

HOW TO WRITE A REVIEWER REPORT

APEX/JJAP Editorial Board

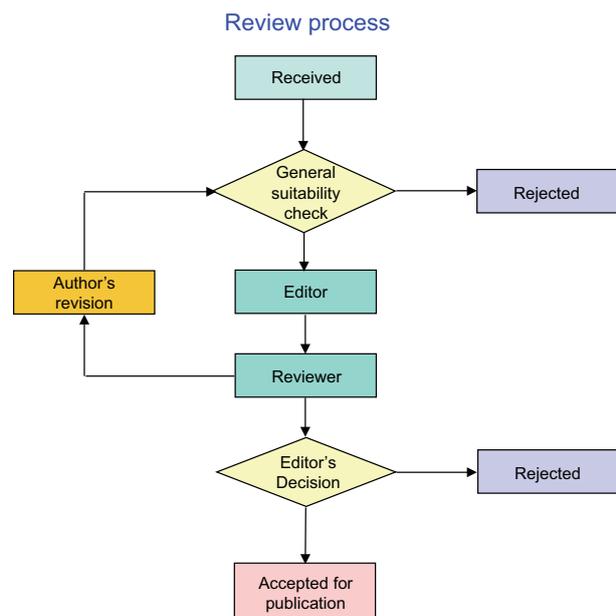
1 Peer review process

How the peer review process works

A paper submitted to the Journal is reviewed anonymously by independent experts in the field (peers) to determine whether the paper is suitable for publication. In the review process, the originality, technical quality, and impact of the research work are critically evaluated, and the editors of the journal then make a publication decision on the basis of reviewers' reports.

The peer review process helps editors to decide what to publish, and it ensures the quality and credibility of the papers as well as of the journal itself. The reviewer must identify any fault in the paper and provide constructive feedback to the authors so that they can improve their work before publication. Other researchers in the field provide this service to you when they review papers you have written, and as a good member of the scientific community, every researcher is expected to reciprocate by reviewing papers in return. In addition, peer review can provide other benefits such as keeping you up to date on progress in the field and aware of the newest research results before they are published.

A simplified flowchart of peer review is illustrated in the figure.



Roles of the editor and reviewer

When a paper is submitted to the journal office, a general check of the paper's suitability, such as the manuscript format and length, and the matching of research scope is conducted at the journal office. If it is judged to be suitable, the editor will ask a reviewer to evaluate your paper.

The reviewer is asked to evaluate your paper from a variety of aspects such as the novelty and originality of research, the importance and impact of results, the logic, style, length and clarity of presentation, and the completeness of references. The reviewer provides a report including various comments and recommendations for improvement.

On the basis of the reviewer's report, the editor will make one of the following decisions on your paper.

- Accept for publication without revision
- Ask for minor revision for likely acceptance
- Request major revision for another review process
- Reject outright

Responsibility of the reviewer

The reviewer must provide to the editor an objective, expert opinion on whether the paper satisfies the journal criteria and is suitable for publication. The reviewer must understand the technical content of the paper and evaluate whether the paper gives a sufficient contribution to the relevant field in accordance with the scope and readers' interest of the journal. The reviewers should be neither too restrictive nor too permissive in assessing the paper. If the paper is insufficient for publication in its present form but includes new and significant results that could contribute greatly to the field, the reviewer is expected to help authors improve the quality of paper to a publishable level. In contrast, the reviewer must function as a filter to reject unreasonable or misleading works.

2 What to consider before you accept a request to review a paper

When you receive a request to act as a reviewer, you should consider the following questions.

(1) Do I have the necessary expertise?

To provide a sound review, you must be sufficiently familiar with the research topic to evaluate the originality of the work, scientific quality of the paper, validity of the conclusion, and importance and impact of the research work presented in the paper. If you lack sufficient expertise, you should inform the editor that you cannot review the paper as it is outside your area. It would be helpful if you could suggest more suitable expert researchers who could review the paper.

(2) Can I complete the review in time?

