

Writing a Great Paper and Getting it Published

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ELSEVIER



Advancing human progress together

Agenda

1. About Elsevier
2. Manuscript preparation
3. Publication process and the Editor's view
4. Research integrity and publishing ethics
5. Elsevier and AI
6. Researcher academy

About Elsevier

ELSEVIER

Origins of scholarly publishing



1439

Gutenberg and
moveable type



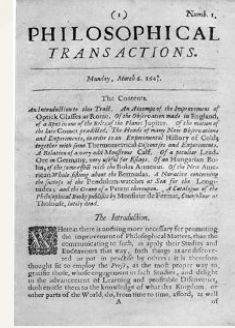
1580

Founding of the House
of Elzevir



Henry Oldenburg
(1618- 1677)

Founding editor and
commercial publisher of the
first scientific journal

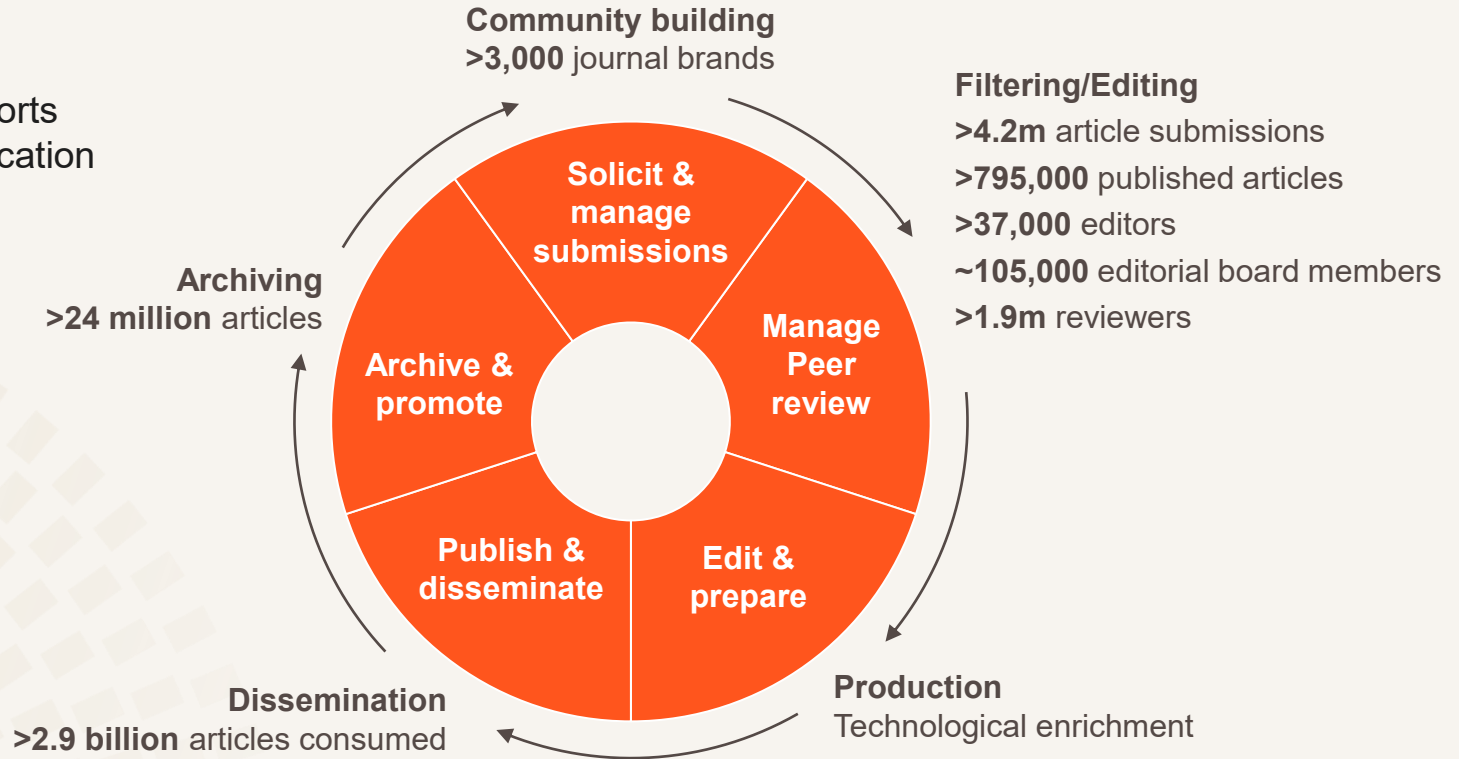


March 6, 1665

Philosophical transactions of
the Royal Society
First true scholarly journal

Journal and Article Ecosystem

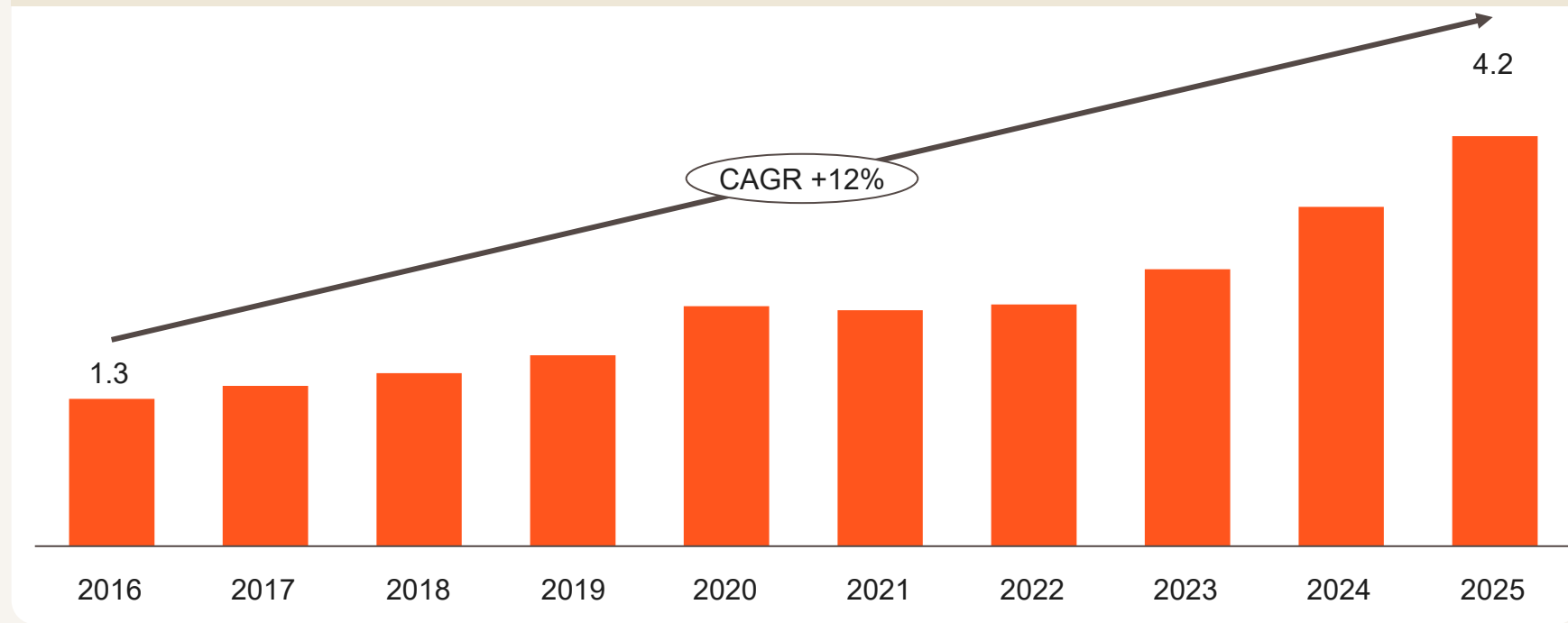
How Elsevier supports scholarly communication



Article Volume Growth: Submissions

Consistent article submissions volume growth

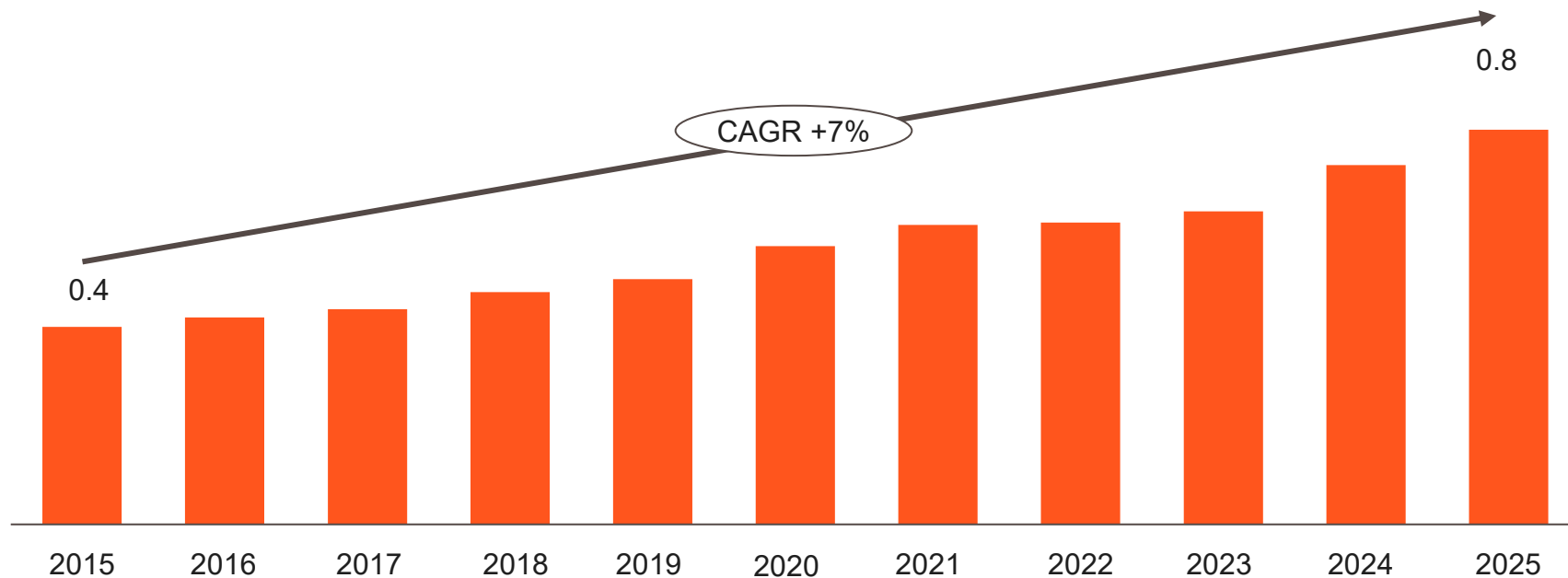
Elsevier Submitted Articles* (Units, Millions)



