

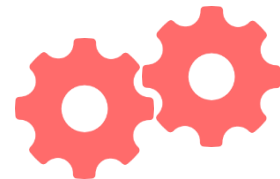
Mastering Manuscript Preparation Key Steps to Successful Publication

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Elsevier

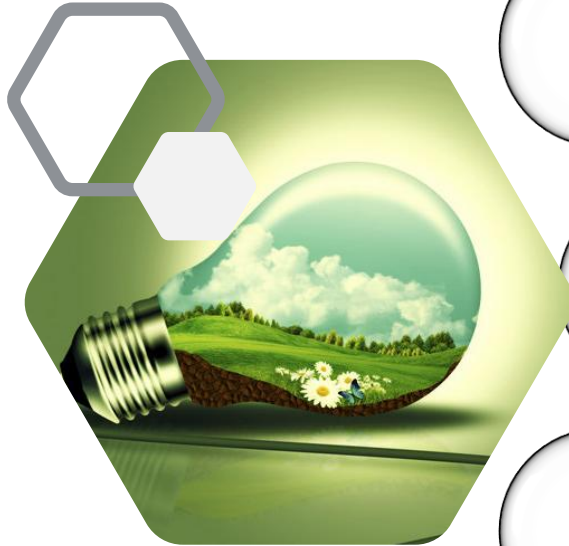
y.klinthongchai@elsevier.com



Announcement

1. Ask questions using Q&A feature.
2. Questions will be answered after presentation.
3. You will be asked to fill the evaluation at the end of the training.
4. Teaching materials will be sent to you after the training.

Outline



1

Research workflow

2

Fundamental Manuscript Preparation

3

AI in Publishing Community



Research Workflow

Research Workflow

Reasoning



Main Question(s)

- Why research is important?
- Why I have to make thesis/dissertation
- What skills required as new researchers?

Let



Publishing



- How to find the right journal?
- What are these metrics in journals?
- What are ethics in publishing?

Promoting



- How to increase my research visibility?
- How to increase my profile as researcher?

Tracking



- How to assess my performance?
- How communicate my performance to stakeholders?

Research Data Management



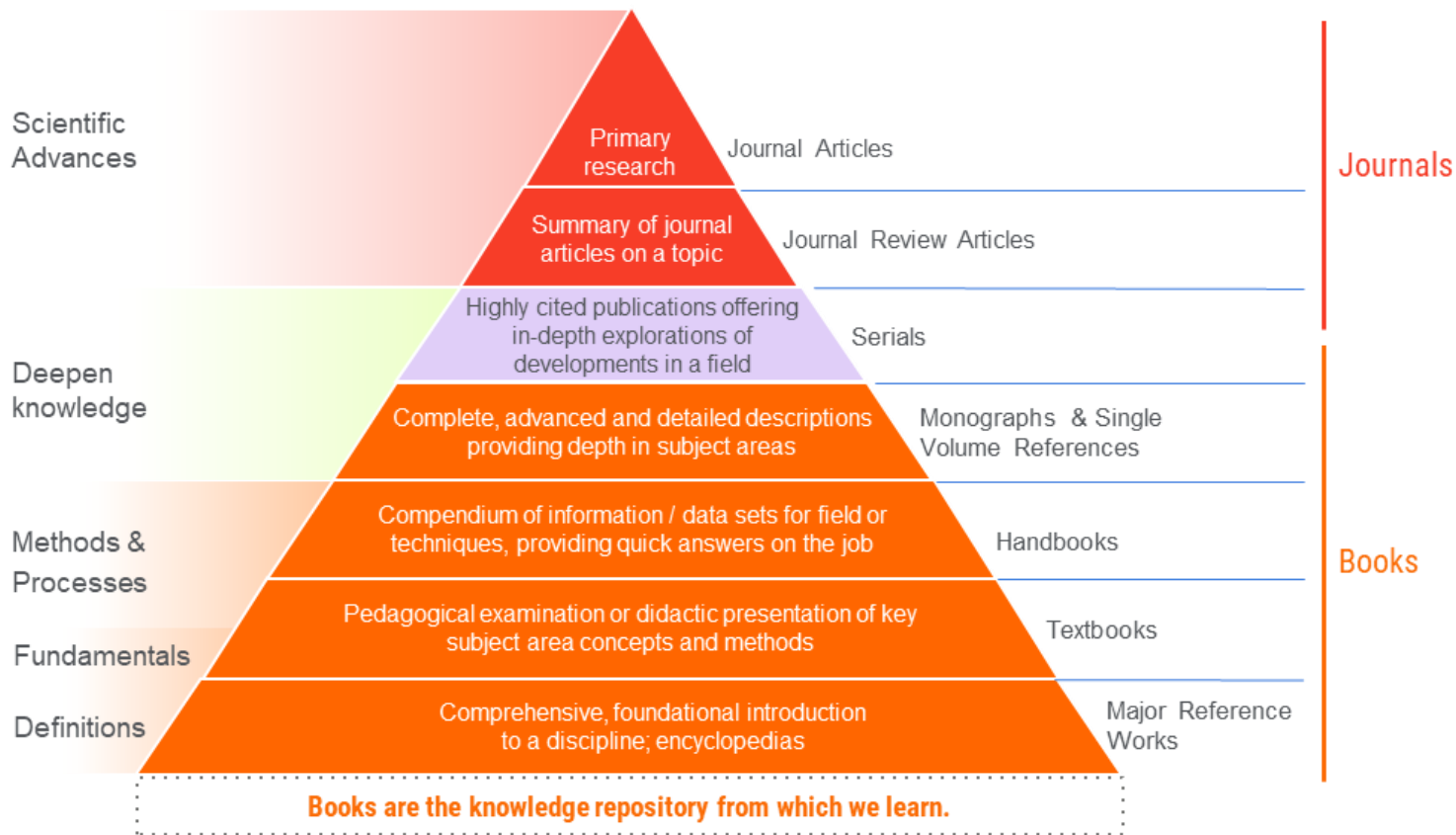
- How to manage research output?
- How to manage journals?

Manuscript Preparation

Search for peer-reviewed journals, articles, books, and other content.

Keywords

Research Reference: Types of content



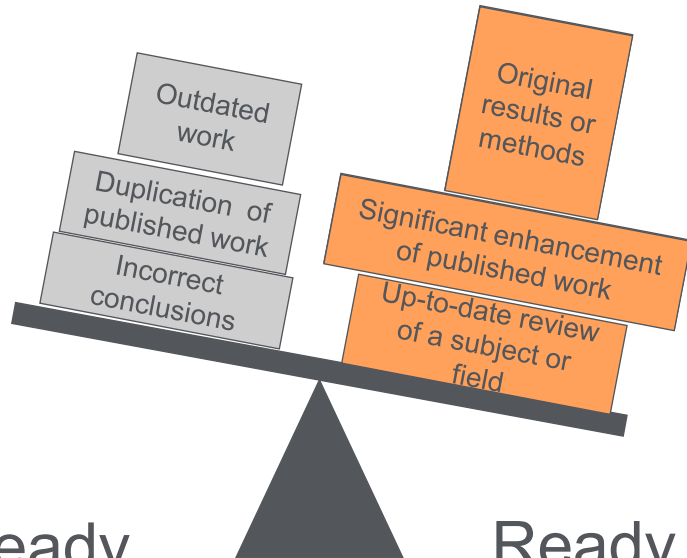
First and very important questions...

Are you ready to publish?



Planning your article

Are you ready to publish?



Not ready

Work has no scientific interest

Ready

Work advances the field

Ask Yourself

- Have you done something **new** and **interesting**?
- Have you provided solutions to **difficult problems**?
- Have you checked the **latest results**?
- Have you verified the **findings**?
- Do your results fit - is the story complete?

Type of Publications



Original Research Articles

- Complete report on original research
- Typically 8-10 pages, 5 figures, 25 references
- Can be found in OA or non-OA journal
- Good way to build a scientific research career



Short Communications

- Quick and early communications of significant, original advances, usually claiming certain results.
- Much shorter than full articles.
- Appear under many names, such as letter papers, preliminary notes, notes, etc.



Review Papers

- Critical synthesis of a specific research topic
- Typically 10+ pages, 5+ figures, 80 references
- Typically solicited by journal editors
- Good way to consolidate a scientific research career



Journal publishing models

Traditional publishing (Subscription = Non-Open Access)

- Authors publish **free of charge**
- Institutions or individuals subscribe to journals



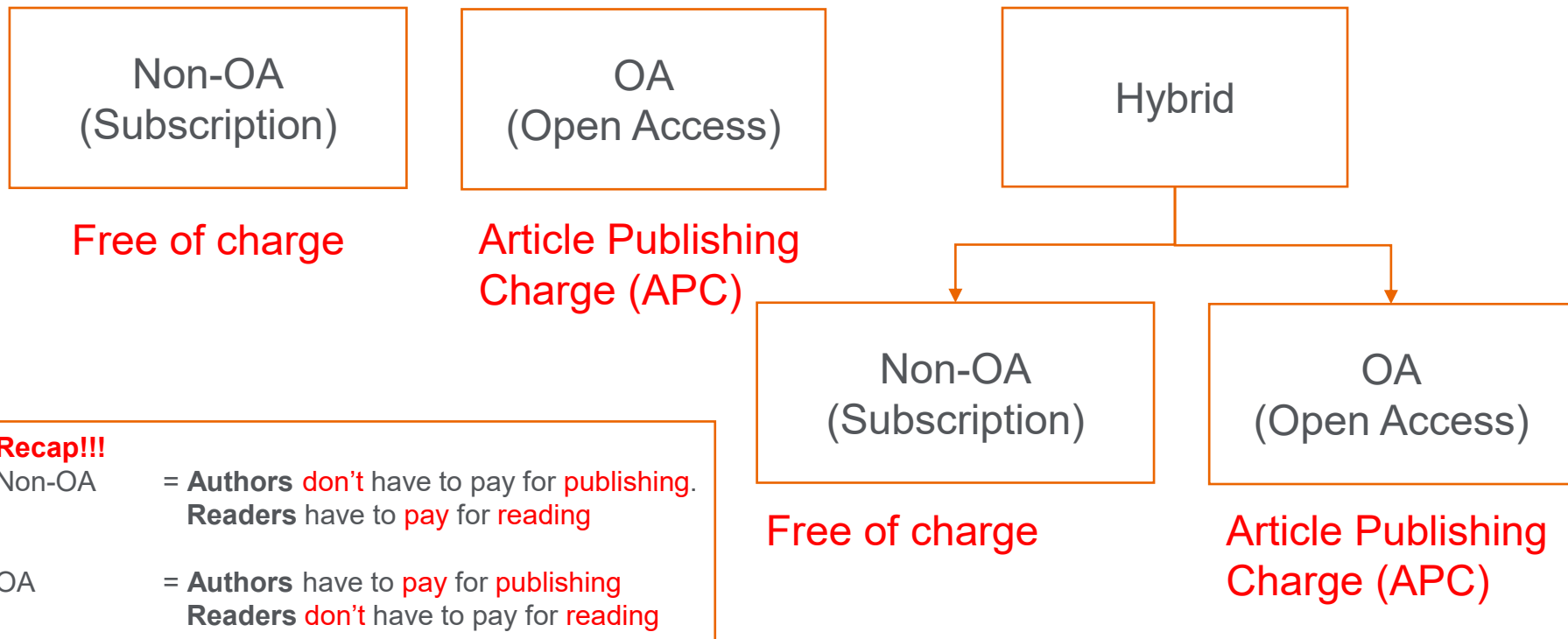
Open access publishing (OA)

- Article is made freely available to all online
- Some journals publish exclusively open access
- Other subscription journals offer open access options: "hybrid"

What are on **type of publications?** Recap!!!

Types of content : OA vs Non-OA

*OA= Open Access and *Non-OA= Subscription



Where to publish?

- Ask help from your supervisor or colleagues
- Your supervisor (who is sometimes the corresponding author) has at least co-responsibility for your work and should provide guidance
- Your colleagues may already have experience of the journal (or the Editor!)
- Shortlist a handful of candidate journals, and investigate them further thoroughly:

Aims and scope

Scan recent tables of contents, etc.

Evaluating a journal

7 key questions to consider as you evaluate the journals you have identified:

1. Is the manuscript the **right fit** for the journal?
2. Are there any **funder/institution mandates** to consider?
3. Is the journal visible in the **communities** you want to reach?
4. Is there a reasonable **chance of acceptance**?
5. Is the journal **indexed** in all the relevant databases?
6. What do the journal **metrics** reveal?
7. Is the journal **reputable**, including practicing robust peer review?



