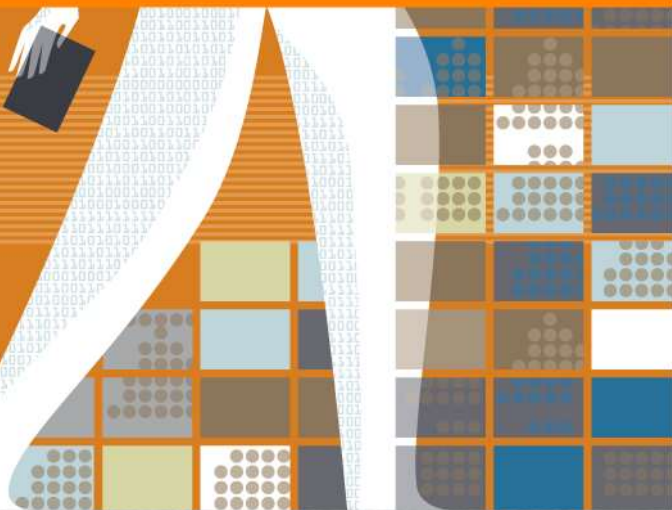


Recap – manuscript language:

- Good language is vital to ensure readers **understand** your message
- Good language is key to getting your paper **accepted** for publication by busy editors and reviewers
- **Publishers do not edit** your language for you but they do provide resources and services to help
- The **author is responsible** for how their research is conveyed
- Write **clearly and concisely**

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Submitting your paper



Revise before submission



Covering Letter

Professor H. D. Schmidt
School of Science and Engineering
Northeast State University
College Park, MI 10000
USA

January 1, 2008

Dear Professor Schmidt,

Enclosed with this letter you will find an electronic submission of a manuscript entitled "Mechano-sorptive creep under compressive loading – a micromechanical model" by John Smith and myself. This is an original paper which has neither previously nor simultaneously in whole or in part been submitted anywhere else. Both authors have read and approved the final version submitted.

Mechano-sorptive is sometimes denoted as accelerated creep. It has been experimentally observed that the creep of paper accelerates if it is subjected to a cyclic moisture content. This is of large practical importance for the paper industry. The present manuscript describes a micromechanical model on the fibre network level that is able to capture the experimentally observed behaviour. In particular, the difference between mechano-sorptive creep in tension and compression is analysed. John Smith is a PhD-student who within a year will present his doctoral thesis. The present paper will be a part of that thesis.

Three potential independent reviewers who have excellent expertise in this field are:

Dr. Fernandez, Tennessee Tech, email1@university.com
Dr. Chen, University of Maine, email2@university.com
Dr. Singh, Colorado School of Mines, email3@university.com

I would very much appreciate if you would consider the manuscript for publication in the *International Journal of Science*.

Sincerely yours,


A. Professor

Final approval from
all the authors

Explanation of the
importance of the
research

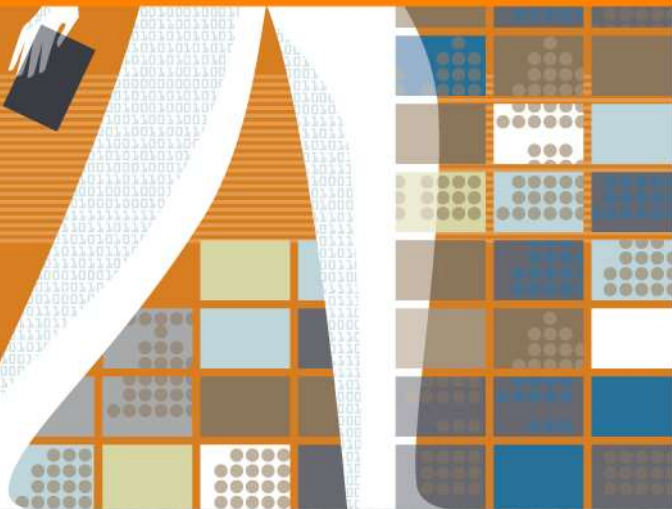
Suggested reviewers

Recap – submitting your paper:

