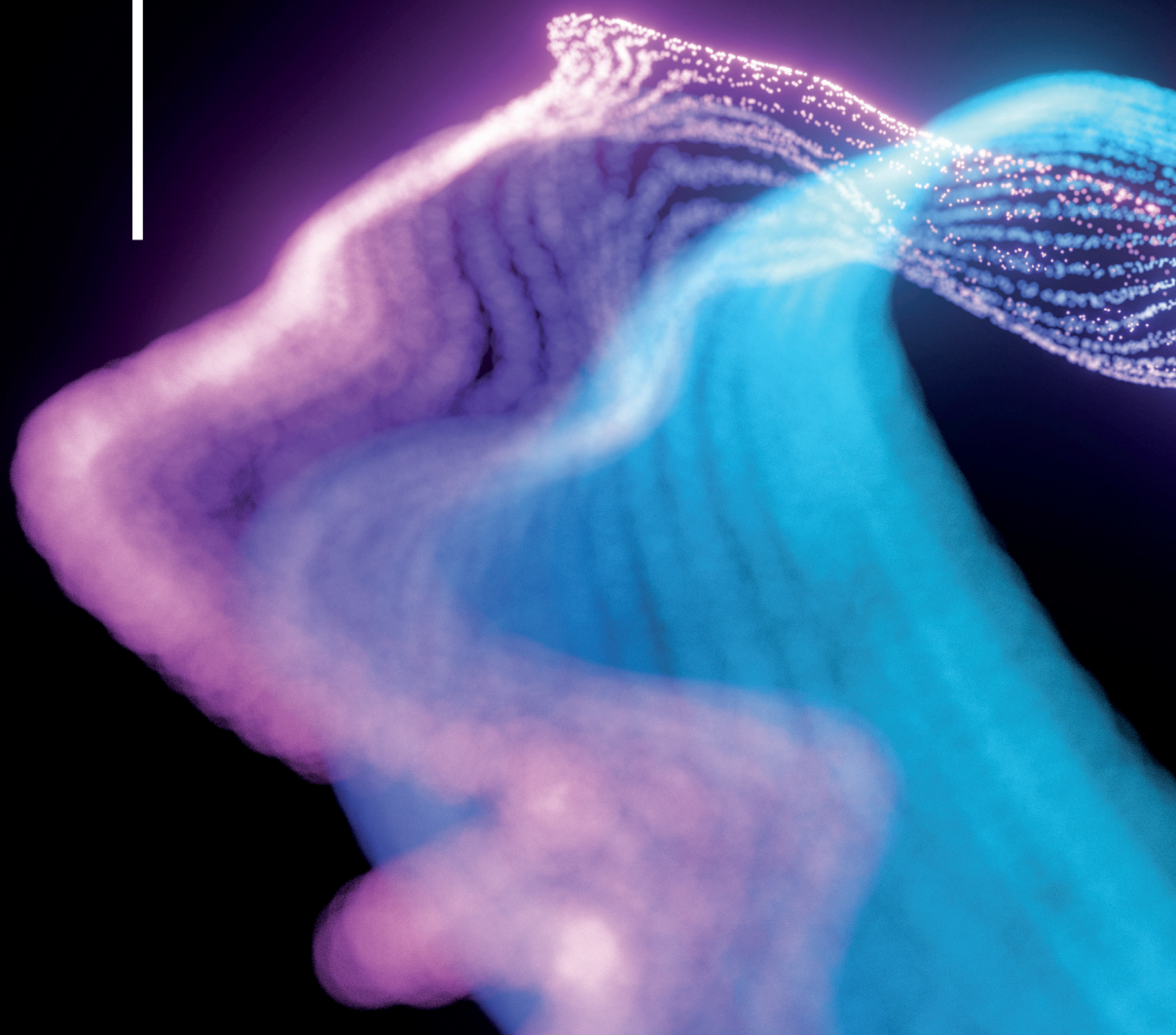


IOP Publishing

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SCIENCE IS OUR ONLY SHAREHOLDER

REVIEWER GUIDE

Your guide to peer reviewing with confidence.
Discover everything you need to know about reviewing
for IOP Publishing journals.