It is not (only) the Impact Factor, it is (mainly) the right audience!

Better to consult the Journal homepage to learn:

- Aims and scope
- Accepted *types* of articles
- Readership
- Current hot topics, (perhaps from Special Issues etc.)

Go through the abstracts of recent publications

Articles in ***your*** references will likely lead you to the right journal.

DO NOT gamble by submitting your manuscript to more than one journal at a time. You will almost certainly be found out and this would lead to an immediate rejection.

Journal ethics

Is the journal reputable?



Don't ignore the warning signs of a predatory journal, which may include one or more of the following:

1. It actively and aggressively solicits submissions, often for a fee.
2. The “call for paper” emails contain spelling and grammar mistakes.
3. It has a short publication history, e.g., four issues or fewer, even though the journal has existed for several years.
4. Its scope is very broad, or the content published doesn't match its stated aims and scope.
5. It offers rapid publication (e.g., within 48 hours).

Publishing in a predatory journal can have negative consequences:

Your article is not perceived as meeting a quality standard because it lacks peer review.

Article processing charges (APCs) provided by your funder or institution are lost, potentially impacting future grant or career progression opportunities.

The reach of your work could be limited if the journal is not indexed in leading databases, and the work itself may be lost if it's not archived correctly.

Submit your current article and get acceptance in 5 days

Dear Author,

We are from the [REDACTED], [REDACTED], [REDACTED]. It gives us immense pleasure to invite you to submit the manuscript for the current issue.

Current Issue: **Vol 3 Issue 3 May - June 2023.**

Submission due date: **25th June 2023**

Article-processing and publication fee: **60USD**

Authors can submit their articles online: [https://\[REDACTED\]](https://[REDACTED])

Authors can also submit the manuscript at [submit@\[REDACTED\]](mailto:submit@[REDACTED])

Our website: [https://\[REDACTED\]](https://[REDACTED])

With Regards,
Editor-in-chief
[REDACTED]

Publishing in a new journal: beware predatory journals.

- Be diligent when assessing a new journal:
 - Who is involved (and are they really)?
 - What promises are made regarding peer review?
 - Has the journal published articles yet (and are they any good)?
 - What are the journal's archiving policies if publication ceases?

Beware of “predatory” journals: <https://predatoryjournals.com/about/> lists over 1250 predatory publishers!

Currently there are over 10,000 predatory journals:

- ...but remember that not all new journals are predatory.
- Remember that new journals will not yet be indexed in Medline/PubMed or other services and will not have an impact factor.

For more questions to ask, see <https://thinkchecksubmit.org/journals/>

{ PREDATORY

PHONY VS LEGIT

PUBLISHING }



Little contact information is given and what is given is suspect

Amateurish page design: clashing colors and graphics, distracting background images, scrolling links, clip art, etc.

Lists of seemingly arbitrary keywords are often used as an ill-advised attempt to boost search engine optimization

False metrics or identifiers such as Impact Index, ISJN, or CiteFactor*

Guarantee of manuscript acceptance and publication or unrealistic turn-time



Text is often full of errors or questionable grammatical choices and may lack context



The project incubates milestones & cutting edge research and discoveries for the year 2014 which have potential to catalyze the domain.

Some elements on the site seem to have a random or indeterminate purpose, like scrolling text and images that don't link anywhere



The list of issues and articles is hard to find,



No statement about ethics or affiliation with industry

Contact information is thorough and accurate

Mobile optimization is often a prominent feature

The list of issues and articles is complete and easy to find

Statement about journal's ethics policy or membership in COPE or similar organization

Text and navigation are clear, accurate, and helpful

Professional, modular page design



Everything on the site has a purpose

All the links work



Industry standard metrics are clearly displayed

The journal website is hosted by a reputable publisher or technology partner that is well known



Elsevier Journal Finder



Elsevier Journal Finder helps is a free resource which allows researchers to find journals that could be best suited for publishing your scientific article.

Powered by the Elsevier Fingerprint Engine™ (<https://journalfinder.elsevier.com>), Journal Finder uses smart search technology and field-of-research specific vocabularies to match your article to Elsevier journals.

Find the right journal for your research

Looking for the best journal match for your paper?
Search the world's leading source of academic journals using your abstract or your keywords and other details.

> [More on how it works](#)

Match my abstract Search by keywords, aims & scope, journal title, etc...

Maximum 5,000 characters

[Check if you're eligible](#) for open access (OA) savings.



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



<https://www.elsevier.com/researcher/author/submit-your-paper>

Elsevier Journal Finder



CiteScore All journals

Time to 1st decision All journals

Publication type

OA Journals that offer gold OA

S Journals with subscription

1 Refine your search

More filters

2 Sort the results

Showing 48 journals matching your paper

Sort by: Best match

Best match

[Best match](#)

Journal name

CiteScore

Impact factor

Acceptance rate

Time to 1st decision

Time to publication

[↑ Best match first](#)

[↓ Best match last](#)

3 Citescore, IF, acceptance rate, time to 1st decision, and time to publication

Environmental Impact Assessment Review

OA S ISSN: 0195-9255 • Indexed by Chinese Academy of Sciences (中科院期刊分区)

Text match score

Top matching keywords

CiteScore 7.6

Impact Factor 6.122

Acceptance rate 12%

Time to 1st decision 3 weeks

Time to publication 2 weeks

4 Click to see detail

Ecological Economics

OA S ISSN: 0921-8009 • Indexed by Chinese Academy of Sciences (中科院期刊分区)

Text match score

Top matching keywords

Subject area: Ecology, Management, Monitoring, Policy and Law, Geography, Planning and Development

Recent articles: A conceptual framework for the assessment and monitoring of environmental impacts of agricultural activities; Can the opening of urban rail transit improve urban air quality? Evidence from 98 stations in China; Endmember-like space design and business levels: A comprehensive research mapping based on urbanistic analysis

Journal steps: Environmental Impact Assessment Review (EIA Review) is a refereed, interdisciplinary journal serving a global audience of practitioners, policy makers, regulators, academics and others with an interest in the field of impact assessment (IA) and management. Impact assessment is defined by the International Association for Impact Assessment (IAIA) as the process of identifying the future consequences of a current or proposed action. For EIA Review, the field of IA is restricted to the assessment of impacts on or of the environment (including, for example, EIA and SEA) and (EIA) health (EIA), and (EIA) human rights, equity, language, technology, products and (EIA) with current or proposed actions. The EIA Review and its review process have been designed to evaluate the impact of policies, projects, processes and products, and have been to make decisions and coordinate management activities.

The focus of EIA Review is on innovative theory and practice that encompasses any of the above mentioned impacts and activities. In other words, EIA Review covers the following topics (the list is not exhaustive):

- Development of IA theory and concepts
- IA legislation, standards and practice
- IA Governance
- IA Methods, for example, forecasting, indicators, systems based approaches, computer assisted assessment, cost benefit analysis, algorithms, network based approaches, among others.
- IA Case Assessment, Carbon Footprinting, Energy Audits, Energy Strategic, and Integrated Product Policy
- Environmental Management Systems.

Despite its name, EIA Review is not restricted to review articles. However, it aims to publish only contributions

New journal recommendation tools help authors choose journals for their research

Publishing research can be a long and confusing process for authors, and often they are not sure what is the best journal to publish their research

ScienceDirect Journal recommendation tool support authors in increasing their chances of selecting a more suitable journal by recommendation.

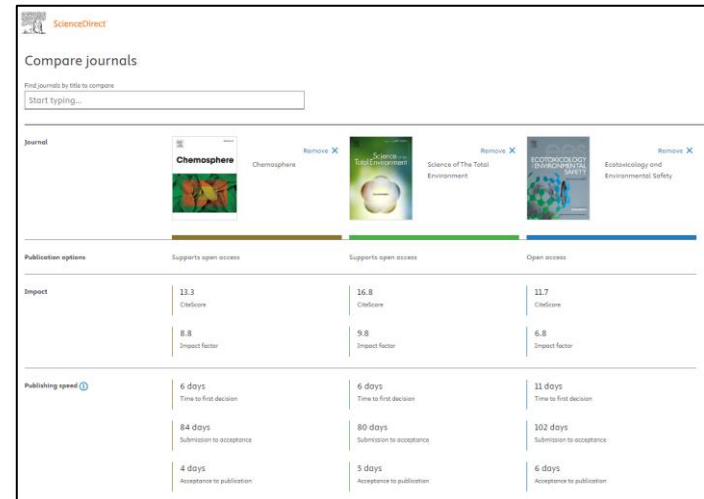
For those who know a few journals, but want more information before deciding where to submit, the Journal Compare tool allows an author to compare key statistics before choosing. Currently available on ~200 journal home pages

<https://www.sciencedirect.com/compare>



Improving Author Experience

- Get Journal recommendations from ScienceDirect to publish your research
- Compare journals to find the right journal on ScienceDirect for you to submit to
- Increase the chance of articles being accepted at first submission



The screenshot shows the 'Compare journals' interface on ScienceDirect. It features a search bar at the top, followed by three journal cards: 'Chemosphere', 'Science of the Total Environment', and 'ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY'. Below the cards is a table comparing key metrics for each journal.

	Chemosphere	Science of the Total Environment	ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY
Publication options	Suggests open access	Suggests open access	Open access
Impact	12.3 CiteScore	16.8 CiteScore	11.7 CiteScore
	8.8 Impact factor	9.8 Impact factor	6.8 Impact factor
Publishing speed	6 days Time to first decision	6 days Time to first decision	11 days Time to first decision
	84 days Submission to acceptance	80 days Submission to acceptance	102 days Submission to acceptance
	4 days Acceptance to publication	5 days Acceptance to publication	6 days Acceptance to publication

New Feature is coming as Compare Journals



ScienceDirect®

Compare journals

Find journals by title to compare

<https://www.sciencedirect.com/compare>

Compare journals

Find journals by title to compare

Journal



Carbon

Remove X



Microporous and Mesoporous Materials

Remove X



Materials Today Chemistry

Remove X

Publication options

Supports open access

Supports open access

Impact

20.1
CiteScore

9.6
CiteScore

7.6
CiteScore

10.9
Impact factor

5.2
Impact factor

7.3
Impact factor

Publishing speed ⓘ

8 days
Time to first decision

5 days
Time to first decision

13 days
Time to first decision

51 days
Review time

54 days
Review time

66 days
Review time

68 days
Submission to acceptance

70 days
Submission to acceptance

81 days
Submission to acceptance

4 days
Acceptance to publication

6 days
Acceptance to publication

Acceptance rate

17.35 %
Acceptance Rate

23.06 %
Acceptance Rate

Article Publishing Charge ⓘ

\$4510
Article publishing charge for open access

\$3700
Article publishing charge for open access

\$3310
Article publishing charge for open access

Submission link

[Guide for authors ↗](#)

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ISSN

Online ISSN: 1873-3891
Print ISSN: 0008-6223

Online ISSN: 1873-3093
Print ISSN: 1387-1811

Online ISSN: 2468-5194

Subject areas

Biomaterials, Materials Chemistry, Energy (General), Nanotechnology

Catalysis, Nanotechnology

Biomaterials, Materials Chemistry, Polymers and Plastics, Nanotechnology

Aims and scope

The journal Carbon is an international multidisciplinary forum for **communicating scientific advances in the field of carbon materials**, including **low-dimensional carbon-based nanostructures**. The ...
[View full aims & scope ↗](#)

The Official Journal of the International Zeolite Association

Microporous and Mesoporous Materials covers novel and significant aspects of **porous solids** classified as either **microporous** (pore size ...
[View full aims & scope ↗](#)

Materials Today Chemistry is a multi-disciplinary journal focused on all aspects of materials chemistry.