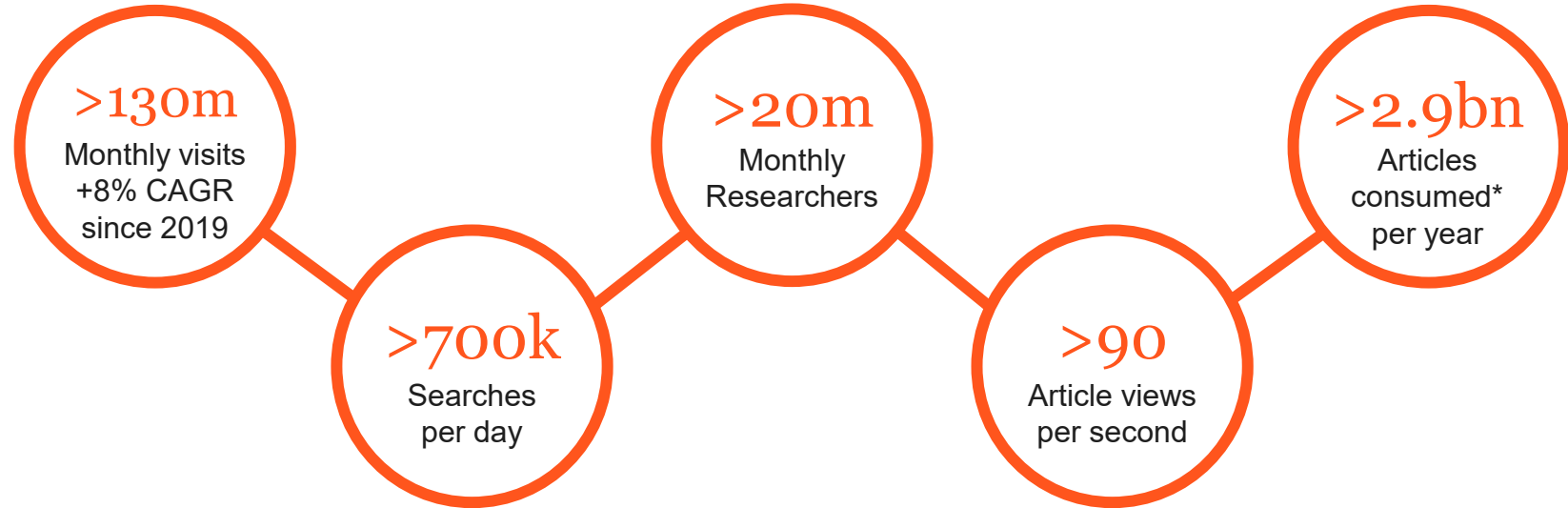
Article Volume Growth: Published Articles

Consistent published articles volume growth

Elsevier Published Articles* (Units, Millions)



Leading research platforms with global reach and scale



Increasing article volume, search and usability, adding sophisticated analytical capabilities

Research trends that drive our strategy to create value for our customers

- Research output growth continues globally; aggregate market growth has averaged 3.5% annually since 2013
- China becomes a huge research nation – not just in quantity but also quality
- New business model emerging ‘Open Access/Pay to Publish’, gradually replacing legacy model of ‘Journal subscriptions’
- Open Science trend means that research is more inclusive, collaborative and transparent
- Changing customer needs and perception of how to add value to the market
- The rise of ‘predatory publishing’, where quality cannot always be trusted, as a side effect of the transition to the open access business model



The four elements of our strategy

Reflect the community of researchers we serve

Offer **equitable** publication opportunities so that what we publish **reflects the diversity** of the **communities** we serve



Build trust, ensure our customers have an enjoyable experience

Drive a **superior** and **trustworthy** author, reviewer and editor **experience**, from **submission** to **publication** and **beyond**



Great place to work

Build a better **connected** and more **effective** organization with **empowered** individuals leveraging their **skills** and **talents**



Being a trusted partner

Ensure **all** journals publish **trusted** content and be a **thought leader** on research **integrity** and publication **Ethics** standards and practices



Other Elsevier activities



The Elsevier foundation¹

- Supports inclusion, diversity, and equity in research
- Funds programs that empower researchers worldwide



Research4life²

- Provides free or low-cost access to scientific content
- Supports researchers in low- and middle-income countries



SDG resource center³

- Curates research aligned with the UN Sustainable Development Goals
- Helps connect science to global challenges



Supporting research that creates impact beyond publication.

Manuscript preparation

Are you ready to publish?

A strong story

- Share original, meaningful insights
- Build on clear, reliable evidence
- Focus your work into one strong contribution



The right audience

- Reach readers who will value your research
- Consider local and global relevance
- Choose a journal that fits your work



A strong manuscript helps you share your contribution with confidence

What is a *strong* manuscript?



Has a clear, useful,
and exciting message



Presented and constructed
in a logical manner



Reviewers and
editors can grasp the
significance easily



Editors and reviewers are all active scientists. Make things easy to save their time.

Choosing the right journal: *JournalFinder*



Journal Finder

Find journals that match your research

- Enter your title, abstract, and keywords
- Discover journals aligned to your topic and field
- Compare options using key metrics and scope

Make a more informed choice

- Explore fit, impact, and review timelines
- Select the journal that best supports your work



JournalFinder helps you connect your research with the right audience.

[Journalfinder.elsevier.com](https://journalfinder.elsevier.com)

Writing a Scientific Paper



Start with a strong foundation

- Define your main message and research questions
- Organize your key findings
- Use figures and tables to shape your story



Draft, then refine

- Write your first draft quickly
- Focus on clarity, not perfection
- Review and improve your structure and message



Strengthen your manuscript

- Read from your reader's perspective
- Check that your message is clear
- Get feedback from others

Manuscript Language Matters

Take responsibility for your writing

- Make sure your manuscript is clear before submission
- Use available tools and support where needed

Use language that's easy to follow

- Write short, direct sentences
- Focus on one idea at a time
- Avoid unnecessary complexity

Use tense consistently

- Present for context and established knowledge
- Past for methods and results
- A mix for discussion



Write with clarity and confidence.