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For further details of content in this guide, visit [Publishing Support](#).

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PEER REVIEW EXCELLENCE

At IOP Publishing, we proudly offer a **free online course in peer review** which is tailored for early career researchers, but accessible to anyone working in the physical sciences.

This comprehensive training is designed to empower you with the tools and confidence to be an excellent reviewer.

In just 1–2 hours, you'll master the fundamentals of peer review, learn how to craft reviewer reports and understand the ethics of peer review. Once passed, you'll be fast-tracked to IOP Trusted Reviewer status and badged in our reviewer selection system, boosting your chances of being selected to review.

Register for free today: [Peer Review Excellence](#).

RECEIVING A REVIEW INVITATION

Things to ask yourself:

Am I an expert?

Do you know the field well enough to be able to assess the scientific rigour, novelty, quality and importance of the research? You don't need to be an expert in all aspects of the paper, but be honest about your expertise and if there are aspects of the article that you feel you cannot assess, let the editor know in the "comments to the editor" section of the report form.

Do I have a conflict of interest?

Reject the invitation if you are: in direct competition with the authors; a co-worker, collaborator or have a personal relationship with one of the authors; affiliated with the same institution as one of the authors; in a position to exploit the authors' work (commercially or otherwise) OR in a position which prevents you from giving an objective opinion of the work.

Can I meet the deadline?

You can ask for more time if you need to, but give the journal a realistic timeframe for preparing your report. Do you have time to review the revised version of the paper too?

Can I be objective?

Are you aware of your own biases? Can you remove subjective preferences and focus on the science, providing a constructive and fair report? If not, you should reject the invitation.

Make sure you do the following:

1. Respond to an invitation as soon as possible
2. Be honest about your availability
3. Suggest alternative reviewers if you can't review

Co-review

IOP Publishing is pleased to support co-review across our journals. Co-review allows two people to collaborate on a reviewer report with both receiving recognition. This is a great way to help one of your colleagues, especially more junior ones, gain experience as a reviewer. For more information see our [co-review guidelines](#).

Should you accept this review invitation?

Firstly, it's important to know that editorial criteria and manuscript acceptance criteria differ across IOP Publishing journals. Ensure you check the journal-specific criteria before you start. This will help you determine whether the manuscript fulfils the requirements for that specific journal.

PEER REVIEW ETHICS

For more information, see our current [ethical guidance for peer reviewers](#).

Generative AI (including ChatGPT)

Generative AI (GenAI) tools can offer benefits when used responsibly, such as improving clarity, readability and accessibility of peer review reports. They can help reviewers communicate feedback more effectively and overcome language barriers.

However, these tools are not infallible. They can produce misleading or fabricated content, lack accountability, and cannot guarantee confidentiality. Uploading manuscript material to GenAI platforms may expose sensitive data to third parties, breaching author rights and privacy laws. Misuse of AI in peer review risks damaging trust in the process and undermining research integrity. This policy aims to balance these considerations, safeguarding confidentiality, accuracy, and fairness while allowing transparent use of AI for language improvement.

Acceptable use

Reviewers may use GenAI tools only to assist with improving the written quality of their peer review reports. This includes:

- Checking grammar, spelling, punctuation, and formatting
- Enhancing clarity, flow, and structure of the language
- Translating a completed review from the reviewer's first language into English
- Reviewers should disclose any use of GenAI tools for language editing and translation. Reviewers (including co-reviewers) remain fully responsible for the contents of their reviews and for ensuring their accuracy, integrity, and originality.

Unacceptable use

Reviewers must not:

- Upload any part of a manuscript under review, including text, figures, tables, supplementary files, or associated communications, to GenAI tools
- Use Gen AI tools to analyse, summarise, interpret, or evaluate the manuscript or its scientific content
- Use GenAI tools to generate references or citations
- Use GenAI tools to write any portion of the review report beyond language refinement
- If a reviewer misuses GenAI tools, we may disregard some or all of their review.