Materials chemistry is one of the fastest developing areas of science, covering the ...
[View full aims & scope ↗](#)

Abstracting and indexing

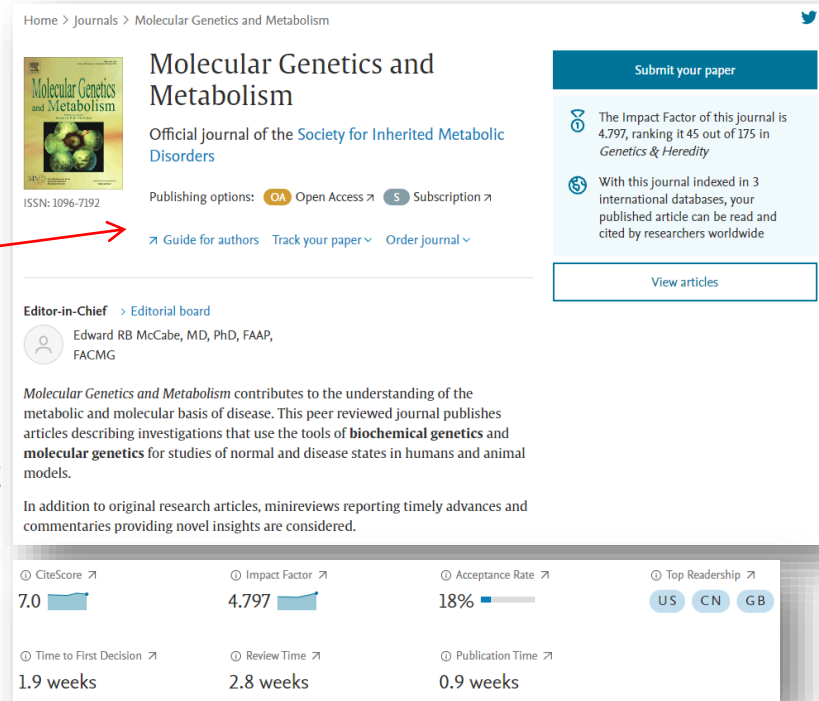
- Elsevier BIOBASE
- Chemical Abstracts
- Current Contents
- Engineering Index
- Monthly & Author Index
- Materials Science Citation Index
- Pascal Francis
- Scopus
- INSPEC

- Science Citation Index Expanded
- Inorganic Crystal Structure Database
- Chemical Abstracts
- Current Contents - Physical, Chemical & Earth Sciences
- Scopus
- INSPEC

- Scopus
- Emerging Sources Citation Index (ESCI)
- INSPEC

Read the ‘Guide to Authors’- Again and again!

- Stick to the Guide for Authors in your manuscript, **even in the first draft** (text layout, nomenclature, figures & tables, references etc.). In the end it will save you time and also the editor’s.
- Editors (and reviewers) do not like wasting time on poorly prepared manuscripts. It is a sign of disrespect.



Home > Journals > Molecular Genetics and Metabolism

Molecular Genetics and Metabolism
Official journal of the Society for Inherited Metabolic Disorders

ISSN: 1096-7192

Publishing options: [OA Open Access](#) [S Subscription](#)

[Guide for authors](#) [Track your paper](#) [Order journal](#)


Submit your paper

The Impact Factor of this journal is 4.797, ranking it 45 out of 175 in *Genetics & Heredity*

With this journal indexed in 3 international databases, your published article can be read and cited by researchers worldwide

[View articles](#)

Editor-in-Chief > [Editorial board](#)

 Edward RB McCabe, MD, PhD, FAAP, FACMG

Molecular Genetics and Metabolism contributes to the understanding of the metabolic and molecular basis of disease. This peer reviewed journal publishes articles describing investigations that use the tools of **biochemical genetics** and **molecular genetics** for studies of normal and disease states in humans and animal models.

In addition to original research articles, minireviews reporting timely advances and commentaries providing novel insights are considered.

CiteScore 7.0	Impact Factor 4.797	Acceptance Rate 18%	Top Readership US CN GB
Time to First Decision 1.9 weeks	Review Time 2.8 weeks	Publication Time 0.9 weeks	

Common problems with submissions:

An international editor says...

*“The following problems appear **much too frequently**”*

- *Submission of papers which are clearly out of scope*
- *Failure to format the paper according to the Guide for Authors*
- *Inappropriate (or no) suggested reviewers*
- *Inadequate response to reviewers*
- *Inadequate standard of English*
- *Resubmission of rejected manuscripts without revision*

– Paul Haddad, Editor, *Journal of Chromatography A*

Publishers do not correct
the language of the
manuscript.

Manuscript language

- Write direct and factual sentences
- Convey one piece of information per sentence
- Avoid multiple statements in one sentence
- The average length of sentences in scientific writing is only about 12-17 words.
- Have a native English speaker check your manuscript or use a language editing service



Present tense:

Use for known facts and hypotheses

Past tense:

Use for experiments conducted and results

Quiz



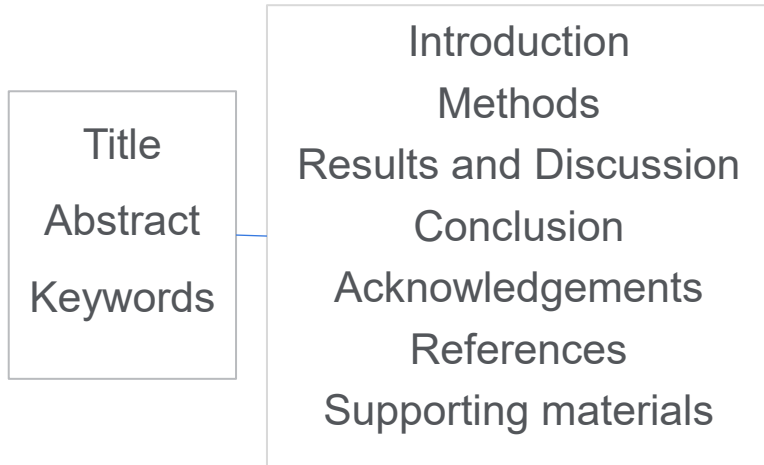
What is the general structure of a research article

Article Structure

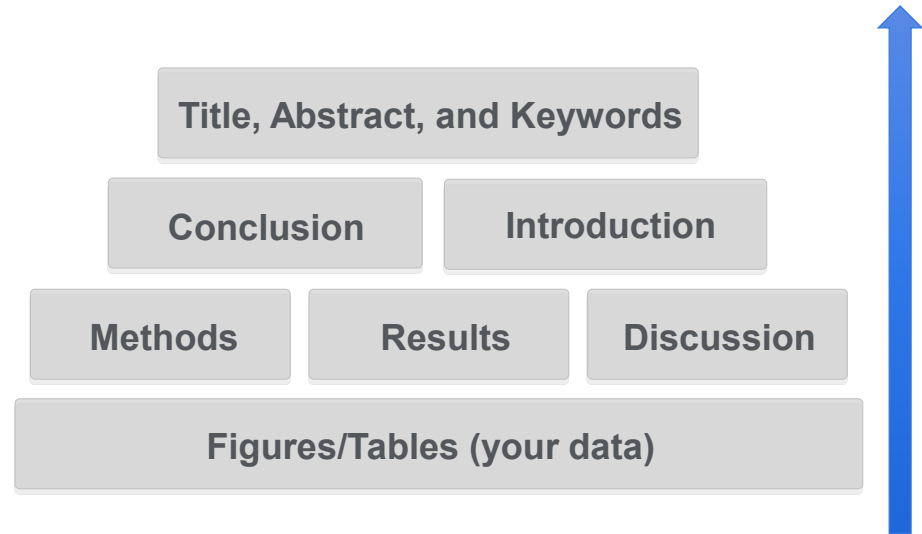
- Title
- Authors
- Abstract
- Keywords
- Main text
 - Introduction
 - Methods
 - Results and discussion
 - Conclusion
- Acknowledgements
- References
- Supplementary material

The process of writing

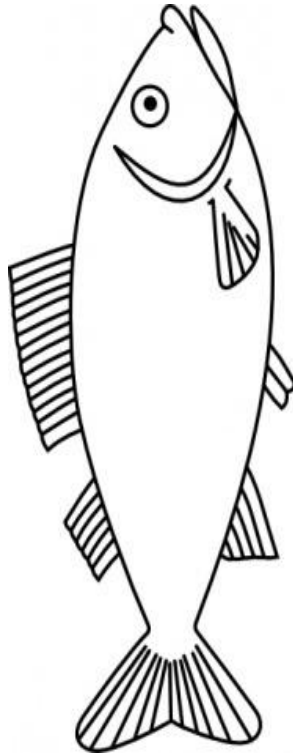
Article Structure



Building the Article



Typical Structure of a Research Article



- Title
- Abstract
- Keywords

Make them easy for indexing and searching! (informative, attractive, effective)

- Main text (IMRAD)
 - Introduction
 - Methods
 - Results
 - And
 - Discussions

Journal space is not unlimited.

Your reader's time is scarce.

Make your article as concise as possible - more difficult than you imagine!

- Conclusion
- Acknowledgement
- References
- Supplementary Data
 - Reviews, Micro Articles etc. different layout.
 - Social sciences more discussion and less data.

Our publication would be some thing like this...



My paper's
title

@phddiarymemes



My paper's
abstract



The rest
of the paper

IMRAD

- **I**ntroduction: What did you/others do? Why did you do it?
- **M**ethods: How did you do it?
- **R**esults: What did you find?
- **A**nd
- **D**iscussion: What does it all mean?

The main text is followed by the Conclusion, Acknowledgements, References and Supporting Materials.

While this is the published structure, however, we often use a different order when writing.

Steps to organizing your manuscript

1. Prepare the **figures and tables**.
2. Write the **Methods**.
3. Write up the **Results**.
4. Write the **Discussion**. Finalize the Results and Discussion before writing the introduction. This is because, if the discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the introduction?
5. Write a clear **Conclusion**.
6. Write a compelling **introduction**.
7. Write the **Abstract**.
8. Compose a concise and descriptive **Title**.
9. Select **Keywords** for indexing.
10. Write the **Acknowledgements**.
11. Write up the **References**.

Who is the First Author?



General principles for who is listed first

First Author:

- Conducts and/or supervises the data analysis and the proper presentation and interpretation of the results
- Puts paper together and submits the paper to journal

Co-Author(s):

- Makes intellectual contributions to the data analysis and contributes to data interpretation
- Reviews each paper draft
- Must be able to present the results, defend the implications and discuss study limitations

Abuses to be avoided

- Ghost Authors: leaving out authors who should be included
- Gift Authors: including authors when they did not contribute significantly

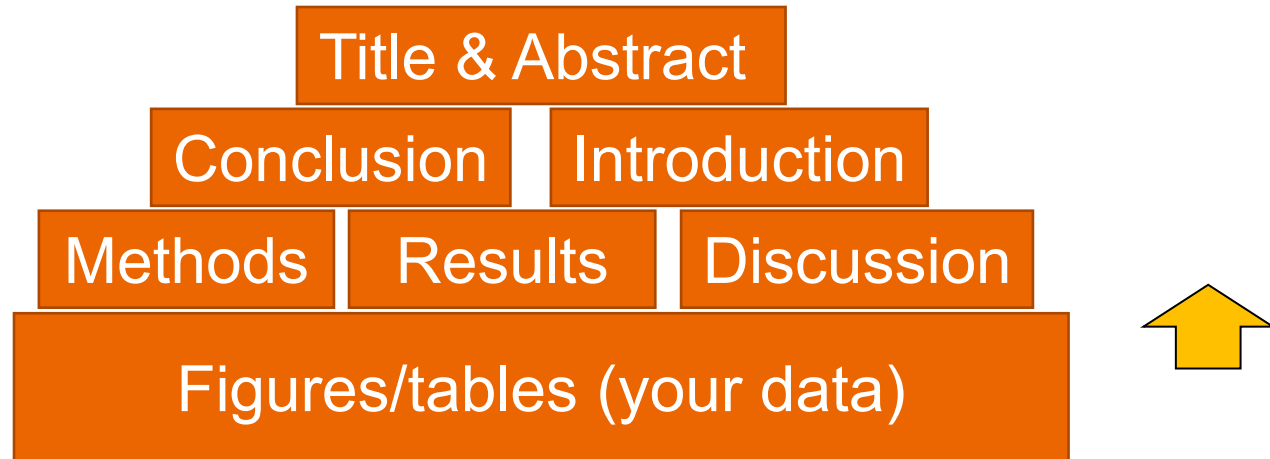
Please bear in mind when you have to select the authors positions.