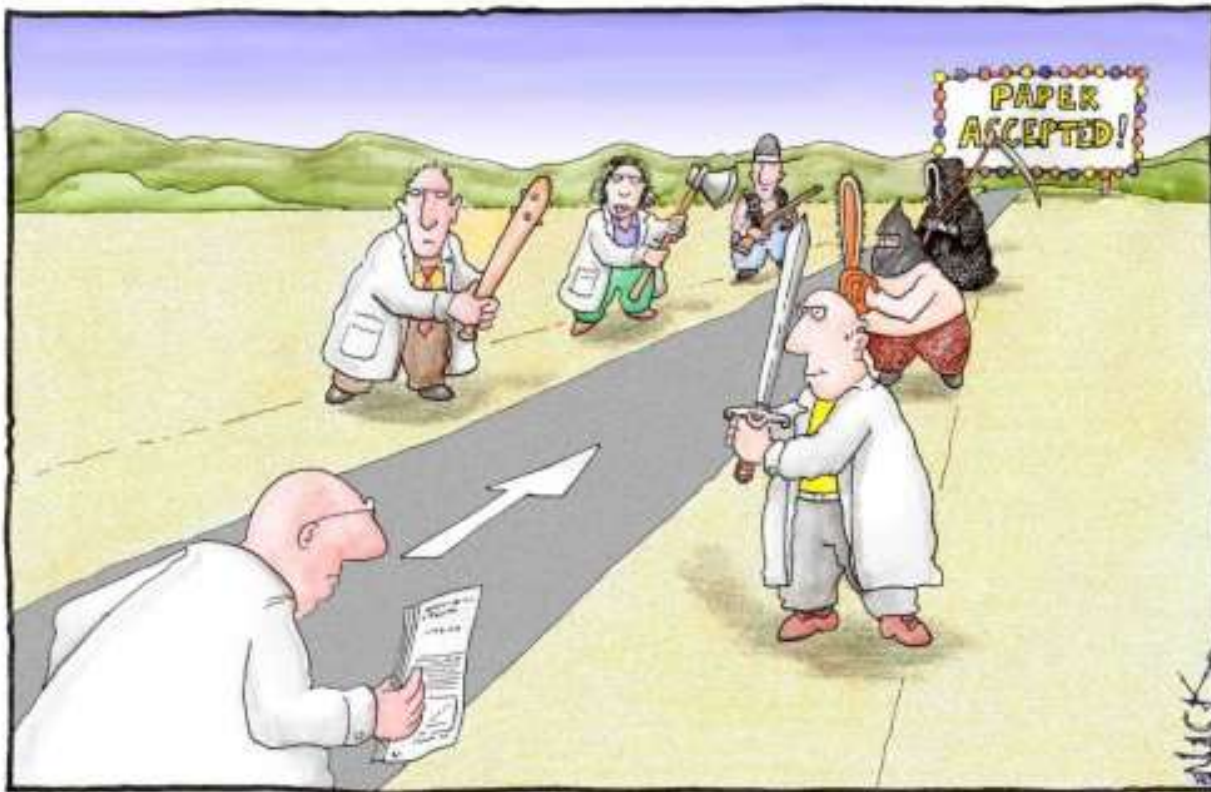
- 
- Check
 - Check
 - Check (again)
 - Include a **covering letter**

