DESCRIPTION

*Progress in Materials Science* publishes authoritative and critical reviews of recent advances in the *science of materials* and their exploitation in *engineering and other applications*. Authors of reviews in *Progress in Materials Science* are active leaders in materials science and have a strong scientific track record in the field of the review. Emphasis is placed on the fundamental aspects of the subject, particularly those concerning *microstructure and nanostructure* and their relationship to properties (mechanical, chemical, electrical, magnetic, optical or biomedical) including the *atomistic and electronic nature of condensed phases*. Also desirable subject matters are the *thermodynamics, kinetics, mechanisms and modelling of processes* which occur within solids, liquids and other condensed phases; experiments and models which help in understanding the *macroscopic properties of materials* in terms of *microscopic mechanisms*; and work which advances the understanding of the use of materials in *engineering, healthcare and other applications*. Materials of interest are *metallic, ceramic, polymeric, biological, medical* and *composite* in all forms. Manuscripts are generally of greater length than those found in journals specialising in research papers.

The focus of the journal is invited reviews, but interested authors may submit a proposal for consideration. The Editors kindly request that all non-invited manuscripts are preceded by the submission of a proposal.

Benefits to authors
We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our Support Center.

AUDIENCE
Materials Scientists.

IMPACT FACTOR
2018: 23.725 © Clarivate Analytics Journal Citation Reports 2019
ABSTRACTING AND INDEXING

Current Contents  
Science Citation Index Expanded  
Materials Science Citation Index  
Chemical Abstracts  
Engineering Index  
INSPEC  
Scopus

EDITORIAL BOARD

Associate Editor  
G. Salieb-Beugelaar, Universitätsspital Basel, Basel, Switzerland

Editors  
K.S. Anseth, University of Colorado, Boulder, Colorado, USA  
E. Arzt, Leibniz Institute for New Materials (INM), Saarbrücken, Germany  
B. Cantor, University of Bradford, Bradford, UK  
T. Mohri, Tohoku University, Sendai, Japan  
F. Toma, Lawrence Berkeley National Laboratory  
Y. Wei, Tsinghua University, Beijing, China
INTRODUCTION

*Progress in Materials Science* publishes authoritative and critical reviews of recent advances in the **science of materials** and their exploitation in **engineering and other applications**.

Emphasis is placed on the fundamental aspects of the subject, particularly those concerning **microstructure and nanostructure** and their relationship to **properties (mechanical, chemical, electrical, magnetic, optical or biomedical)** including the atomistic and electronic nature of condensed phases. Also desirable subject matters are the **thermodynamics, kinetics, mechanisms and modelling of processes** which occur within solids, liquids and other condensed phases; experiments and models which help in understanding the **macroscopic properties of materials** in terms of **microscopic mechanisms**; and work which advances the understanding of the use of materials in **engineering, healthcare and other applications**. Materials of interest are **metallic, ceramic, polymeric, biological, medical and composite** in all forms. Manuscripts are generally of greater length than those found in journals specialising in research papers.

Contributors may be invited or interested authors may submit a proposal or manuscript via the online submission platform.

**Benefits to authors**
We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our [Guide for Authors](http://www.elsevier.com/locate/pmatsci) for information on article submission. If you require any further information or help, please visit our support pages: [http://service.elsevier.com](http://service.elsevier.com).

**BEFORE YOU BEGIN**

**Ethics in publishing**
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

**Declaration of interest**
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. More information.

**Submission declaration and verification**
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

**Preprints**
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).
Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

Contributors
Each author is required to declare his or her individual contribution to the article: all authors must have materially participated in the research and/or article preparation, so roles for all authors should be described. The statement that all authors have approved the final article should be true and included in the disclosure.

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Copyright
Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see more information on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.
Funding body agreements and policies
Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of existing agreements are available online.

Open access
This journal offers authors a choice in publishing their research:

Subscription
- Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs.
- No open access publication fee payable by authors.
- The Author is entitled to post the accepted manuscript in their institution's repository and make this public after an embargo period (known as green Open Access). The published journal article cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

Gold open access
- Articles are freely available to both subscribers and the wider public with permitted reuse.
- A gold open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For gold open access articles, permitted third party (re)use is defined by the following Creative Commons user licenses:

CC BY license
Others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)
For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The gold open access publication fee for this journal is USD 3800, excluding taxes. Learn more about Elsevier's pricing policy: https://www.elsevier.com/openaccesspricing.

Green open access
Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our open access page for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. Find out more.

This journal has an embargo period of 24 months.