Original Research Paper Published



The process of writing – building the article





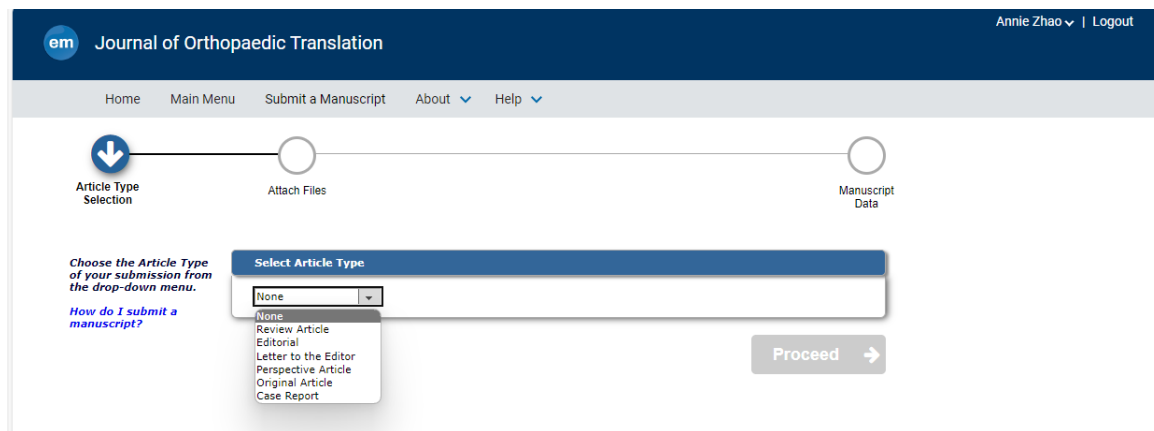
Submit your manuscript

Submit your article

Submit via the journal specific submission portal, following the step-by-step guideline, save draft if can't finish in one go



The image shows the top section of the Journal of Orthopaedic Translation website. On the left is a cover image of the journal. To its right, the journal title "Journal of Orthopaedic Translation" is displayed in a large font, with "Open access" below it. Further right, the journal's metrics are shown: "11.8 CiteScore" and "5.9 Impact Factor". Below this header is a navigation bar with links for "Articles & Issues", "About", "Publish", a search box labeled "Search in this journal", and a red-bordered button labeled "Submit your article". A "Guide for authors" link is also present on the right.



The image shows the submission portal interface for the Journal of Orthopaedic Translation. At the top, the journal name and user information "Annie Zhao | Logout" are visible. Below is a navigation menu with "Home", "Main Menu", "Submit a Manuscript", "About", and "Help". A progress indicator shows three steps: "Article Type Selection" (active), "Attach Files", and "Manuscript Data". The main content area features a "Select Article Type" dropdown menu with options: "None", "Review Article", "Editorial", "Letter to the Editor", "Perspective Article", "Original Article", and "Case Report". A "Proceed" button is located to the right of the dropdown. A blue instruction box on the left reads: "Choose the Article Type of your submission from the drop-down menu. How do I submit a manuscript?"

10 tips for writing a truly terrible journal article

1. Refuse to read the previous literature published in your field
2. Take the lazy route and plagiarize
3. Omit key article components
4. Disrespect previous publications
5. Overestimate your contribution
6. Excel in ambiguity and inconsistency
7. Apply incorrect referencing of statements
8. Prefer subjective over objective statements
9. Give little care to grammar, spelling, figures and tables
10. Ignore editor and reviewer comments



Editor Bert Blocken highlights some of the major mistakes early career researchers make when preparing and submitting a manuscript to a scientific journal

<https://www.elsevier.com/authors-update/story/publishing-tips/10-tips-for-writing-a-truly-terrible-journal-article>

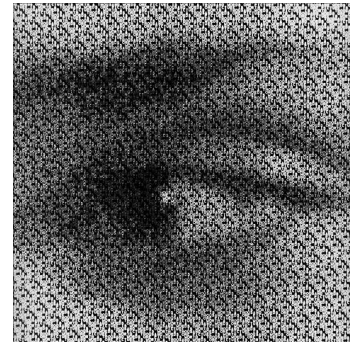
Step 1: Prepare the figures and tables

Results – Figures and tables

Illustrations are critical, because:

- Figures and tables are the most efficient way to present results
- Results are the driving force of the publication
- Captions and legends must be detailed enough to make figures and tables self-explanatory
- Figures and tables should not need further explanation or description in text. Less writing and less reading. Let your figures do the work instead of words.

*"One Picture is Worth a
Thousand Words"
Sue Hanauer (1968)*



Step 1: Prepare the figures and tables

Should you use a table or chart?

Remember that "a figure is worth a thousand words." Hence, illustrations, including figures and tables, are the most efficient way to present your results. Your data are the driving force of the paper, so your illustrations are critical!

Whatever your choice is, no illustrations should duplicate the information described elsewhere in the manuscript.

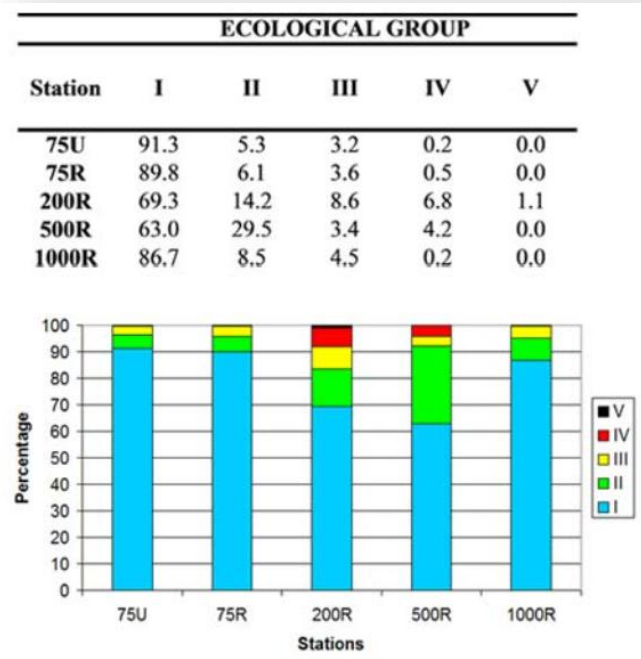


Figure 1. An example of the same data presented as table or as figure.

Depending in your objectives, you can show your data either as table (if you wish to stress numbers) or as figure (if you wish to compare gradients). Note: Never include vertical lines in a table.

Step 2: Write the Methods

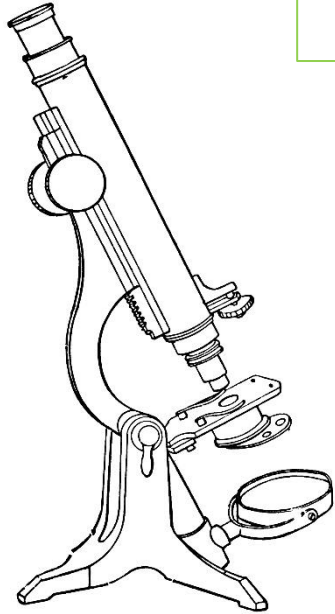
This section responds to the question of how **the problem was studied**. If your paper is proposing a new method, you need to include detailed information so a knowledgeable reader can reproduce the experiment.

However, do not repeat the details of established methods; use References and Supporting Materials to indicate the previously published procedures. Broad summaries or key references are sufficient



Step 2: Write the Methods

Methods



Describe how the problem was studied

Identify equipment and materials used

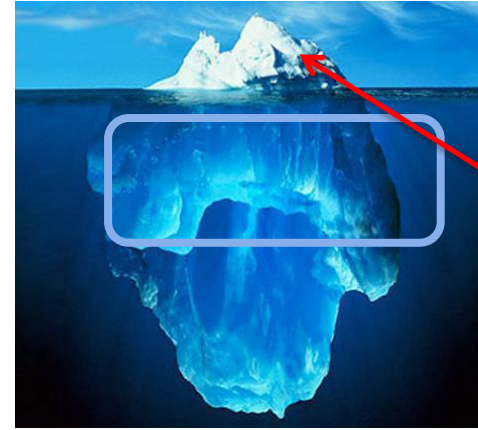
Include detailed information, reproducible

Do not describe previously published procedures

Results – what have you found?

The following should be included

- ✓ the **main findings**
 - Thus, not *all* findings. Decide what to share.
 - Findings from experiments described in the Methods section
- ✓ Highlight findings that **differ** from findings in previous publications, and **unexpected** findings
- ✓ Results of the **statistical analysis**



Do not try to fit everything in!

But this is what should end up in the paper

This may be your total work..

Discussion

The Discussion is where you *interpret* what your results mean. Provide *critical appraisal*. This is the most important section of the article.

- Does not require complete review of the literature but should place the study in context for the reader – *but don't repeat what is in the Introduction*. Make the Discussion correspond to the Results. But do not reiterate the results.
- Why are **your findings new and different?**
- How are they relevant? Can you identify a mechanism to explain your results or hypothesis?

Include:

- Interpretation of results considering any sources of bias or imprecision
- Context of results with current evidence and in relation to the purpose of your study.

Discussion

Interpretation of **results**



The discussion should correspond to the **results**

Compare published **results** with your own

Be careful NOT to use the following:

- Statements that go beyond what the results can support
- New terms not already defined or mentioned in your paper

Conclusions

How the work advances the field from the present state of knowledge

- Not the same as a summary! Do not just repeat the Abstract!
- Give conclusions that are supported by your results
- Do not overreach:
Statements such as “*this method can potentially be used...*” do not belong to the conclusions (and often irritate referees).
- Try to end in a positive tone.
- Suggest future experiments that build on your work and potentially mention those already underway

Conclusion

How the work advances the field from the present state of knowledge

- Should be clear
- Justify your work in the research field
- Suggest future experiments

In summary, we have demonstrated that the mercapto-acetamide-based HDACis possess favorable solubility, lipophilicity, permeability and plasma stability features as compared to recently FDA approved drug Vorinostat (SAHA). Based on these findings, we assume that these compounds could sufficiently be absorbed by the intestinal tract. However, further studies are needed in order to determine the pharmacokinetic disposition of these compounds.

Introduction

- Provide a brief **context** to the readers
- **Address the problem**
- **Identify the solutions and limitations**
- **Identify what the work is trying to achieve**



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

Introduction

Introduction is especially important!

A high proportion of “lack of novelty” rejections are made after reading abstract, introduction and conclusions.

- You are telling a story. The Introduction sets the scene.
- What was the purpose of this work?
- State the reason you did the study as clearly as possible.
- Do not attempt to summarize the whole field (it is not possible!)
- Quote what is necessary for background and give credit to previous works (A Reviewer could have written a seminal article in the past!).
- Provide a perspective that is consistent with the journal where you aim to submit.
- Typically, the last few sentences of the introduction should clearly state the hypothesis or aim of the work being presented.

Introduction (Continued)

- Give a clear **motivation** for the work. Explain *why* before explaining how.
- Explain what is **novel** compared to what is already available in the literature
- High level description of your approach. Why is it **important**? Why is it **difficult**?
- What are the **alternatives**? Why is yours **different** or **better**?
- What are the gaps and how are you going to fill them? At the end of the introduction the reader knows the problem and maybe the solution / approach you propose.



Editors want to:

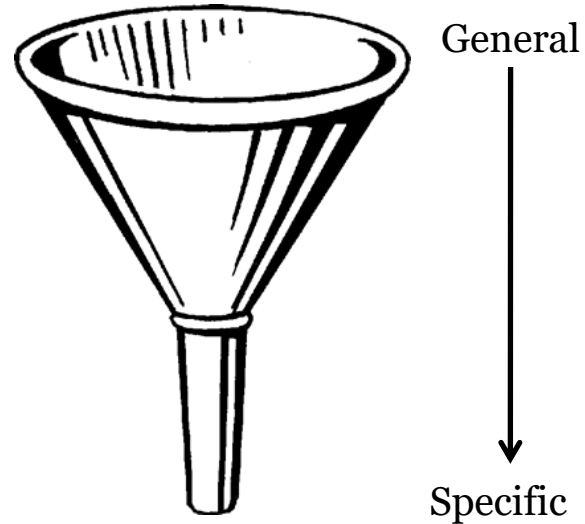
Understand how your work is related to previous research
Be sure that your work builds upon the most recent insights
Be sure all relevant (international) work has been considered

Introduction

The place to convince readers that you know why your work is relevant, also for them.

Answer a series of questions:

- What is the problem?
- Are there any existing solutions?
- Which one is the best?
- What is its main limitation?
- What do you hope to achieve?