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Review

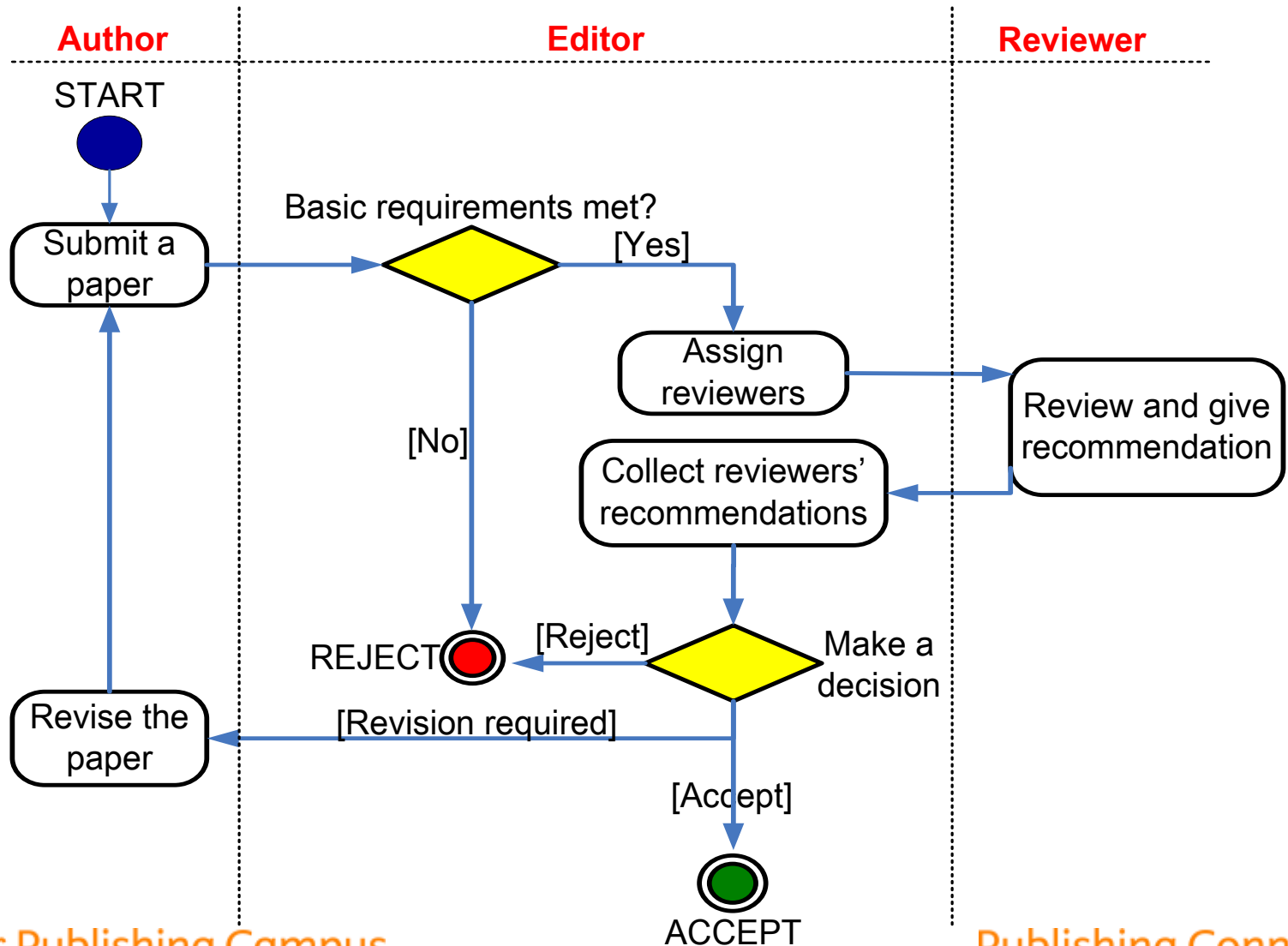


Not how it works



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

What actually happens



What are reviewers looking for?

- Importance of the hypothesis
- Originality
- Clear progression through the paper
- Well presented



Addressing reviewer and editor feedback

ADDRESSING REVIEWER COMMENTS

BAD REVIEWS ON YOUR PAPER? FOLLOW THESE GUIDELINES AND YOU MAY YET GET IT PAST THE EDITOR:

Reviewer comment:

"The method/device/paradigm the authors propose is clearly wrong."

How NOT to respond:

✗ "Yes, we know. We thought we could still get a paper out of it. Sorry."

Correct response:

✓ "The reviewer raises an interesting concern. However, as the focus of this work is exploratory and not performance-based, validation was not found to be of critical importance to the contribution of the paper."

Reviewer comment:

"The authors fail to reference the work of Smith et al., who solved the same problem 20 years ago."

How NOT to respond:

✗ "Huh. We didn't think anybody had read that. Actually, their solution is better than ours."

Correct response:

✓ "The reviewer raises an interesting concern. However, our work is based on completely different first principles (we use different variable names), and has a much more attractive graphical user interface."