Manuscript structure

Title

Abstract

Keywords



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

Main text (IMRAD)

- Introduction
- Methods
- Results
- And
- Discussions



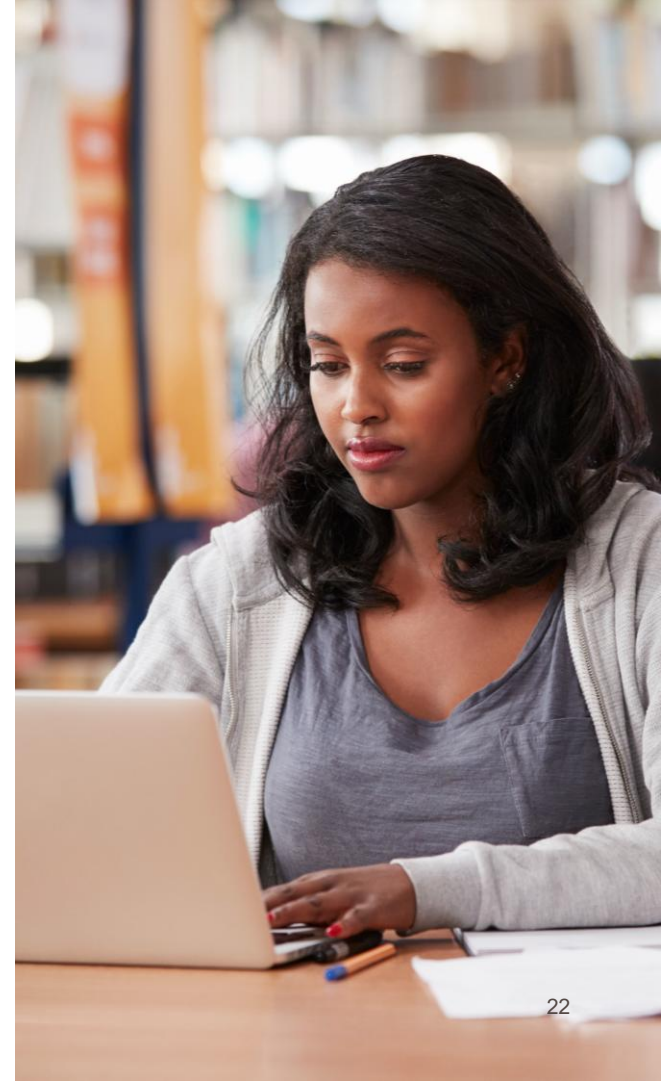
Your reader's time is scarce
Make your article as concise as possible -
more difficult than you imagine!

Conclusion

Acknowledgement

References

Supplementary Data



Title & Abstract



Title

- Be clear, concise, and informative
- Reflect your research accurately
- Help readers quickly understand your work

Abstract

- Summarize what you did and what you found
- Make it easy to understand on its own
- Be accurate, specific, and brief



Your title and abstract help others discover - and engage with - your research.

Introduction & Methods



Introduction

- Explain the problem and why it matters
- Show how your work builds on existing research
- Make your aim and contribution clear

Methods

- Describe how you studied the problem
- Include the detail needed for others to follow your approach
- Reference established procedures and identify key materials or equipment



A strong paper moves clearly from context to approach.

Results & Discussion



Results - show what you found

- Highlight your main findings clearly
- Use figures and tables to present data effectively
- Make visuals easy to understand on their own

Use visuals with purpose

- Include only essential data
- Avoid repeating the same information in text and figures
- Keep charts and tables simple and easy to read

Discussion - explain what it means

- Interpret your results in context
- Compare with existing research
- Discuss limitations and implications



Strong papers move from clear results to meaningful insight.

Conclusion & References



Conclusion - show what your work means

- Summarize your key findings clearly
- Show how your work advances the field
- Highlight implications and future directions

References - support your contribution

- Cite the most relevant and important work
- Use sources you fully understand
- Follow the journal's guidelines



A strong conclusion and references reinforce the value of your research

Before Submission



Take a final look

- Review your manuscript carefully
- Make sure your message is clear and complete
- Read the journal's Guide for Authors and check all requirement



Get a fresh perspective

- Ask colleagues or supervisors for feedback
- Use their input to strengthen your work



Submit with confidence

- Send your manuscript and cover letter
- Take the next step in sharing your research

Publication process and the Editor's view

Publishing business models



Subscription journals

- Publish without an author fee
- Access is provided through institutional or personal subscriptions

Open access journals

- Research is freely available to all readers
- Publication is typically supported by an article publishing charge

Different open access routes

- Gold: article is immediately and permanently open
- Green: a version of the article is shared, often after an embargo



Choosing the right model helps your research reach the right audience

The Peer Review System

What is peer review?

- Your manuscript is evaluated by experts in your field
- Reviewers assess quality, validity, and relevance



Why it matters

- Ensures quality, validity, and originality
- Improves manuscripts through expert feedback
- Protects the integrity of scientific research



How it works

- Editor selects independent reviewers
- You receive feedback and revise your manuscript
- A final decision is made based on the reviews



Peer review helps strengthen your research before publication.