Abstract

Freely available in electronic abstracting & indexing services [PubMed, Medline, Embase, Scopus etc]

- This is the **advertisement of your article**. Make it interesting, and easy to be understood without reading the whole article
- You must be **accurate** and **specific!**
- A clear abstract will strongly influence whether or not your work is further considered.
- Keep it as **brief** as possible!!!
- It is your opportunity to **sell** your article



What has been done



What are the main findings

Abstract

Tell readers what you did and the important findings

- One paragraph (between 50-250 words) often, plus Highlight bullet points (and Graphical Abstracts if allowed)
- **Advertisement for your article**, and should encourage reading the entire paper

Graphite intercalation compounds (GICs) of composition $C_xN(SO_2CF_3)_2 \cdot \delta F$ S are prepared under ambient conditions in 48% hydrofluoric acid, using K_2MnF_6 as an oxidizing reagent. The stage 2 GIC product structures are determined using powder XRD and modeled by fitting one dimensional electron density profiles.

A new digestion method followed by selective fluoride electrode elemental analyses allows the determination of free fluoride within products, and the compositional x and δ parameters are determined for reaction times from 0.25 to 500 h.

What has been done

What are the main findings

Abstract

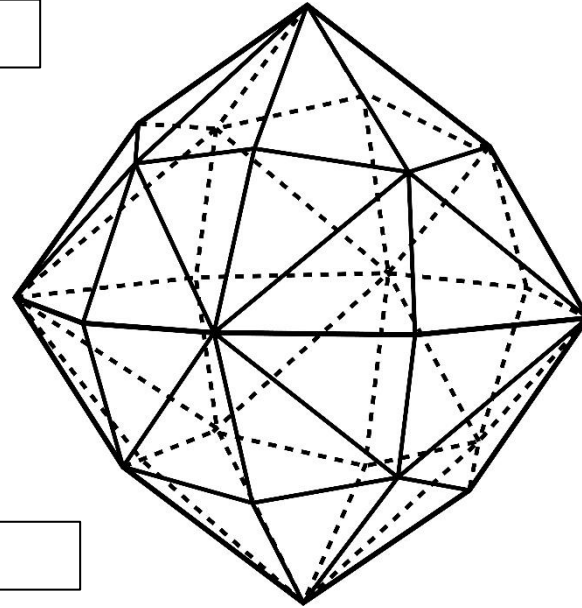
As brief as possible, one paragraph

Summarize the problem, methods, results, and conclusions.

Clearly written and easy to understand

Accurate, specific and 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.



Step 7: Write the Abstract

- However, the abstracts must be kept as brief as possible. Just check the 'Guide for authors' of the journal, but normally they have less than 250 words. Here's a good example on a short abstract

Aim and
Scope of
research



Abstract

The present study has investigated metal contamination at nine sites (10 sampling stations) from the English Channel to the Mediterranean Sea, including low level and highly contaminated sediments. Both total and labile concentrations of metals were determined in superficial sediments. The influence of different pHs was tested and metal lability at pHs encountered in the gut of invertebrates (the ragworm *Nereis diversicolor*, the blue mussel *Mytilus edulis*, the Japanese oyster *Crassostrea gigas*) was compared with the distribution of metals in various operationally defined geochemical fractions. Cd showed the highest lability and Cu the lowest, whereas Zn lability was intermediate. Metal concentrations were determined in bivalves at six sites and in worms at three sites. Cd in living organisms and labile Cd in sediments increased in proportion over the gradient of contamination. This relationship did not always hold for Cu and Zn and these exceptions are discussed. Even if sediments are not the only source of metal contamination in marine invertebrates, the procedure proposed here to assess metal bioavailability by remobilising sediment-bound metals at physiological pHs, seems a significant improvement of the existing methodologies of risk assessment.



Research
Methodology

Significant
findings as result
& discussion



Step 7: Write the Abstract

- In an abstract, the two *whats* are essential. Here's an example from an article I co-authored in *Ecological Indicators*:

Abstract

In recent years, several benthic biotic indices have been proposed to be used as ecological indicators in estuarine and coastal waters. One such indicator, the AZTI Marine Biotic Index (AMBI), was designed to establish the ecological quality of European coasts. The index examined the response of soft-bottom benthic communities to natural and man-induced disturbances in coastal and estuarine environments. It has been successfully applied to different geographical areas and under different impact sources, with increasing user numbers in European marine waters (Baltic, North Sea, Atlantic and Mediterranean). The AMBI has been used also for the determination of the ecological quality status (EcoQ) within the context of the European *Water Framework Directive* (WFD).

In this contribution, 38 different applications including six new case studies (hypoxia processes, sand extraction, oil platform impacts, engineering works, dredging and fish aquaculture) are presented. The results show the response of the benthic communities to different disturbance sources in a simple way. Those communities act as ecological indicators of the 'health' of the system, indicating clearly the gradient associated with the disturbance.

1. What has been done?

"In recent years, several benthic biotic indices have been proposed to be used as ecological indicators in estuarine and coastal waters. One such indicator, the AMBI (AZTI Marine Biotic Index), was designed to establish the ecological quality of European coasts. The AMBI has been used also for the determination of the ecological quality status within the context of the European Water Framework Directive. In this contribution, 38 different applications including six new case studies (hypoxia processes, sand extraction, oil platform impacts, engineering works, dredging and fish aquaculture) are presented."

2. What are the main findings?

"The results show the response of the benthic communities to different disturbance sources in a simple way. Those communities act as ecological indicators of the 'health' of the system, indicating clearly the gradient associated with the disturbance."

Abstract

The abstract should just be one paragraph (10 sentences, ~250 words) and should summarize the problem, the method, the results, and the conclusions. In other words: **what has been done & what are the main findings**. It should include important data (sample size, statistics) and results. Beware of spin.

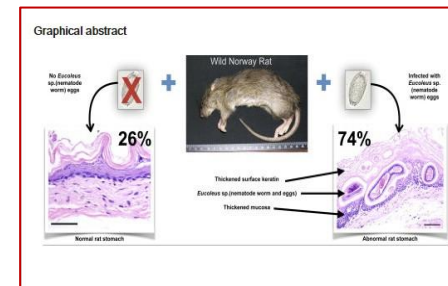
The abstract is the **advertisement** for your article and will be freely available in PubMed, Medline, Embase, Scopus, etc. You want to make it as impactful as possible.

As such the abstract could be viewed as the most important section of the article —

It will certainly be read by the most people

Many authors write the abstract last so that it accurately reflects the content of the paper.

Some journals now also ask for a graphical abstract.



Article Title

Effective manuscript titles:

- Attract the readers attention
- Use the fewest possible words
- Adequately describe content
- Identify the main issue / topic
- Do not use **uncommon** abbreviations
- Do not be flippant or ask a question....leave such titles for conferences
- Avoid words like “novel”, “innovative” or “new”

Editors and reviewers don't like titles that make no sense or fail to represent the subject matter adequately.

Maybe even more importantly, you want the appropriate audience to read your paper. If the title isn't accurate, the right people may not read it and the community might be unaware of your work. This could even lead to lower citations than the paper deserves.

Example 1

- **Original title:**
- Preliminary observations on the effect of Zn element on anticorrosion of zinc plating layer
- **Revised title:**
- Effect of Zn on anticorrosion of zinc plating layer
- **Comments:**
- Long title distracts readers. Remove all redundancies such as "studies on," "the nature of," etc. Never use expressions such as "preliminary." Be precise.



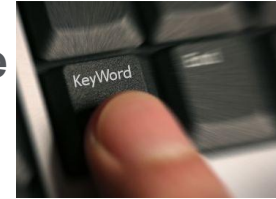
Example 2

- **Original title:**
- Action of antibiotics on bacteria
- **Revised title:**
- Inhibition of growth of Mycobacterium tuberculosis by streptomycin
- **Comments:**
- Titles should be specific. Think about "how will I search for this piece of information" when you design the title.



Keywords

In an “electronic world”, keywords determine whether your article is found or not!



Avoid making them


- ✗ too general (“drug delivery”, “mouse”, “disease”, etc.)
- ✗ too narrow (so that nobody will ever search for it)

Effective approach:

Look at the keywords of articles relevant to your manuscript

Play with these keywords, and see whether they return relevant papers, neither too many nor too few – a good guideline.

Why are Keywords Important



ScienceDirect

Search ScienceDirect Advanced search

Journal of SEO
Volume 1, 2016, Pages 1-9

Top tips: making your article visible with SEO

Jane Doe, John Smith

Show more

Abstract
Include key information to explain what your readers can find in your article.

Keywords
Choose your keywords carefully and use terms and phrases consistently where relevant.

Introduction
In a recent survey of 4,668 researchers, 95 percent said they find the information they need in journal articles, and 39 percent start their searches with a full text service like ScienceDirect.

Info found in journal articles:
[Progress bar]

Search starting with a full text service:
[Progress bar]

MAKE YOUR TITLE SHORT AND USE KEYWORDS

LINK, LINK AND LINK SOME MORE

CAPTION EVERYTHING
Figure 1: Everything!

CAN HELP YOUR READERS FIND YOUR PAPER!

BE CONSISTENT: USE KEYWORDS THROUGHOUT THE ARTICLE

USE Subheadings

CHOOSE YOUR KEYWORDS CAREFULLY

Figure 1 | Why it's important to get your SEO right.

Acknowledgments

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



Acknowledgements and COI/DOI statements



Most, if not all journals in the life sciences require that a Conflict of Interest (COI) or Declaration of Competing Interests (DOI) statement is submitted alongside your paper

References

Cite the main scientific publications on which your work is based

Do not use too many references - *but don't be lazy and only cite most recent reviews*

Avoid excessive Self-Citation

Avoid excessive citations of publications from the same region

Conform strictly to the style given in the guide for authors

Typically, there are more mistakes in the references than any other part of the manuscript. It is one of the most annoying problems and causes great headaches for editors. Attention should be given in writing this section.

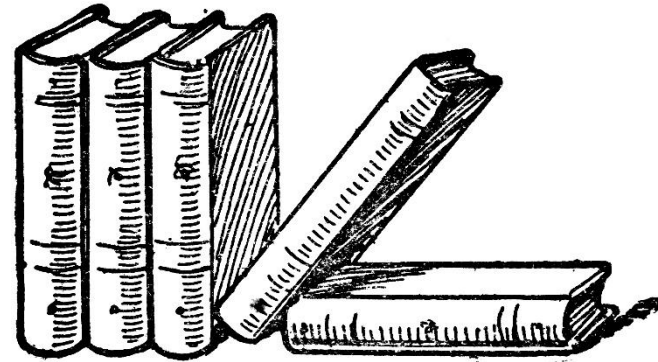


References

Ensure you've absorbed the material you reference

Do not use too many references

Avoid excessive self citations



Conform to the style in the journal's Guide for Authors

References: get them right!

- ✓ Please **adhere to the Guide for Authors** of the journal
- ✓ It is your responsibility, not the Editor's, to format references correctly!
- ✓ Get help, save time - use Reference management software
- ✓ Check
 - Referencing style of the journal
 - The spelling of author names, the year of publication
 - Punctuation use
- ✗ Avoid citing the following if possible:
 - Personal communications, unpublished observations, manuscripts not yet accepted for publication
 - Articles published only in the local language, which are difficult for international readers to find and understand

When you love citing yourself...

Me while citing my own
paper...



Cover Letter

Very important:

This is your chance to speak directly to the Editor

- Often overlooked by authors and filled quickly without thought (a big mistake!).
- You have spent months working on your paper. Do not rush now!
- Explain the main findings and motivation
- Highlight the novelty and significance of results and relevance to the journal.
- State final approval of all co-authors
- State prior reviews, revisions, etc.
- Note special requirements (suggest not to contact a particular referee, for example). Suggest referees: experts, *not* collaborators
- ***State any conflicts of interest***

Cover Letter

- Your chance to speak to the editor directly
- Submitted along with your manuscript
- Mention what would make your manuscript special to the journal
- Note special requirements (suggest reviewers, conflicts of interest)
- Make it short!

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 the area of this paper 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*.