Reviewer responsibility

By accepting a review invitation, reviewers agree to:

- Adhere to IOP Publishing's ethical standards, including confidentiality, conflict of interest disclosure, and maintaining anonymity
- Ensure that the manuscript under review is not shared with any third party, including GenAI tools
- Take full responsibility for the content of their review, whether conducted individually or as part of a co-review.

GenAI tools are not expert peers. They lack higher-level reasoning and critical thinking, are prone to generating false or misleading content (“hallucinations”), and cannot take responsibility for the material they produce. They also lack the legal personality to sign publishing agreements or licenses and cannot be held accountable for ethical compliance.

Self-citations

Reviewers are expected to point out relevant work that has not been cited, and use citations to explain where elements of the work have been previously reported. When writing a report, reviewers should justify any references suggested for inclusion in the work.

Citations should add value, and should not be unfairly biased towards an individual, group or organisation. Please note that the editor reserves the right to challenge excessive citation suggestions, especially to the reviewer’s own work. The practice of including superfluous references, including to the reviewer’s own work, to promote and inflate citation scores is unethical. The editor reserves the right to exclude citation suggestions from reports if these are considered to be potential acts of citation manipulation, and/or to protect reviewers’ anonymity.

Anonymity

All IOP Publishing journals use either single- or double-anonymous peer review, or both. This means the authors should not know the identity of the people reviewing their paper. Please keep your review anonymous.

Suspected author misconduct

Reviewers should report any suspicions of misconduct to the journal staff for investigation. This includes, but is not limited to, suspicions of:

- Plagiarism
- Duplicate publication
- Parallel submission
- Data fabrication falsification
- Image manipulation
- Incorrect authorship
- Author conflict of interest
- Unethical research practices
- Content that could be considered offensive

We follow the [COPE guidelines on responding to whistleblowers](#), which includes protecting their anonymity.

IOP PUBLISHING JOURNAL SCOPES

We recommend that you read the journal's scope before writing your reviewer report. This can help you judge whether the manuscript is suitable for that journal. Select the journal in the table below. For our partner journals, please see the 'About the journal' section on the journal homepage: [IOPscience - Journals](#).

2D Materials	Journal of Breath Research	Materials for Quantum Technology
Biofabrication	Journal of Micromechanics and Microengineering	Materials Research Express
Bioinspiration & Biomimetics	Journal of Neural Engineering	Measurement Science and Technology
Biomedical Materials	Journal of Optics	Medical Engineering & Physics
Biomedical Physics & Engineering Express	Journal of Physics A: Mathematical and Theoretical	Medical Sensors & Imaging
Classical and Quantum Gravity	Journal of Physics B: Atomic, Molecular and Optical Physics	Methods and Applications in Fluorescence
Electronic Structure	Journal of Physics Communications	Modelling and Simulation in Materials Science and Engineering
Engineering Research Express	Journal of Physics D: Applied Physics	Nano Express
Environmental Research Communications	Journal of Physics Energy	Nano Futures
Environmental Research Letters	Journal of Physics G: Nuclear and Particle Physics	Nanotechnology
Environmental Research: Climate	Journal of Physics Materials	Neuromorphic Computing and Engineering
Environmental Research: Ecology	Journal of Physics Photonics	Nonlinearity
Environmental Research: Energy	Journal of Physics: Complexity	New Journal of Physics
Environmental Research: Water	Journal of Physics: Condensed Matter	Physica Scripta
Environmental Research: Food Systems	Journal of Radiological Protection	Physical Biology
Environmental Research: Health	Machine Learning: Earth	Physics Education
Environmental Research: Infrastructure and Sustainability	Machine Learning: Engineering	Physics in Medicine & Biology
European Journal of Physics	Machine Learning: Health	Physiological Measurement
Flexible and Printed Electronics	Machine Learning: Science and Technology	Plasma Physics and Controlled Fusion
Inverse Problems		Plasma Sources Science and Technology

[Progress in Biomedical
Engineering](#)

[Progress in Energy](#)

[Quantum Science & Technology](#)

[Reports on Progress in Physics](#)

[Semiconductor Science and
Technology](#)

[Smart Materials and Structures](#)

[Superconductor Science and
Technology](#)

[Surface Topography: Metrology
and Properties](#)

[Sustainability Science and
Technology](#)

HOW TO WRITE A REVIEWER REPORT

Quality assessment

We will ask you to score the manuscript using different criteria. These vary depending on which journal you are reviewing for. It is useful to comment on these criteria in the free-text section of the report. You can find more information about each journal on page 4. Criteria you may be asked to score and comment on:

Originality*

A measure of the novelty of the ideas and techniques reported in the manuscript compared to the existing literature.