Editorial Decisions & Process

Reject

- Common outcome for many submissions
- Feedback helps you improve your work
- Revise and consider submitting to another journal

Revise

- Most manuscripts require revisions
- Address reviewer comments carefully
- Strengthen clarity, structure, and argument

Accept

- Final step after successful revision
- Your article moves to production and publication

Editorial decisions guide you toward a stronger final paper.



Revision Types Explained



Major revision

- Significant changes are needed
- May involve restructuring, additional analysis, or new data
- Address all comments carefully before resubmitting



Minor revision

- Manuscript is close to acceptance
- Requires clarification or small improvements
- Focus on accuracy, clarity, and completeness



What to keep in mind

- Address every reviewer comment clearly
- Minor revision does not guarantee acceptance
- Careful revisions increase your chances of success



Revisions are an opportunity to strengthen your paper!

What Leads to Acceptance

A strong contribution

- Clear, original, and relevant to the field

Robust evidence

- Reliable data and sound methodology

Clear and logical structure

- Easy to follow and well organized

High-quality presentation

- Clear language and strong visuals

Ethical and responsible research

- Follows publishing and research standards

Strong manuscripts combine **clarity**, **quality**, and **integrity**.



What Editors Look At First

Title and abstract

- Is the topic clear and relevant?
- Does the research seem meaningful and interesting?

Introduction

- Is the research question clear?
- Does it address a real gap in the field?



Editors first assess whether the paper fits the journal's scope, before considering clarity and relevance.

Evaluating the Paper Content

Figures and data

- Are visuals clear, accurate, and easy to interpret?
- Do they support the main findings effectively?

Results and discussion

- Are results presented clearly and logically?
- Does the discussion explain their significance?

References

- Are sources relevant and up to date?
- Do they position the work within the field?



Strong evidence and clear interpretation drive editorial decisions

How to Respond to Reviewers

Be clear and structured

- Address each comment individually
- Explain what you changed and where

Be specific

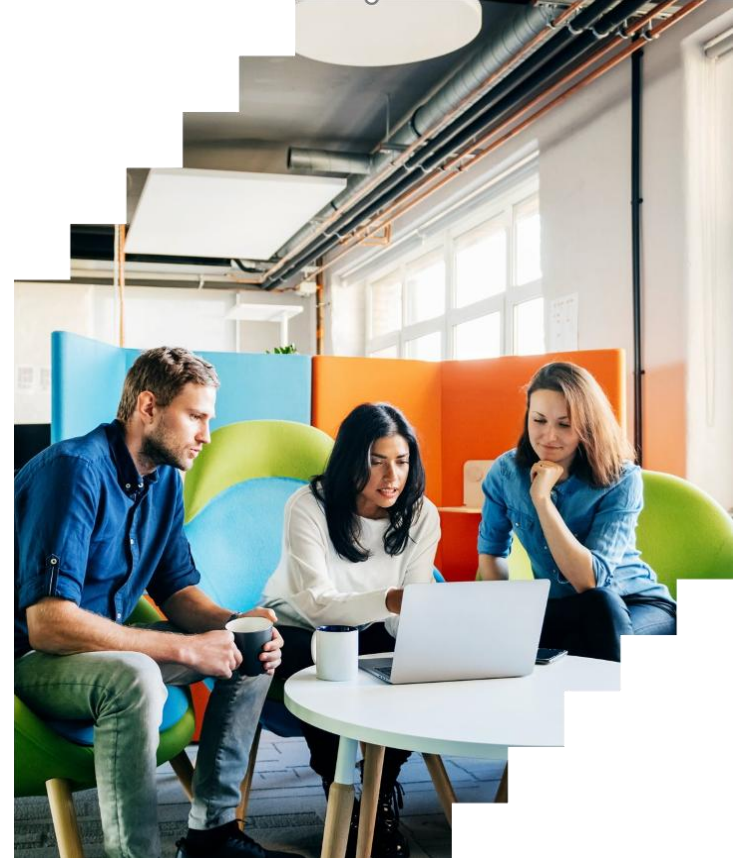
- Refer to page or line numbers where relevant
- Avoid general or vague responses

Be constructive and professional

- Accept feedback where appropriate
- Provide clear, evidence-based responses
- Respond politely, even when you disagree

Take revision seriously

- Use feedback to improve your manuscript
- Careful revisions increase your chances of acceptance



From Lab to Paper: An Engineering Perspective

An honest account of what publishing in STEM really looks like -- from experiment to acceptance.

The Lab Reality

- Plan for 2-3 failed cycles per major result -- each failure narrows your hypothesis and becomes legitimate Methods material. A study on heterogeneous catalyst design ran 3 failed synthesis routes; those failures explained WHY the final formulation was novel.
- Document conditions in real time. Lab notebooks are the raw material of your Methods section -- waiting until submission means forgotten parameters, unreproducible results, and reviewer rejections on technical grounds.
- Discuss publishability with your supervisor early. Ask: 'What single sentence describes what this paper proves?' In Chemical Engineering, one focused contribution -- a new catalyst, a process improvement, a separation breakthrough -- beats a fragmented multi-story submission.

The Writing Challenge

- Build around your 5-6 strongest figures first -- they ARE the story. Write narrative to connect them, not the other way around. Figures submitted to reviewers are read before the abstract.
- Reframe from 'what you did' to 'what problem you solved.' Draft: 'We synthesised a new catalyst.' Published: 'We address a critical bottleneck in low-temperature CO₂ conversion efficiency for industrial-scale carbon capture.'
- Use JournalFinder before finalising your framing. The same ChE dataset can fit Chemical Engineering Journal, AIChE Journal, Applied Catalysis, or Green Chemistry depending on how you frame the contribution. Title, Abstract, and Keywords are read 100x more than the full text -- invest time there first.