Reviewer comment:

"This paper is poorly written and scientifically unsound. I do not recommend it for publication."

How NOT to respond:


✗ "You #&@*% reviewer! I know who you are! I'm gonna get you when it's my turn to review!"

Correct response:

✓ "The reviewer raises an interesting concern. However, we feel the reviewer did not fully comprehend the scope of the work, and misjudged the results based on incorrect assumptions."

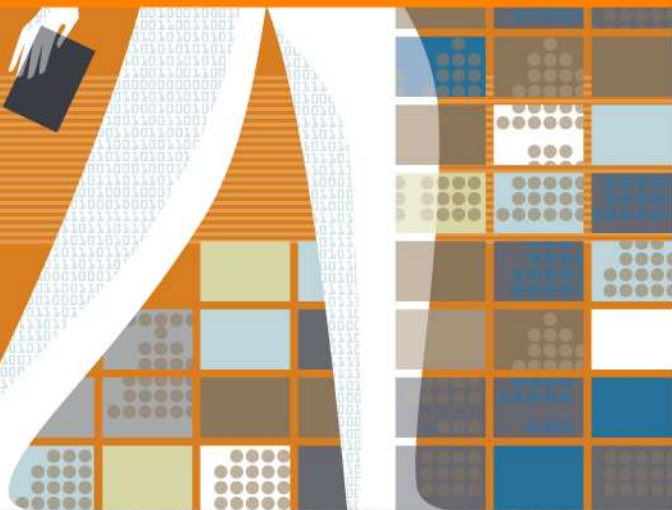
www.phdcomics.com

Recap – the review process:

- 
- The review process is managed by the handling editor
 - Editors can and do desk reject papers
 - Papers that pass the basic journal requirements are sent out for review where expert peers provide assessments
 - Papers may be accepted, rejected or sent back to the author for revision
 - Reviewers and editors are looking for novel research of high technical quality
 - The revision process should be seen as constructive

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Publishing ethics



What is unethical behaviour?

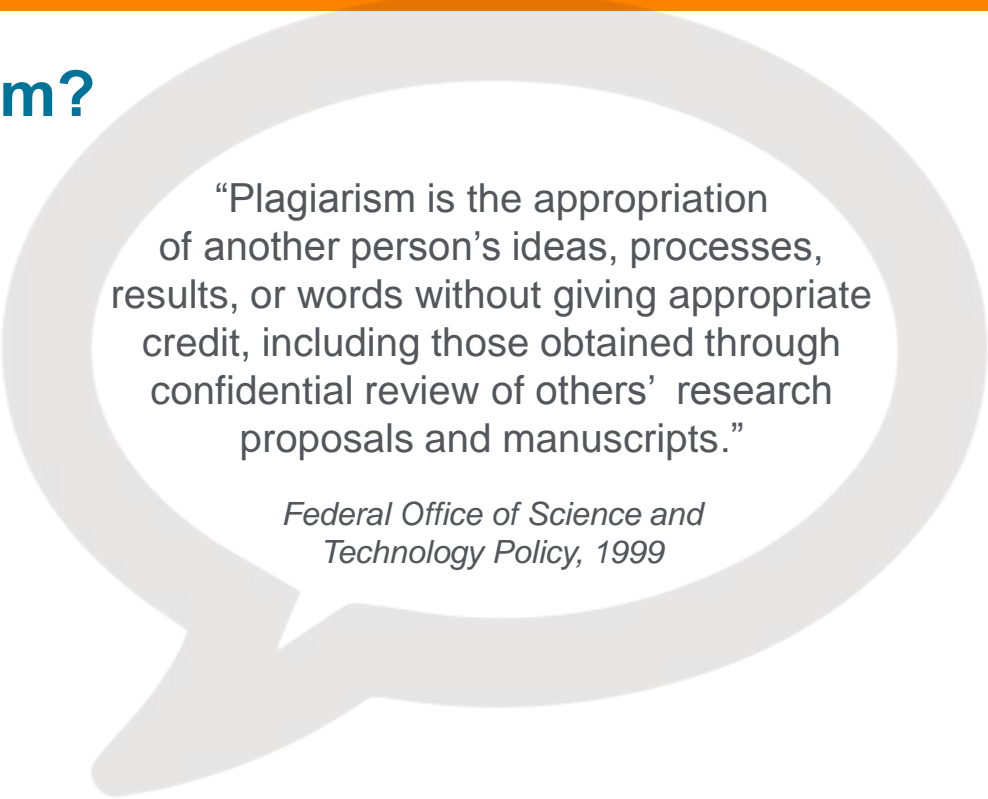
- Fabrication of data or cases
- Wilful falsification of data
- Plagiarism
- No ethics approval
- Not admitting missing data
- Ignoring outliers
- No data on side effects
- Gift authorship
- Redundant publication
- Inadequate literature search