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

PREPARATION
**Proposal and submission**

Three routes are available for publication in *Progress in Materials Science*: **Invited manuscripts.** To submit your invited contribution, please submit your article via the Elsevier Electronic Submission System (EES). EES is available via the "Submit your Paper" button on the journal homepage. Please ensure that you clearly indicate the name of the inviting Editor in your cover letter. **Unsolicited proposals.** If you would like to write a Review for *Progress in Materials Science*, the Editors kindly request that a proposal is submitted first, consisting of proposed title, abstract, an outline, the author list, the expected length of the paper (in words) and a tentative submission date. In addition please supply a list of the authors' publications in the field of the review and CVs of all the authors. Proposals should be submitted via the Elsevier Electronic Submission System (EES). EES is available via the "Submit your Paper" button on the journal homepage. If your proposal is accepted, the full paper may be submitted as a "revision" to the proposal. **Unsolicited manuscripts.** The Editors kindly request that unsolicited papers are not submitted prior to the submission, and acceptance, of a proposal. However, authors may submit completed, unsolicited manuscripts to the journal if required - though the Editors note that processing such submissions will take more time and authors may expect a delay, and may be rejected on the basis of similarity to pending invited papers. Such articles may be submitted via the Elsevier Electronic Submission System (EES). EES is available via the "Submit your Paper" button on the journal homepage. In addition please supply a list of the authors' publications in the field of the review and CVs of all the authors.

All authors are expected to currently be research active in the fields for which they are writing a review. **Due to the extensive nature of the reviews, and to maintain balanced coverage, the Editors kindly request that no author/group submit more than two review proposals or papers per calendar year.**

While there are no formal minimum or maximum page or reference limits for *Progress in Materials Science*, article length generally exceeds that of a typical research article. It is expected that the review will contain sufficient content and references for a researcher in materials science to understand the current state of the field.

**Language (usage and editing services)**

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop.

**Peer review**

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [More information on types of peer review.](#)

**Manuscript Preparation**

**General**

Editors reserve the right to adjust style to certain standards of uniformity. Please use Word or Word Perfect files for the text of your manuscript.

**Structure**

Follow this order when typing manuscripts: Title, Authors, Affiliations, Abstract, Keywords, Main text, Acknowledgements, Appendix, References, Vitae, Figure Captions and then Tables. Collate acknowledgements in a separate section at the end of the article and do not include them on the title page, as a footnote to the title or otherwise.

**Text Layout**

Use double spacing and wide (3 cm) margins. (Avoid full justification, i.e., do not use a constant right-hand margin.) Ensure that each new paragraph is clearly indicated. Present tables and figure legends on separate pages at the end of the manuscript. If possible, consult a recent issue of the journal to become familiar with layout and conventions. Number all pages consecutively, use 12 or 10 pt font size and standard fonts. If submitting in hardcopy, print the entire manuscript on one side of the paper only.
**Corresponding author**
Clearly indicate who is willing to handle correspondence at all stages of refereeing and publication, also post-publication. All correspondence should be handled only by the corresponding author. Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address. Full postal addresses must be given for all co-authors. Please consult a recent journal paper for style if possible.

**Abstract**
A self-contained abstract outlining in a single paragraph the aims, scope and conclusions of the paper must be supplied.

**Figures**
Figures should ideally be supplied in JPEG or TIFF form, in the highest resolution possible. If authors wish to use a figure previously published elsewhere, the authors must ensure they have the appropriate permission to use the figure and that the figure is cited. [Permission to use figures previously published can usually be obtained quickly, by finding the relevant article on the Publishers website, and following links for Rights and/or Permissions].

**Formatting of funding sources**
List funding sources in this standard way to facilitate compliance to funder's requirements:

**Funding:** This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Units**
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

**References**
All publications cited in the text should be presented in a list of references following the text of the manuscript.

**Please note:** As per the Journal's guidelines, own references of the Authors should be highlighted in Yellow.

**Text:** Indicate references by number(s) in square brackets in line with the text. The actual authors can be referred to, but the reference number(s) must always be given.

**List:** Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

**Examples:**

**Data references**
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

**Free Colour**

As a token of appreciation for your contribution to the journal, Elsevier is pleased to offer free reproduction of your colour of your images in print.

If, together with your accepted article, you submit usable colour figures, then Elsevier will ensure, at no additional charge, that these figures will appear in colour on the web (e.g., ScienceDirect and other sites) and in the printed version. Further information concerning colour illustrations and costs is available from our Support Center and at https://www.elsevier.com/artworkinstructions.

**Tables**

Tables should be numbered consecutively and given suitable caption and each table is laid out on a new page. No vertical rules should be used. Tables should not duplicate results presented elsewhere in the manuscript (for example, in graphs). Footnotes to tables should be typed below the table and should be referred to by superscript lowercase letters.

**Data visualization**

Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

**AFTER ACCEPTANCE**

**Online proof correction**

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**

The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier’s Webshop. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com