The Review Experience

- Desk rejection (50-95% of STEM submissions) signals scope mismatch, not poor quality. Do not revise the paper -- revise the target journal, reframe the contribution, and resubmit. This is completely normal.
- Treat every reviewer comment as free expert advice. A request for missing characterisation is a gift -- that experiment may become your strongest result. A Chemical Engineering case: demanded BET surface area and TPR data became the paper's headline finding.
- Write your response letter like a second paper: restate each comment, show new data, cite the exact page in the revised manuscript. 'We disagree because...' always requires evidence, not assertion.



Publishing is a skill you build, not a talent you are born with. Every published STEM paper started with the same uncertainty you feel now.

Let's test your knowledge with this scenario...



Dr. Sara is a Chemical Engineering PhD researcher. She has developed a novel bimetallic catalyst for low-temperature CO₂ hydrogenation -- lab results show 42% higher methanol yield than the current state-of-the-art. She only has bench-scale reactor data; no pilot-scale or techno-economic validation yet.

Her supervisor advises: *"The results are excellent -- just submit to Nature Catalysis and let the reviewers decide if it is good enough."*

Should Dr. Sara follow this advice?

Probably not -- and here is why:

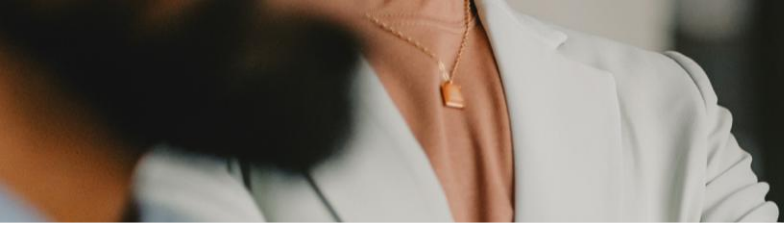
- Nature Catalysis targets landmark mechanistic or conceptual catalysis advances -- not incremental yield improvements. Bench-scale data with no pilot validation or DFT mechanistic insight is unlikely to clear desk review at ~8% acceptance rate.
- Better fits: Chemical Engineering Journal, Applied Catalysis B, or AIChE Journal -- where the process engineers and industrial chemists who will USE this work actually read and publish.

Discuss with your group:

- What additional experiments -- pilot-scale data, DFT mechanistic study, or stability testing -- would strengthen the impact claim for a higher-tier journal?
- How would you reframe this paper for a Chemical Engineering process audience vs. a fundamental chemistry/catalysis audience?



Key lesson: Journal fit is a strategic decision, not just prestige. For Chemical Engineering researchers, the right journal is where the people who could USE your work -- process engineers, industrial chemists, scale-up specialists -- actually read. A 42% yield improvement is transformative for industrial carbon capture but needs process-level framing to resonate beyond fundamental catalysis.



Research integrity and publishing ethics

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Why Ethics Matters



Trust in research

- Ensures findings are reliable and transparent
- Builds confidence in published work



Integrity of science

- Protects the scientific record
- Prevents misconduct such as plagiarism or data manipulation



Responsibility of authors

- Report research honestly and accurately
- Follow ethical standards in publishing and authorship



Ethics underpin credible and impactful research.

Key Ethical Risks

Plagiarism

- Using others' work without proper attribution
- Includes text, data, and images

Data falsification

- Manipulating or misrepresenting results
- Includes selective reporting or image changes

Duplicate submission

- Submitting the same manuscript to more than one journal
- Publishing the same work multiple times

Conflicts of interest

- Not disclosing relationships that may influence the research
- Financial, professional, or personal



Addressing these risks protects the integrity of your research



Responsible Publishing Practices



Follow authorship rules

Include only contributors who meet authorship criteria

Be transparent

- Disclose conflicts of interest
- Report methods and data honestly

Follow journal policies

Adhere to submission and ethical guidelines

Use AI responsibly

Follow journal guidance and disclose use where required

Responsible practices evolve — including how we use AI in research

Authorship Deep Dive

An author must:

- Make a substantial contribution to the work's conception and design, or acquisition of data, or analysis and interpretation
- Be involved in drafting or revising the manuscript for important intellectual content
- Approve the final version
- Take responsibility for all aspects of the work

Who may be acknowledged instead

- Contributors with limited or technical support
- Those who edit the work

Agree on authorship early

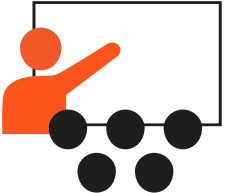
- Define roles and author order at the start
- Editors will generally not consider changes to authorship after submission
- Avoid misunderstandings later

Clear authorship supports transparency and trust.



Let's test your knowledge with this scenario...

A research group at another institution invites Dr. Chen to be a co-author on an article that they are preparing for publication. Dr. Chen learns that the group has already conducted the research and written the article, but that the group would just like to offer Dr. Chen a co-author position as a gift as she is a senior leader in the field. **Should Dr. Chen accept?**



No. This is “gift authorship” and it is considered unethical.

Not disclosing authors who meet the authorship criteria, or “ghost authorship” is also unethical.

Quiz



Suzie is a researcher who works collaboratively with a group that writes many papers. Suzie is only working on some aspects of the research. Her supervisor asks her to edit an article in an area where she has not conducted research. She does extensive language edits to make the paper sounds more professional. Should Suzie be listed as an author?

A. Yes

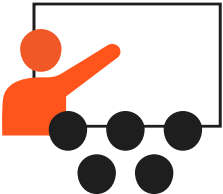
B. Depends on the extent of the language edits

C. No

No, Suzie should not be listed as an author.