Scientific rigour

A measure of how well the research has been carried out; whether all necessary details of the method and results are presented in a way that they can be reproduced; and whether the results have been appropriately analysed and discussed. (This includes the testability of any theoretical predictions or modelling.)

Clarity

A measure of the structure and quality of writing within the article, and how well the authors have conveyed the required information.

Significance

A measure of the level of advance and likely impact of the reported results and/or approach within the article's immediate field (and possibly beyond).

*Please note – some of our journals do not ask for the assessment of a manuscript's novelty. In these circumstances, we instead welcome manuscripts that demonstrate scientific validity and a strong methodology. In doing so, we aim to be more inclusive of the types of research we publish, including null and negative results, or replication studies.



You can read a full classification of how to score these criteria in the [Quality Assessment Breakdown](#).

Language

Reviewers are not expected to correct spelling, grammar or use-of-English mistakes, as most journals have copy editors who can correct minor problems with language. However, if the paper is written so poorly that you cannot clearly understand what the authors mean, or there are so many errors that reading the paper becomes very difficult, then that should be reported back to the journal.

Making a recommendation

The exact recommendations available to you will vary by journal, but in most cases you should be able to choose from the following four options:

Accept

It is very unusual for a paper to be accepted without needing any revisions. If you recommend acceptance, provide detail justifying why this is the case, rather than a short remark such as “this paper is perfect, I recommend that it be accepted”.

Minor revisions

A recommendation of minor revisions suggests that the manuscript will be ready for publication if the authors make small changes and clarifications to the text. Minor revisions include things such as addressing referencing queries, clarifying parts of the manuscript that might not be clear, adding in extra details and amending the abstract.

Major revisions

A recommendation of major revisions should be made if you do not think that the manuscript is publishable in its current form, but you believe that if the authors make substantial changes to the way they report their research, then it could be publishable. Major revisions include substantial re-writes, re-doing analyses or doing extra analysis, adding extra tables and figures, and substantially editing the text for language.

Reject

Based on the scope and requirements of the journal, and your assessment of the quality of the manuscript, you do not believe that the manuscript should be published in this journal. It is important that your review justifies the rejection recommendation. Let the editor know if you think the paper could be suitable for transfer to another journal.

It is important that your comments to the editors/authors reflect your recommendation. If you are recommending that the editor reject a manuscript, be clear in your comments to the authors about why you believe it should be rejected in relation to the editorial standards of that journal.

The structure of an excellent reviewer report

Reviewers are not required to give a detailed summary of the manuscript. However, your reviewer report should be substantial and thorough. You should explain your thinking and give the author(s) and editor(s) enough reasoning to support your recommendation. If you are asking the author to revise the manuscript, be clear about what is needed to bring the manuscript up to the required quality standards for publication.

Comments to the editor(s)

These comments will not be shared with the authors. Use this section if there is anything you want to say that would not be appropriate to tell the authors. If you suspect any form of author misconduct, mention it here.

Comments to the author(s)

The following is a good way to structure your reviewer report:

Summary

Open your review with a summary of the manuscript and its findings. This shows the authors and editors of the journal that you have read and understood the work.

Comments on the manuscript

- Familiarise yourself with the editorial standards of the journal and comment on whether the manuscript meets those standards. Details for each journal can be found using page 4.
- Comment on the qualities you scored in the quality assessment section of the reviewer report form e.g. scientific rigour and clarity.
- Make sure that your recommendations are specific enough for the authors to follow.
- Compare the manuscript to existing literature. Check that the authors have cited the most relevant and recent appropriate work.
- Organise your comments into 'Major points' and 'Minor points' where applicable.
- It is helpful to number your points. This can make it easier for the authors to respond to your comments and when checking the revised manuscript.