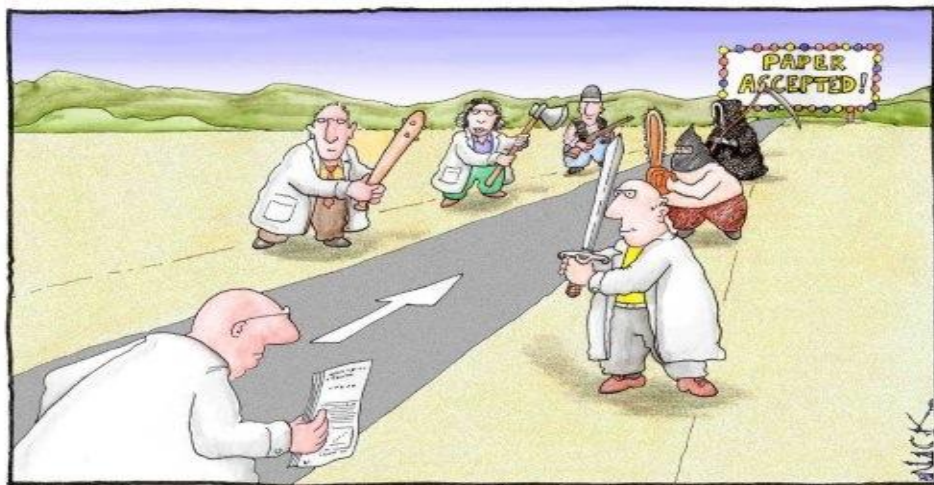
Sincerely yours,

A. Professor

Final approval from all authors

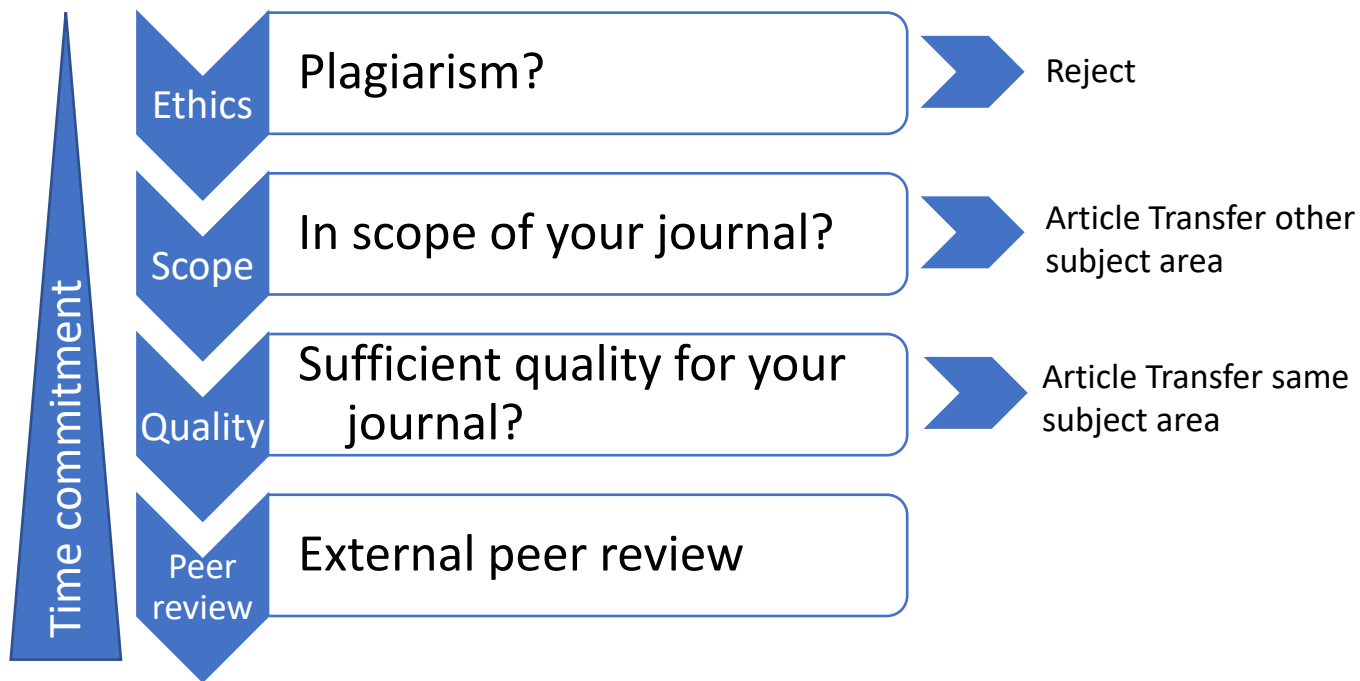
Explanation of importance of research

The peer review process

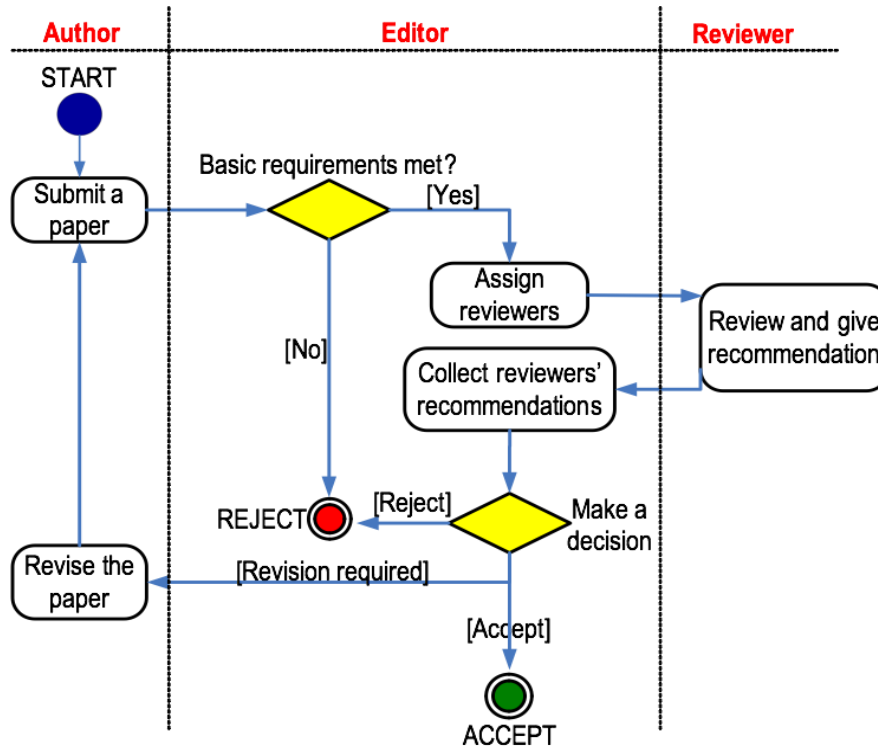


Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Overview



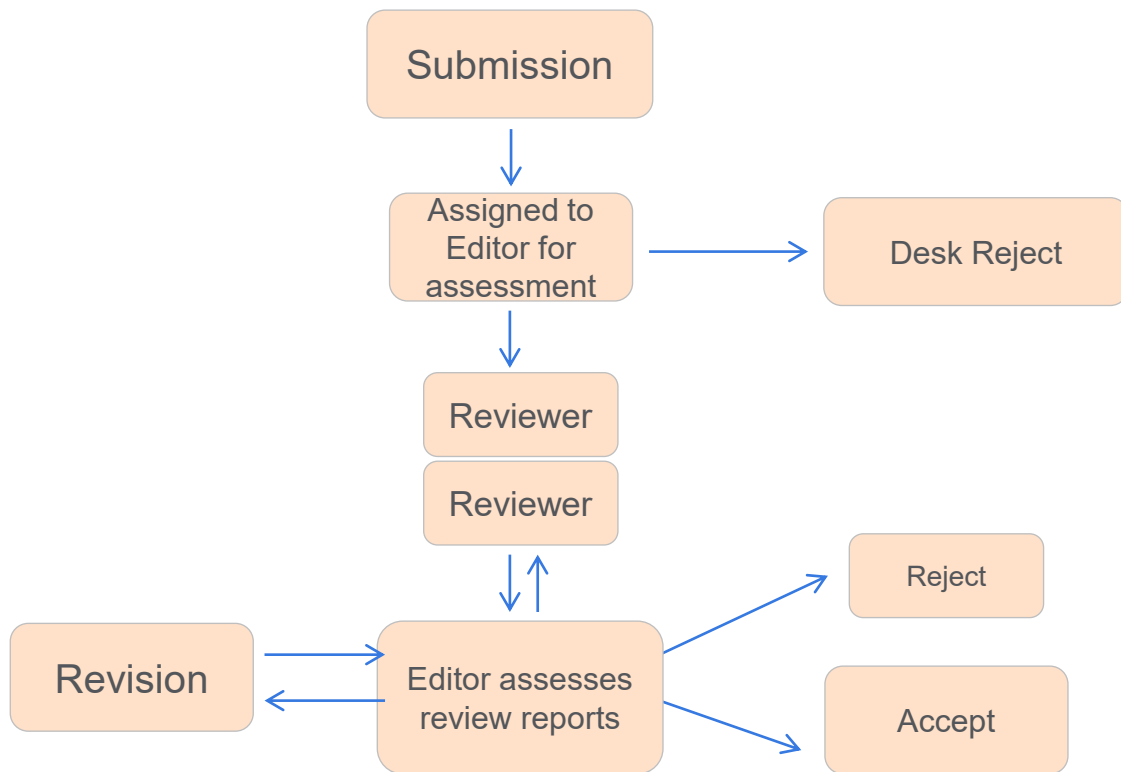
Peer review



The 4 possible outcomes

- Accept as it is
- Accept with minor or moderate revision, usually not back to referees
- Major revision, revised manuscript usually goes back to referees
- Reject

Submission and peer review process



Decision types...

Minor revision requires some changes to your paper.

Major revision requires significant deficiencies to be addressed before it can be accepted.

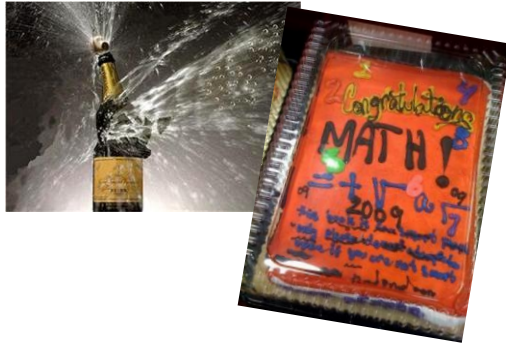
If you receive an 'Accept' decision then congratulations, your paper will be published!

If you receive a 'Reject' decision, then your paper is not suitable for publication.

First Decision: “Accepted” or “Rejected”

Accepted

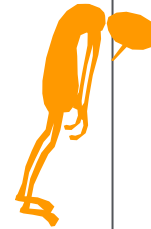
- Very rare, but it happens



- Congratulations!
 - Now wait for page proofs and then for your article to appear online and / or in print

Rejected

- Probability 40-90% ...
- Do not despair
 - It happens to everybody
- Try to understand **WHY**
 - Straight out rejection without peer review
 - Consider reviewers' advice
 - Be self-critical
- If you submit to another journal, begin as if it were a new manuscript
 - Take advantage of the reviewers' comments. **They may review your (resubmitted) manuscript again!**
 - Read the Guide for Authors of the new journal, again and again.



Leading Causes for Desk Rejection

- Scope Misalignment
- Insufficient Originality or Novelty
- Poor Quality of Writing
- Ethical Issues
 - Resubmission/ duplicate submission
 - Plagiarism
 - Data and image manipulation
 - Authorship disputes
 - Missing documents: COI, GenAI disclosure, ethics approval

[View Submission](#)
[Similarity Check/Plagiarism Results \(40%\)](#)
[Duplicate Submission Check \(21%\)](#)
[Details](#)
[History](#)
[File Inventory](#)
[Similar Articles in MEDLINE](#)
[PubMed - Title](#)
[Similar Articles in Scopus](#)
[Scopus Corresponding Author Search](#)
[Linked Submissions](#)

Managing a rejection

- A significant percentage of papers are rejected by the Editor on submission without going out to review.
- Don't take it personally! It does not necessarily mean the paper is not a good one.
- Work with reviewers' feedback to strengthen the paper.
- Find another journal to submit your paper.