Suzie is **not** considered an author. Authors must contribute to the work's conception, design, execution, or interpretation, and they must be able to take full responsibility for the work.

Language editing, even extensive language editing, does not merit authorship.



Instead, the authors should acknowledge Suzie's editing contributions in the acknowledgements.

Quiz

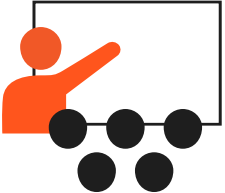


Which of the following is **true** about the CORRESPONDING AUTHOR of a manuscript?

- A. The corresponding author handles communication about the article before and after publication.
- B. The corresponding author should be listed as the first author.
- C. The corresponding author is the most senior author.
- D. All of the above.

The answer is A.

The corresponding author handles communication about the article before and after publication. While they can be the first author or sometimes a senior author from the institution, this is not always the case. In some fields it is unusual for the Corresponding Author to appear listed first.



Remember, authorship and the order of authors should be agreed BEFORE the original submission of the paper.

Quiz



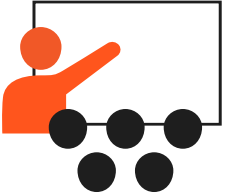
Dr. Smith has written an article about a clinical topic that is very familiar to him. He received funding from a pharmaceutical company two years ago to write about this topic, but he has not received funding for this article. Does Dr. Smith have to disclose this previous funding?

A. Yes

B. No

The answer is Yes.

Authors must disclose research support, including financial and non-financial assistance with a vested interest in the work as well as **related work/relationships** within the last 3 years between an author and a third party that might have an interest in the manuscript.



Remember, Elsevier has developed a **step-by-step Declarations Tool** to help authors through the processes of preparing well-considered and ICMJE-compliant statement.

Elsevier and AI

ELSEVIER

How do researchers currently use AI?

AI is transforming research and publishing

- [Elsevier's Researcher of the Future Report](#) draws on insights from 3,200+ researchers across 113 countries (survey **Aug–Sep 2025**).
- AI adoption is accelerating: 58% now use AI at work (up from 37% in 2024)
- However, gaps remain: 45% feel undertrained, and only 32% rate institutional AI governance as strong.

AI adoption in research has surged

58% have used AI tools for work

↑ Up 21 percentage points from 2024.



How do researchers currently use AI?

Researchers say they currently use AI tools to:

61%

Find and summarize
the latest research

41%

Draft grant proposals

51%

Perform literature reviews

38%

Draft research papers
or reports

38%

Analyze research data

The Trust Gap in AI

- The race against time is pushing researchers to use readily-available AI tools for efficiency, but at what cost?
- AI can sound authoritative, but in science, authority is earned, not generated.

...the diversity of tools using AI is so huge that you have no idea of which is a valuable one.”¹



- Senior academic / researcher,
Switzerland

86%

Believe AI tools could cause critical **errors or mishaps**²

22%

Believe AI tools are **trustworthy**¹.

1 in 4

Fear AI tools could **devalue their work**¹.
And yet...

58%

Use them specifically for work¹.

Why general-purpose AI tools are not fit for research



Lack Transparency

- Black box, no citations¹
- Produce literature reviews with >50% citations being hallucinations or having errors²
- Satirical posts presented as legitimate sources¹
- Retracted research rated as 'word-leading'³



Erodes critical thinking

- Inflated user trust, regardless of the accuracy¹
- Creating an illusion of authoritativeness¹
- Potential for bias towards agreement in responses¹



Privacy & security issues

- Widespread use, 58% of researchers use it for their work
- User inputs being used to train models
- Ensuring security, privacy and handling of confidential information

Elsevier's policies for authors, editors and reviewers on Generative AI

Authors

Editors and reviewers

Figures, images, artwork

When **applied responsibly and with human oversight**, we support the use of AI tools by authors, including AI agents and deep research tools, to synthesize literature, identify research gaps, generate ideas, and assist with content structuring and language polishing. However, please note:

AI is **not a substitute** for human critical thinking.

Authors are **responsible and accountable** for the content of the manuscript, including accountability for:

- Thoroughly **reviewing and verifying the accuracy** of all AI-generated output
- Editing and adapting all material to ensure the paper represents the authors' **authentic** and **original** contribution
- **Disclosing** the use of AI upon submission - a statement will be placed in the published article for transparency
- Ensuring data privacy, IP and other rights by **checking the Terms & Conditions** of any AI tool they use

ELSEVIER



Our AI author policy was updated in September 2025 to reflect how AI is advancing and to support authors in safe and responsible use.



Where to find Elsevier's GenAI Policies for Journals:

- [Generative AI policies for journals](#)
- Further guidance can be found in the [Elsevier Responsible AI Principles](#)

Elsevier's policies for authors, editors and reviewers on Generative AI

Authors

Editors and reviewers

Figures, images, artwork

- Not upload the manuscript into an AI tool- this may violate confidentiality and author's rights
- Not upload peer review report or editorial decision letters – they may contain confidential information as well
- Generative AI should not be used to assist in the review, evaluation or decision-making process



Where to find Elsevier's GenAI Policies for Journals:

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Elsevier's policies for authors, editors and reviewers on Generative AI