**Serious
ethical
violations**

**Questionable
research
practices**

What is plagiarism?



“Plagiarism is the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit, including those obtained through confidential review of others’ research proposals and manuscripts.”

*Federal Office of Science and
Technology Policy, 1999*

Copying any of these would be plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Graphic representations
- Computer programs
- Diagrams Graphs
- Illustrations
- Information
- Lectures
- Printed material
- Electronic material

Did you know? Plagiarism also includes:

- **Paraphrasing** - restating someone else's ideas while not copying their actual words verbatim.
- Copying one's own work (called “**text re-cycling**” or “**self-plagiarism**”) is a grey area.

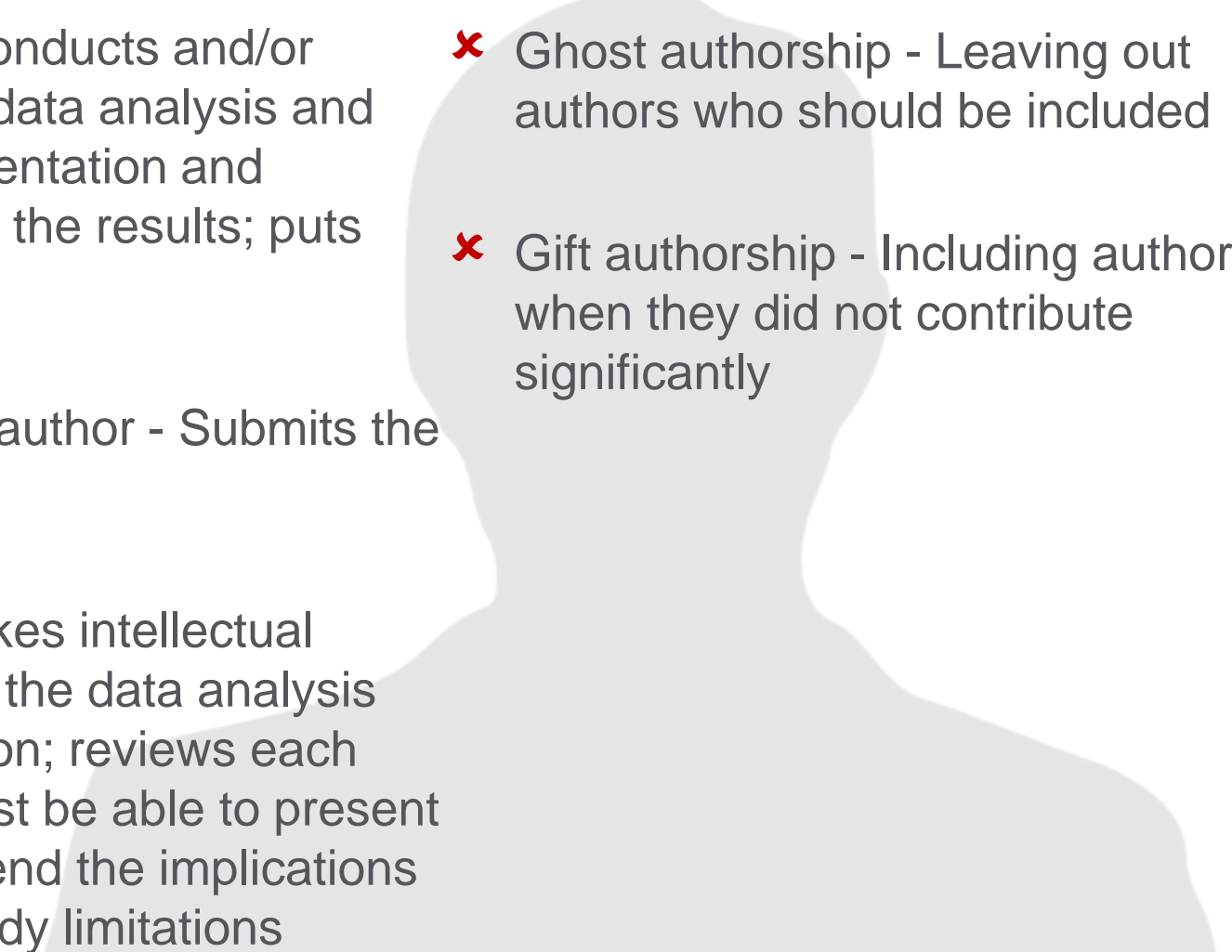
What is duplicate submission / publication?