You should let the editor know as soon as possible whether you will be able to complete the review by the suggested deadline. If you are unable to accept this task, for instance, when you are already involved in reviewing many other papers, inform the editor immediately so that the review process is not delayed. Your suggestion of alternative candidates for reviewers would be helpful to the editor.

A reviewer is expected to act promptly to ensure timely publication. Prompt response is appreciated, particularly when reviewing articles submitted as Letters for APEX and Rapid Communications for JJAP, for which the urgency and timeliness of the publication of research results is of primary importance.

(3) Do I have a conflict of interest?

If you are collaborating with any of the authors, if you have any financial conflict relating the research, or if an author(s) is your friend or direct competitor, you must decline the review request and inform the editor immediately of your status.

3 Essential obligations of the reviewer

It is absolutely obligatory for reviewers to observe the following.

(1) Maintain strict confidentiality of review

You must be aware that the paper you are reviewing is confidential before its publication. Under no circumstances should you contact the authors or disclose that you are a reviewer of their paper. When you have any questions for the authors, ask them through the editor not directly to the authors.

(2) Refrain from taking unfair advantage

One benefit of serving as a reviewer is that one can access new research results before their publication. However, it is a violation of ethics to use any information gained during the review process for your own personal benefit, such as writing for publication in journals or fundraising.

4 How to assess the paper quality

The following questions must be answered to adequately evaluate the paper.

- Is the work understandable, correct, and appropriate for the journal?
 - What are the purpose of and problems to solve in the work? Are they clearly stated?
 - Is the purpose or goal of the work within the journal's scope?
 - Is the work correct and free of obvious errors?
 - Are the methods and techniques employed appropriate? Is the mathematics correct?
- Is the work original and interesting?
 - Is the work original and does it contain new results that significantly advance the research field, or does it show only incremental advance over prior research results?
 - Have any parts of the paper already been published or considered for other publication?
 - Are the results interesting and important to researchers in relevant fields of applied physics? Is this paper likely to be cited in the future?
 - Is the paper scientifically sound and not misleading? Does it provide sufficient information and in-depth discussion?
 - Is the presentation complete for a scientific paper? Is there any critical information missing?
- Is the presentation satisfactory?
 - Is the paper well written enough for evaluation of technical content?
 - Does the title reflect the contents of the paper?
 - Does the abstract describe the essential information in the work?
 - Does the introductory section adequately explain the framework and problems of the research? Are the importance and usefulness of this research work clear?
 - Are sufficient references cited for providing a background to the research? (30 references for JJAP Regular Papers and 20 references for APEX Letters and JJAP Rapid Communications are recommended.)
 - Is the length and format of the paper appropriate?
 - Is the conclusion logically supported by the obtained results?
 - Are the figures and tables easily readable, correct and informative?
 - Is the English understandable? Is the paper free of typographical and grammatical errors?

5 Tips for preparing a reviewer report

For the evaluation of the paper, a reviewer's report form is provided on the online reviewing system for you to fill in, dealing with the appropriateness of the presentation and scientific quality of the paper. You can provide your evaluation in each section of the form, so that the editor can choose to either approve the publication of the paper or return the manuscript to the authors for revision or rejection.

The following sequence of procedures may be useful for preparing a reviewer report.

- Begin your review with a concise summary of the essential points of the paper both for the editor's use and to ensure that you have understood the work.
- Next, evaluate the quality of the work. Give evaluations and comments on each of the publication criteria by following the sections of the reviewer report form.
- Finally, provide an overall recommendation for or against publication. Use the "Reviewer's remarks to the authors" section for providing comments and suggestions for the authors, and the "Reviewer's confidential remarks to the editor" section for informing the editor of your opinion on the paper including confidential information relating to the paper evaluation.

In writing the report, you should pay attention to the following issues.