Authors

Editors and reviewers

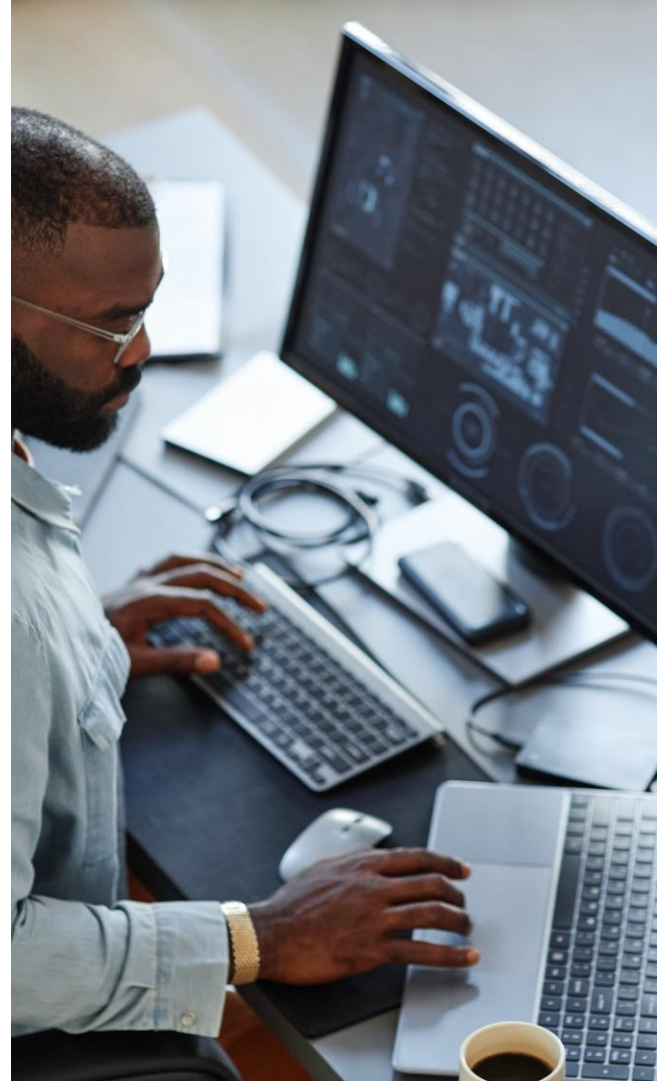
Figures, images, artwork

- Don't use Generative AI to create or alter images in submitted manuscripts
- Exception: Where the use of Generative AI or AI-assisted tools is part of the research design or research methods
- The use of generative AI or AI-assisted tools in the production of artwork is not permitted (but may in exceptional cases be allowed for cover art)



Where to find Elsevier's GenAI Policies for Journals:

- [Generative AI policies for journals](#)
- Further guidance can be found in the [Elsevier Responsible AI Principles](#)



Elsevier's policies for Generative AI — figures, images, and artwork

No AI-generated visuals

- Do not use AI to create or alter images
- Applies to all submitted figures and visuals



Limited exceptions

- Allowed only if part of the research method
- Must be clearly described and justified



Artwork restrictions

- AI tools not permitted for artwork production
- May be allowed in exceptional cases (e.g., cover art)



Visual integrity is essential to trustworthy research

In summary, Our Generative AI policies focus on:



Responsible use

Elsevier's Generative AI policy for authors emphasizes responsible use & the need for disclosure



Adaptability & alignment

Elsevier aligns with other organizations to provide uniform guidelines, will monitor ongoing developments in this area closely and will adjust or refine the policies as appropriate.



Protecting authors' rights

Our policies for editors and reviewers focus on protecting author confidentiality and data privacy rights



Receiving feedback & answering questions

Our [Gen AI Policy](#) page features a [FAQ-section](#) which we continue to refresh as questions and concerns from the community arise

Elsevier's Responsible AI Principles

- We consider the real-world impact of our solutions on people
- We take action to prevent the creation or reinforcement of unfair bias
- We can explain how our solutions work
- We create accountability through human oversight
- We respect privacy and champion robust data governance

For more than a decade, Elsevier has been using AI and machine learning technologies responsibly in our services and products to help researchers discover and apply trusted knowledge: [See our Elsevier Responsible AI Principles](#)



How is Elsevier using responsible AI to support the research workflow?

- **For Editors:** AI supports **reviewer selection**, **scope matching**, and **duplicate submission detection**.
- **For Authors:** Tools like **Journal Finder** and **Article Transfer Service** help identify suitable journals and alternative publication options.
- **For In-House Teams:** AI assists with technical (completeness) checks, research integrity checks, and post-acceptance tasks (proof preparation, copy-editing, etc.)
- **For Researchers and Clinicians:** We develop AI-powered solutions across our platforms (e.g., LeapSpace, ClinicalKey AI) to support discovery, synthesis, and evidence-based decision-making.



We are committed to ensuring that human judgment remains at the core of decision-making. Our AI solutions are designed to support and reinforce critical thinking, helping experts make informed decisions, not replacing their expertise.



Alongside supporting the editorial process, Elsevier is developing AI tools designed specifically for researchers.

The question then becomes: what should researchers expect from AI built for research?

Researcher Academy

ELSEVIER



Researcher Academy

Elsevier's free e-learning platform for researchers

- Provides **clear, actionable guidance** across every stage of the research journey
- Helps researchers **build skills, publish with confidence, and promote their work**
- Content developed by experts and aligned with the **publishing cycle**
- Offers an **integrated learning experience** from preparation to publication and recognition
- Connected to Elsevier's broader **tools, resources, and services**

200K+
certificates
generated
annually

800K+
annual
unique
visitors

100K+
annual new
registrants



Research preparation

5 topics
24 modules



Writing for research

5 topics
24 modules



Publication process

5 topics
24 modules



Navigating peer review

5 topics
24 modules



Communicating your research

5 topics
24 modules





Advancing human progress together