- Submitting to / publishing one's paper in multiple journals
- Such papers are easily detected
- Don't send your paper to a second journal unless it is rejected or you withdraw it

How do publishers detect plagiarism and duplicate publication?



Who should be listed as an author?

- 
- ✓ First author - Conducts and/or supervises the data analysis and the proper presentation and interpretation of the results; puts paper together
 - ✓ Corresponding author - Submits the paper to journal
 - ✓ Co-author - Makes intellectual contributions to the data analysis and interpretation; reviews each paper draft; must be able to present the results, defend the implications and discuss study limitations
 - ✗ Ghost authorship - Leaving out authors who should be included
 - ✗ Gift authorship - Including authors when they did not contribute significantly

What is a conflict of interest?

- Direct financial
e.g. employment, stock ownership, grants, patents
- Indirect financial
e.g. honoraria, consultancies, mutual fund ownership, expert testimony
- Career & intellectual
e.g. promotion, rivalry
- Institutional
- Personal belief



Severe consequences for publishing misconduct


Potential consequences can vary according to the severity of the misconduct and the standards set by the journal editors, institutions and funding bodies.

Possible actions include:

- Written letters of concern and reprimand
- Article retractions
- Some form of disciplinary action on the part of the researcher's institute or funding body

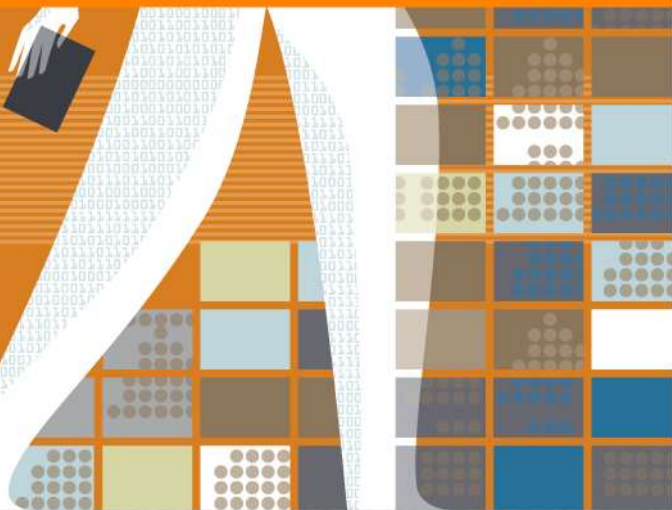


Recap – publishing ethics:

- 
- Never be tempted
 - Only submit one article at a time
 - Acknowledge all authors that should be credited and none that shouldn't
 - Disclose any conflicts of interest
 - The potential consequences are severe

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Promoting your work



How can I make sure my research gets the attention it deserves?



1. Preparing your article

Search engine optimization:

- Keywords
- Subheadings
- Picture labels



2. Promoting your published article

- Audioslides
- Conferences
- Share links
- Social media
- Social networks



3. Monitoring your article

Monitor by:

- Citations
- Views
- Downloads
- Altmetrics

Thank you

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