- For objective assessment of papers, the reviewer is requested to identify not just negative points but also positive points of the paper. Be specific about what is particularly interesting or good about the paper.
- Be specific in any criticism or recommendation. If you recommend rejection of the paper, you must state the reason as clearly as possible. When the paper does not provide any new information, evidence such as full references to earlier works must be provided.
- If you feel that the paper is insufficient for publication in its present form but may become publishable after improvement, you are requested to provide constructive comments and suggestions that will be useful to the authors in improving the quality and presentation of their paper.
- For timely and rapid publication, manuscript turnaround between the authors and the reviewer must be minimized (not more than once for APEX Letters). All recommendations and suggestions to be provided to the authors should be clearly stated to avoid any delay of the review process that may be induced by misunderstanding.
- When you provide suggestions on revision for improving the paper, make it clear whether the suggested revisions are mandatory or optional.
- Be sure to point out all the faults in the paper at one time in the review process. Do not add new criticisms after the authors' revision. This would make the review process endless.
- Reviewers should objectively judge the scientific quality of the paper and refrain from subjective, personalized criticism of the authors. You are assessing the research work not the researcher.
- In preparing suggestions and recommendations to the authors, use a constructive tone and phrase your comments tactfully. The authors will be more receptive to responding to your comments, if they are given in a positive tone.
- Providing educational suggestions and guidance may be useful to the authors, particularly new researchers, in improving their paper. However, the reviewer should not be so overbearing that their paper becomes one that you would have written as a coauthor. You are neither a supervisor nor a coauthor of the authors.

6 Online review system

Reviewer report forms are provided in the Online Review System for APEX Letters, and Regular Papers, Rapid Communications, and Brief Notes in JJAP. A brief explanation of each section of the report form for JJAP Regular Papers is given below. Slightly more compact forms are provided for other types of paper.

Presentation checklist

1. **Title:** Is the title adequate for the content, informative, concise, and clear?
2. **Abstract:** Is it comprehensive by itself? Is the important and essential information of the article included?
3. **References:** Are appropriate and adequate references to related works covered sufficiently in the list? 30 references are recommended for JJAP Regular Papers. (20 references are recommended for APEX Letters and JJAP Rapid Communications.)
4. **Structure and length:** Is the overall structure of the article well organized and well balanced? Is the article written with the minimum length necessary for all relevant information?
5. **Logic:** Is the article written clearly and correctly? Is it logically consistent?
6. **Figures and tables:** Are they essential and clearly presented?
7. **English:** Is the English used in the article readable and good enough to convey the scientific meaning correctly?

Scientific quality rating

1. Novelty and originality: Is the article novel and original? Does the article contain material that is new or adds significantly to knowledge already published?
2. Importance and impact: Are the presented results of significant importance and impact to advancement in the relevant field of research? Is this article likely to be cited in the future?
3. Relevance to applied physics: Is the article scientifically sound and not misleading? Does it provide sufficient in-depth discussion of the application of a physical principle or the understanding of physics in view of its application?
4. Completeness of presentation: Is the presentation complete for a scientific article? Please rate the article by considering the evaluation given in 1.

Overall rating and recommendation

1. Summary of reviewer's evaluation: The results of the reviewer's evaluation are summarized.
2. Recommendation: State the reviewer's opinion on the acceptability of the article by choosing one of the following.
 - (1) The article may be accepted for publication with/without English correction.
 - (2) The article may become acceptable after minor revisions of content and/or English as per the reviewer's comments.
 - (3) The article may need major revision referring to the reviewer's comments.
 - (4) The article is unacceptable.

Reviewer's remarks to the authors

It is useful to provide a concise summary of essential claims in the paper, including both positive and negative points. If it is a great paper, please explain what is so good about it. On the other hand, if you recommend rejection of the paper, you must state the reason for rejection as clearly as possible. If you recommend revision of the paper for possible publication, you must specify what is needed for sufficient improvement of the paper. These comments are sent to the authors and editors.

 Reviewer's confidential remarks to the editor

These comments are sent only to the editor responsible for the review of the article, not to the authors.

1. Importance of the article: If you recommend "publish," please concisely describe the background and novelty/importance of the present research to merit its publication in the journal. If you recommend "reject," please briefly provide the reasons.
2. Other comments: Please provide additional information, if any, in relation to the evaluation of the article.