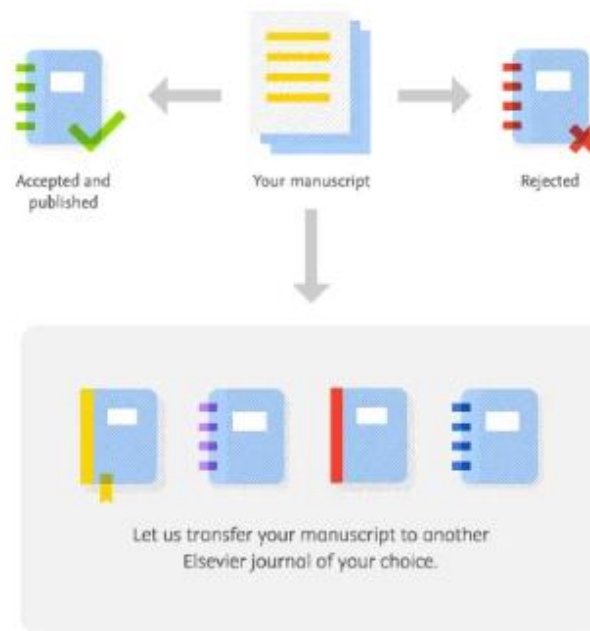


Article Transfer Service (ATS)

The Article Transfer Services provides authors with the opportunity to submit their paper to another Elsevier journal if they have not been successful in their initial submission. This is completed by our global team of dedicated Scientific Managing Editors, who are all subject-matter experts. They take a personal approach to each manuscript they assess and strive to support the authors journey to acceptance.

The Benefits of ATS

- Avoid the time required to start the publication process from scratch.
- Quickly identify the journals where your paper has the highest chance of acceptance.
- If the transfer takes place post-review, we will share referee comments with the destination journal so that they can make decisions more quickly and you can focus on refining your paper.



First Decision: “Major” or “Minor” Revisions

Major revision

- The manuscript may finally be published in the journal
- Significant deficiencies must be corrected before acceptance
- Usually involves (significant) textual modifications and/or additional experiments. Usually a 3 month period is allowed for a revised manuscript

Minor revision

- Basically, the manuscript is worthy to be published
- Some elements in the manuscript must be clarified, restructured, shortened (often) or expanded (rarely)
- Textual adaptations
- “Minor revision” does **NOT** guarantee acceptance after revision!

Responding to Reviewers

- Do not take it personally, Reviewers do this as community service in order to improve your paper, be polite.
- Take editor/reviewer's advice seriously
- Don't use harsh language or sweeping statements
- With resubmission, provide a detailed point-by-point response to reviewers' comments.
- If the reviewers and/or the editors have misunderstood a key aspect of the paper, consider an appeal, provide solid proof.

What leads to acceptance?

- **A**ttention to details
- **C**heck and double check your work
- **C**onsider the reviewers' comments
- **E**nglish must be as good as possible
- **P**resentation is important
- **T**ake your time with revision
- **A**cknowledge those who have helped you
- **N**ew, original and previously unpublished
- **C**ritically evaluate your own manuscript
- **E**thical rules must be obeyed



– Nigel John Cook
Editor-in-Chief, *Ore Geology Reviews*

Issues with ethics in publishing

Fabrication

- Making up research data

Falsification

- Manipulation of existing research data

Plagiarism

- Plagiarism takes many forms, from “passing off” another’s paper as the author’s own paper, to copying or paraphrasing substantial parts of another’s paper (without attribution), to claiming results from research conducted by others

Not disclosed Conflict of interest

- Cover letter

Authorship issues

- No ghost or gift authors

Duplicate publication

- Submit to only one journal

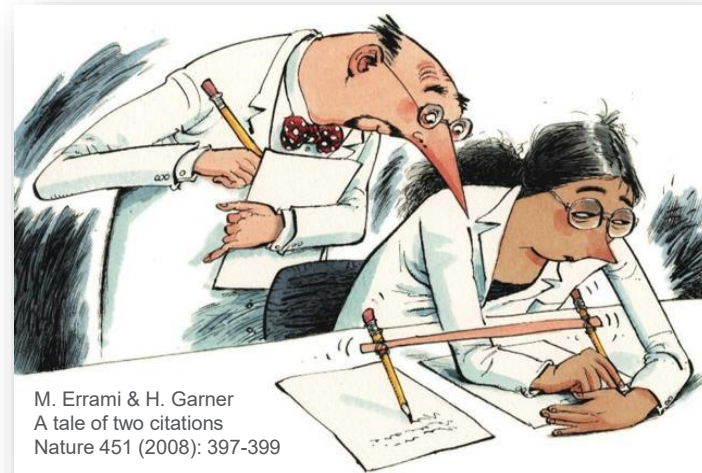
Peer review manipulation

- Fake peer review

Sharing guidelines

Publish *AND* Perish! – if you break ethics rules

- International scientific ethics have evolved over centuries and are commonly held throughout the world.
- Scientific ethics are not considered to have national variants or characteristics
 - there is a **single ethics standard** for science.
- Ethics problems with scientific articles are on the rise *globally*.



M. Errami & H. Garner
A tale of two citations
Nature 451 (2008): 397-399

What is plagiarism?

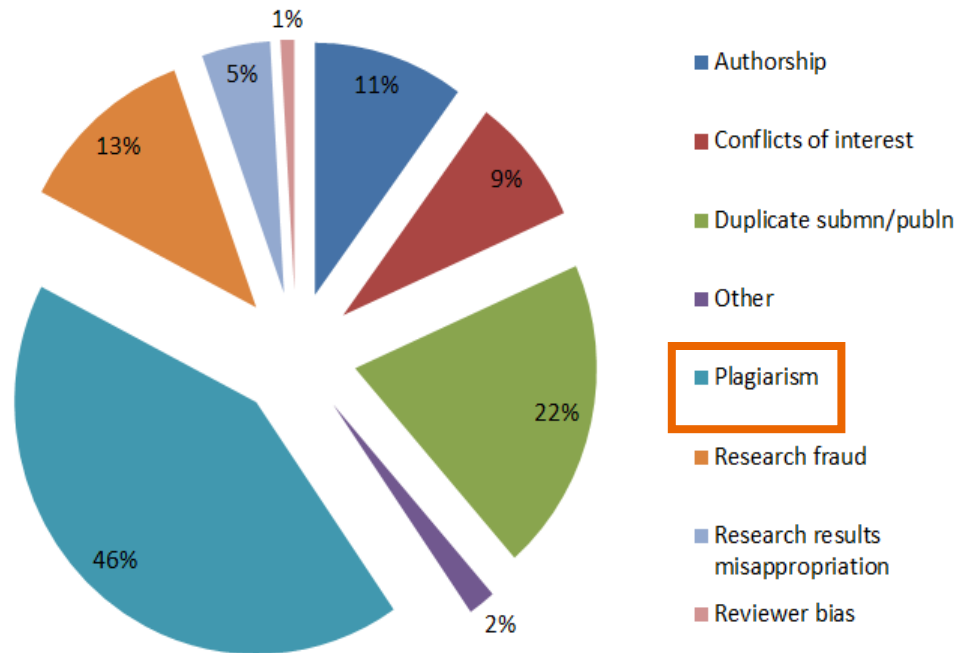
Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit, including those obtained through confidential review of others' research proposals and manuscripts.

Federal Office of Science and Technology Policy, 1999

“Presenting the data or interpretations of others without crediting them, and thereby gaining for yourself the rewards earned by others, is theft, .. it eliminates the motivation of working scientists to generate new data and interpretations.”
Prof. Bruce Railsback, Department of Geology, University of Georgia

Plagiarism high amongst ethics issues

Sample of cases reported to Elsevier Journals publishing staff in 2012



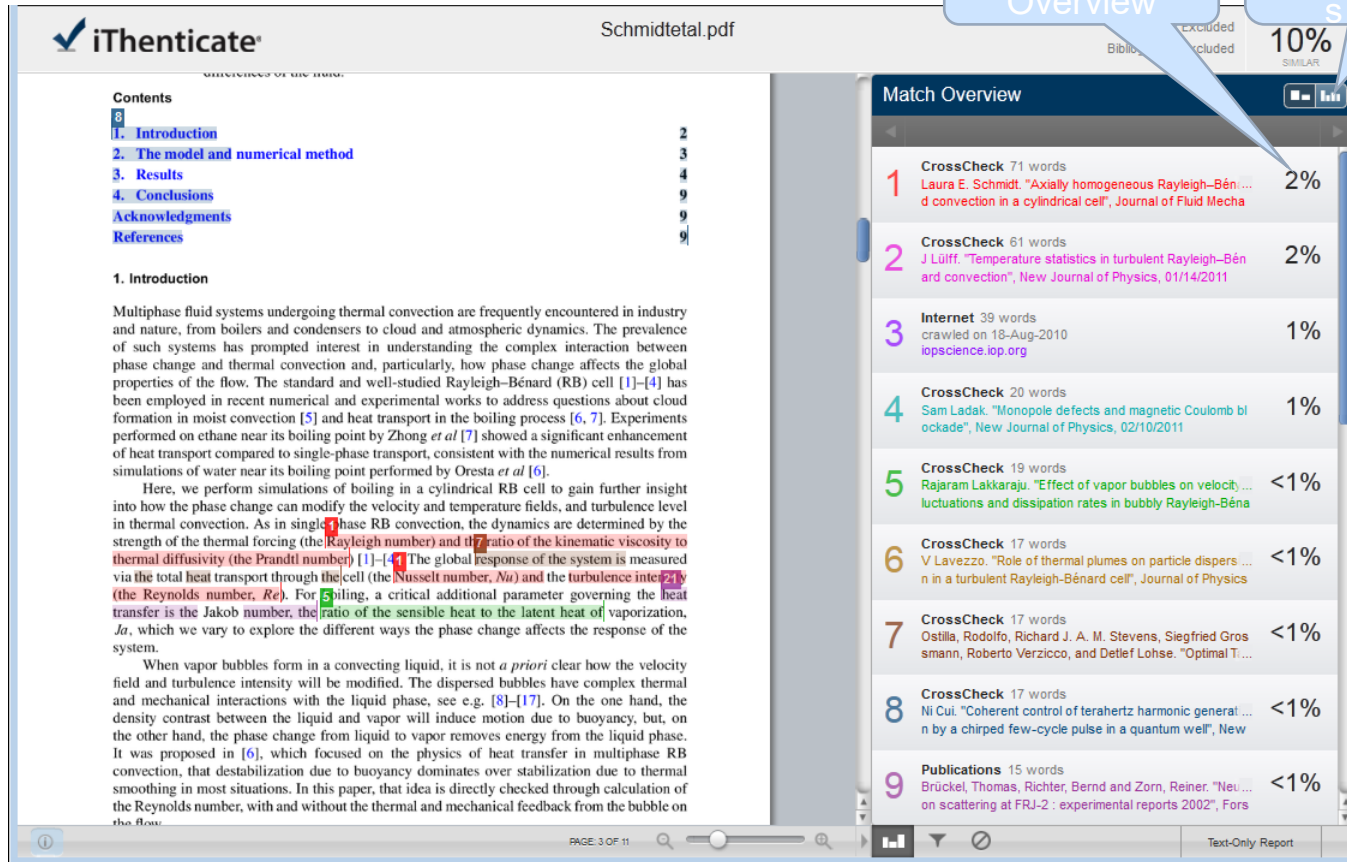
Perhapsit is just the easiest ethical issue to detect

Plagiarism Detection Tools

- Elsevier is participating in 2 plagiarism detection schemes
 - **Turnitin** (for universities) & **Ithenticate** (for publishers and corporations)
 - Manuscripts are checked against a database of 20 million peer reviewed articles which have been donated by 50+ publishers, including Elsevier.
 - All post-1994 Elsevier journal content is included, and pre-1995 content is being added week-by-week
- Editors and reviewers
- Your own colleagues...
- Other “whistleblowers” ...The walls have ears, it seems ...



CrossCheck "Document Viewer"



The screenshot displays the iThenticate interface for a document titled "Schmidtetal.pdf". The main window shows the document's table of contents and the beginning of the "Introduction" section. A sidebar on the right, titled "Match Overview", lists nine matches with their respective word counts and similarity percentages. Two callout boxes highlight "Match Overview" and "All Sources".