Recommendation

At the end of your review, make a recommendation to the editor. Clearly state and justify your recommendation. This means explaining why you have chosen the reject/revise/accept option.

PEER REVIEW RECOGNITION

How we evaluate reviewer reports

Our editors rate all of the reviewer reports we receive on a scale of 1–5, with 5 representing a report of outstanding quality. This link will take you to a full breakdown of the [Reviewer report ratings](#). These are the criteria to have a report rated 5 out of 5:

Criteria	Level to be rated 5 out of 5
Thoroughness	Detailed and very thorough: comments on essentially all sections of the manuscript.
Assessment of significance	Comments on the significance of the work within the context of the field.
Literature comparison	Includes a comprehensive comparison with existing literature.
Feedback quality	Constructive feedback that enables the author(s) to improve the article.
Recommendation	Recommendation is clearly justified and consistent with the journal's editorial standards.
Timeliness	Submitted in the agreed timeframe.

IOP Trusted Reviewer status

Any reviewer who submits a report rated 5 will achieve IOP Trusted Reviewer status and become eligible for our annual [Outstanding Reviewer Awards](#). If you gain IOP Trusted Reviewer status or have highly rated reviews, you will be more likely to be selected to review again.

Reviewer feedback

At IOP Publishing, we have implemented a system to offer reviewers feedback on their reports. There is now an option to opt in and receive an evaluation of your reviewer report. The evaluation will be based on the structure, constructiveness and usefulness of the report, not the scientific content. Please note that reports are not evaluated until a decision is made on the manuscript, so there may be a delay between you submitting your report and receiving your evaluation. We will not provide evaluations for editorial board member or guest editor reports.

FAQs

Where can I find more information about reviewing for IOP Publishing?

You can find information here: [Reviewers - IOPscience - Publishing Support](#).

How long will I have to submit my reviewer report?

You will be told the deadline to submit your report by the journal, but at IOP Publishing it is normally 2 weeks. This is a compromise between giving reviewers enough time to review and ensuring an efficient peer review process for our authors. If you need more time to submit your report, please ask for an extension. If there is a change of circumstances and you are unable to review, please let us know as soon as possible so we can reduce delays for the authors.

What should be the length of my reviewer report?

This depends on the manuscript being reviewed. It is not necessary to write pages and pages of analysis, but make sure you have included enough information to show us that you have understood the manuscript, given detailed constructive feedback and justified your recommendation. Outstanding reviewer reports (rated 5 out of 5) tend to be at least one page of A4 in length.

How many people will review a manuscript?

Normally, two people will review a manuscript, but these reports might be supplemented by editorial board members or other experts.

What happens if the reviewers disagree on the outcome of a manuscript?

If the reviewers do not agree, the journal may consult an adjudicator. An adjudicator is a senior reviewer or editorial board member. They are asked to provide an opinion on both the manuscript and the reviewer reports. If an editorial board member is consulted, they may be told the names of the reviewers to help them make their decision, but the authors will still only see anonymous reports. The adjudicator may agree or disagree with your assessment of the article. If an adjudicator has been consulted, you may receive the adjudicator's comments with any revised version of the manuscript that you are asked to review. You should consider all reports during your assessment of the revised version.

What are revised manuscripts?

When authors receive major or minor revisions they will amend their manuscript based on the reviewers' comments and then send it back to the editor for reconsideration. This is called a revised manuscript. The revised document will be sent back to one or all of the original reviewers.

When you review a revised manuscript, the recommendation options will be more limited (accept, minor revisions, or unsatisfactory revisions). At this point it is highly unusual for the reviewer to suggest completely new revisions. Instead, you are assessing whether the author has sufficiently amended the manuscript based on the reviews they received.

Who should I contact if I have questions?

You should contact the journal inbox, which can be found on each journal webpage, if you have any questions about reviewing the manuscript. Alternatively, you can reply to the email invitation.

More general questions about peer review at IOP Publishing can be directed to the Peer Review Engagement team, peerreview@iopublishing.org.

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