Match Number	Source	Words	Similarity
1	CrossCheck: Laura E. Schmidt. "Axially homogeneous Rayleigh-Bénard convection in a cylindrical cell", Journal of Fluid Mecha	71	2%
2	CrossCheck: J Lüff. "Temperature statistics in turbulent Rayleigh-Bénard convection", New Journal of Physics, 01/14/2011	61	2%
3	Internet: crawled on 18-Aug-2010, iopscience.iop.org	39	1%
4	CrossCheck: Sam Ladak. "Monopole defects and magnetic Coulomb blockade", New Journal of Physics, 02/10/2011	20	1%
5	CrossCheck: Rajaram Lakkaraju. "Effect of vapor bubbles on velocity fluctuations and dissipation rates in bubbly Rayleigh-Bénard convection", Journal of Fluid Mechanics, 01/14/2011	19	<1%
6	CrossCheck: V Lavezzo. "Role of thermal plumes on particle dispersion in a turbulent Rayleigh-Bénard cell", Journal of Physics	17	<1%
7	CrossCheck: Ostilla, Rodolfo, Richard J. A. M. Stevens, Siegfried Grossmann, Roberto Verzicco, and Detlef Lohse. "Optimal Turbulence in Rayleigh-Bénard Convection", Physical Review Letters, 01/14/2011	17	<1%
8	CrossCheck: Ni Cui. "Coherent control of terahertz harmonic generation by a chirped few-cycle pulse in a quantum well", New Journal of Physics, 01/14/2011	17	<1%
9	Publications: Brückel, Thomas, Richter, Bernd and Zorn, Reiner. "Neutron scattering on scattering at FRJ-2: experimental reports 2002", Fortschritte der Physik, 01/14/2011	15	<1%

Retractions

doi:10.1016/j.sigpro.2005.07.019 Cite or Link Using DOI
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RETRACTED: Matching pursuit-based approach for ultrasonic flaw

N. Ruiz-Reyes^a, , P. Vera-Candeas^a, , J. Curpián-Alonso^a, , J.C. Cuevas-Martínez^a, and F. Ló

^aElectronics and Telecommunication Engineering Department, University of Jaén, Linares, Jaén, Spain

^bSignal Theory and Communications Department, University of Alcalá, Alcalá, Madrid, Spain

Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publisher. Please see <http://www.elsevier.com/locate/withdrawnpolicy>

Reason: This article is virtually identical to the previously published article: "New matching pursuit-based algorithm for SNR improvement in ultrasonic NDT" , *Independent Nondestructive Testing and Evaluation International*, volume 38 (2005) 453 – 458 authored by N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, María Campos and J.C. Cuevas-Martínez.

Corresponding author. Tel.: +34 953648554; fax: +34 953648554

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as welds and castings. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, when the input SNR (SNR_{in}) is lower than 0dB (the level of echoes from the structures is above the level of the noise).

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $s[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let H be a Hilbert

space. We define the over-complete dictionary as a family $D = \{g_i, i=0, 1, \dots, L\}$ of vectors in H , such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analyzed signal $s[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, when L is too large to use the optimum algorithm because of its mathematical complexity. Then a well-designed dictionary is used in matching pursuit, the non-linear operation of the algorithm leads to compact and sparse representations.

In each iteration of the procedure, vector $g_i[n]$ which gives the largest inner product with the analyzed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the m th iteration the residue is

$$r^m[n] = \begin{cases} s[n] & m=0, \\ s[n] - \sum_{i=0}^{m-1} g_i[n] + \alpha_{i+1} g_{i+1}[n], & m \neq 0, \end{cases} \quad (1)$$

where α_{i+1} is the weight associated to optimum atom $g_{i+1}[n]$ at the m th iteration.

The weight α_i^m associated to each atom $g_i[n] \in D$ at the m th iteration is introduced to compute all the inner products with the residual $r^m[n]$:

$$\alpha_i^m = \frac{\langle r^m[n], g_i[n] \rangle}{\langle g_i[n], g_i[n] \rangle} = \frac{\langle r^m[n], g_i[n] \rangle}{\|g_i[n]\|^2} \quad (2)$$

The optimum atom $g_{i_{opt}}[n]$ (and its weight $\alpha_{i_{opt}}^m$) at the m th iteration are obtained as follows:

$$g_{i_{opt}}[n] = \arg \min_{g_i[n] \in D} | \langle r^m[n], g_i[n] \rangle |^2$$

$$= \arg \min_{g_i[n] \in D} | \langle r^m[n], g_i[n] \rangle |^2 \quad (3)$$

The computation of correlations $\langle r^m[n], g_i[n] \rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n] \rangle = \langle r^m[n], g_i[n] \rangle - \alpha_{i_{opt}} \langle g_{i_{opt}}[n], g_i[n] \rangle. \quad (4)$$

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AI in the Publishing Community



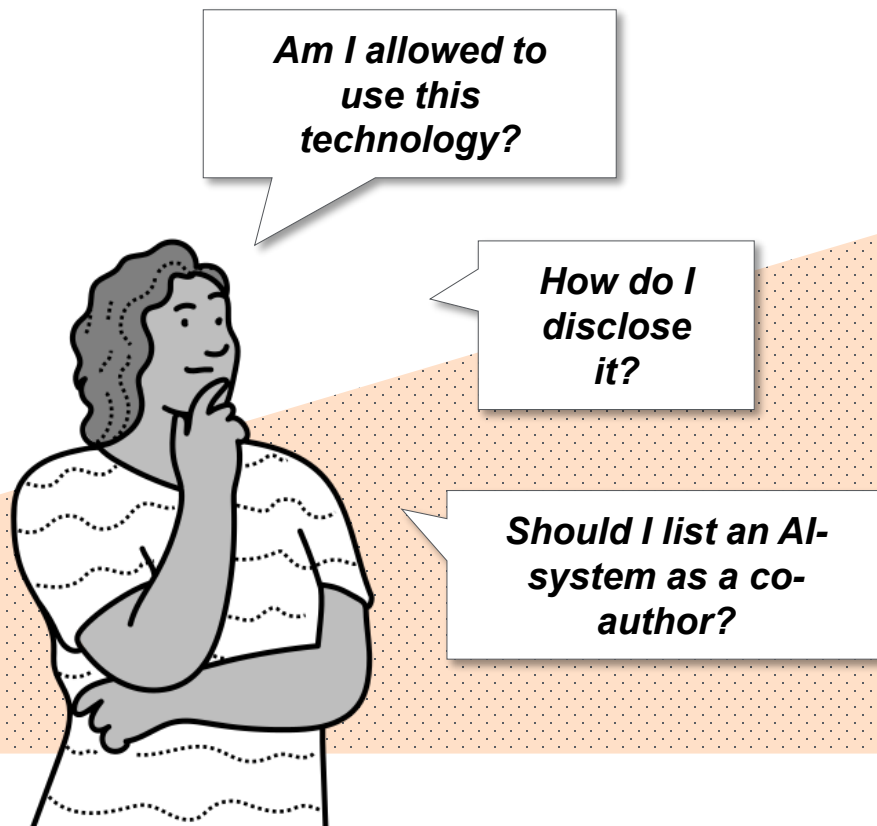
Audience Poll



What is your level of trust in using generative AI solutions to help you with your research work?

Why should we think about GenAI in the context of scientific writing and publishing?

- We expect researchers to **increasingly use** Generative AI in scientific writing
- **Many researchers have questions about the technology**, how it can benefit them, how it will impact them, and how it should and shouldn't be used in the context of scientific publishing.
- There are **concerns about inaccuracy, unreliable references, copyright infringement** and training **bias**.



Key concerns related to the use of Generative AI in scientific writing and publishing



Inaccurate information and unreliable sources

Generative AI tools may generate incorrect or made-up information such as citing non-existent references, making up authors, or suggesting non-existing reviewers. They may give incomplete or misleading responses and spread misinformation.



Ethical concerns and biases

The models often lack transparency. A GenAI tool may be based on biased training data and potentially infringe ethical standards including plagiarism, using copyrighted information without consent or proper attribution, or violating confidentiality and/or data privacy rights.



Lack of up-to-date information

When a GenAI tool is used of which the dataset is outdated it does not provide current news or information. The recommendations the tool provides are only as current as the knowledge cut-off date.



Homogenization of content

By optimizing for efficiency, GenAI systems can potentially lead to content becoming increasingly uniform and repetitive.



Not trained with scientific data

A further limitation of recent consumer-focused GenAI tools such as ChatGPT is that they are not trained with scientific data.

Of course, there are also LLMs specifically designed for scientists, including many domain-specific models. Researchers have been using them for years. We expect that this trend will continue to grow.

Potential Benefits related to the use of (Generative) AI in scientific writing and publishing when used responsibly and with human oversight

New benefits that arise with application of GenAI



Save time and effort

New ways of discovering information, including improved search and quicker information retrieval. Can support a systematic literature review and help to summarize and simplify large amounts of content.



Improve language and translate text

GenAI tools can help authors improve the language, tone and style of a research paper and can be used for translation. This could enhance equity in publishing for EAL (English as Additional Language)- authors.



Identify novel research topics

Help explore new research ideas and different lines of inquiry.



Promote research

GenAI can create promotional copy or layperson's summaries.



Support education

GenAI can help with education (chatbots, question banks or quizzes)

Enabled by traditional AI, potentially enhanced by GenAI



Make science more accessible

Improved accessibility, for instance through the creation of translations in less known languages, or audio descriptions for the visually impaired.



Assist with manuscript checking and screening

AI can assist in the screening process (for completeness, plagiarism, references, format etc.) before the paper goes to editor or reviewer.



Recommend reviewers

Recommending peer reviewers based on keywords and other metadata is a common use of AI in journal publishing.



Match manuscript to a journal

Suggest relevant journals based on the scope of a manuscript.



Design more user-friendly workflows

Support user-friendly and time-saving workflows (text mining, information extraction, process automation, question-answering etc.)

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Information about the new policy and disclosure instructions have been added to the Guide for Authors of our journals and a notification has been added to the submission journey in Editorial Manager.

Author Policy



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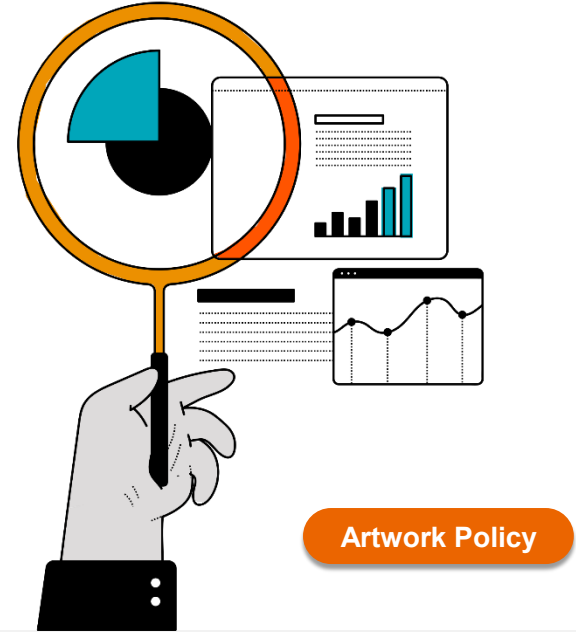
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- [List of journals included in Elsevier's geographical pricing for open access pilot](#)

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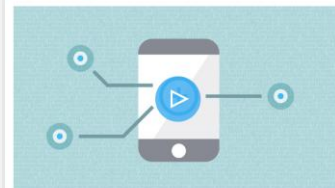
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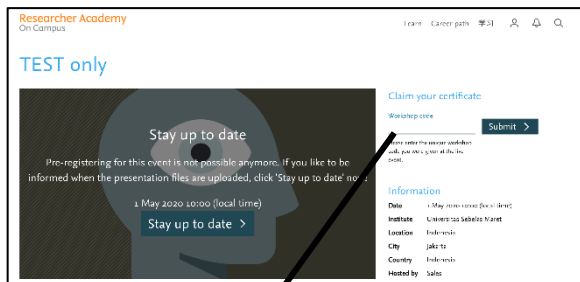




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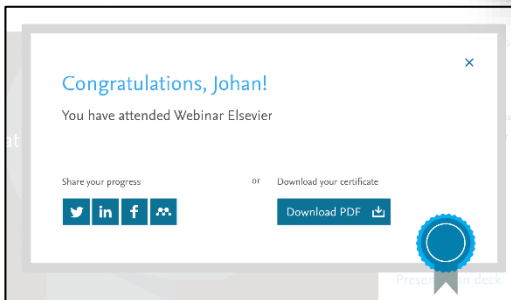
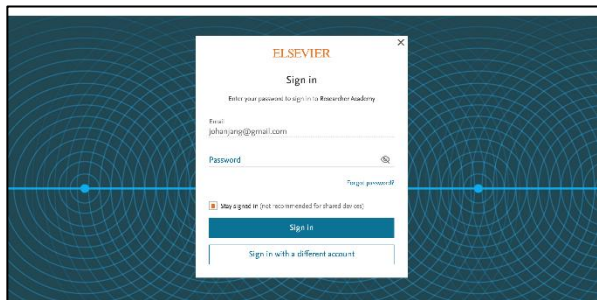


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