



TABLE OF CONTENTS

●	Description	p.1
●	Impact Factor	p.1
●	Abstracting and Indexing	p.2
●	Editorial Board	p.2
●	Guide for Authors	p.4



ISSN: 1742-7061

DESCRIPTION

Acta Biomaterialia is an international journal that publishes peer-reviewed original research reports, review papers and communications in the broadly defined field of **biomaterials science**. The emphasis of the journal is on the relationship between **biomaterial structure** and **function** at all length scales.

The scope of *Acta Biomaterialia* includes: Hypothesis-driven design of biomaterials Biomaterial surface science linking structure to biocompatibility, including protein adsorption and cellular interactions Biomaterial mechanical characterization and modeling at all scales Molecular, statistical and other types of modeling applied to capture biomaterial behavior Interactions of biological species with defined surfaces Combinatorial approaches to biomaterial development Structural biology as it relates structure to function for biologically derived materials that have application as a medical material, or as it aids in understanding the biological response to biomaterials Methods for biomaterial characterization Processing of biomaterials to achieve specific functionality Materials development for arrayed genomic and proteomic screening

Benefits to authors

Free and automatic manuscript deposit service to meet NIH public access requirements at one year; Multiple options for data-sharing (see <http://www.materialstoday.com/materials-genome-initiative/>); Free author pdf and Sharelink share your article with your peers (see <http://www.elsevier.com/journal-authors/share-link>); And more information on our author services can be found [here](#)

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

IMPACT FACTOR

2016: 6.319 © Thomson Reuters Journal Citation Reports 2017

ABSTRACTING AND INDEXING

Elsevier BIOBASE
MEDLINE®
Materials Science Citation Index
EMBASE
Science Citation Index
Scopus
Science Citation Index Expanded
EMBiology

EDITORIAL BOARD

Editor-in-Chief

W. R. Wagner, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

Managing Editor

V. Kucharski

Editors

M. Bohner, RMS Foundation, Bettlach, Switzerland

W. L. Murphy, University of Wisconsin at Madison, Madison, Wisconsin, USA

Coordinating Editor

C. A. Schuh, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Editorial Board

Kristi S. Anseth, University of Colorado, Boulder, Colorado, USA

Gang Bao, Georgia Institute of Technology, Atlanta, Georgia, USA

Jake Barralet, McGill University, Montreal, Quebec, Canada

Angela Belcher, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Sangeeta Bhatia, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Susmita Bose, Washington State University, Pullman, Washington, USA

David G. Castner, University of Washington, Seattle, Washington, USA

Xuesi Chen, Chinese Academy of Sciences (CAS), Changchun, China

Joel Collier, Duke University, Durham, North Carolina, USA

José Manuel Delgado López, Instituto Andaluz de Ciencias de la Tierra (CSIC-UGR), Granada, Spain

Maria-Pau Ginebra, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain

Dirk W. Grijpma, University of Twente, Enschede, Netherlands

Robert Guldberg, Georgia Institute of Technology, Atlanta, Georgia, USA

Pamela Habibovic, Maastricht University, Maastricht, Netherlands

Jeffrey Hubbell, University of Chicago, Chicago, Illinois, USA

Yoshito Ikada, Suzuka University, Suzuka, Japan

Klaus D. Jandt, Friedrich-Schiller-Universität Jena, Jena, Germany

Roger D. Kamm, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Pierre Layrolle, Université de Nantes, Nantes, France

Andreas Lendlein, Helmholtz-Zentrum Geesthacht, Teltow-Seehof, Germany

Kam Leong, Columbia University, Columbia, New York, USA

David C. Martin, University of Delaware, Newark, Delaware, USA

Prabhas V. Moghe, Rutgers University, Piscataway, New Jersey, USA

Yukio Nagasaki, University of Tsukuba, Tsukuba, Japan

Matthias Peuster, Jilin Heart Hospital, Changchun, China

Catherine Picart, Grenoble Institute of Technology, Grenoble, France

Suzie Pun, University of Washington, Seattle, Washington, USA

Rui L. Reis, University of Minho, Braga, Portugal

Erich Sackmann, Technische Universität München, Garching, Germany

Michael S. Sacks, University of Texas at Austin, Austin, Texas, USA

Shelly Sakiyama-Elbert, Washington University in St. Louis, St. Louis, Missouri, USA

Christine E. Schmidt, University of Florida, Gainesville, Florida, USA

Patrik Schmuki, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Dror Seliktar, Technion - Israel Institute of Technology, Haifa, Israel

Martina Stenzel, UNSW Australia, Sydney, Australia

Samuel Stupp, Northwestern University, Evanston, Illinois, USA

Maria Vallet-Regi, Universidad Complutense de Madrid, Madrid, Spain

Naren Vyavahare, Clemson University, Clemson, South Carolina, USA

Jun Wang, University of Science and Technology of China (USTC), Hefei, Anhui, China
Stephen Weiner, Weizmann Institute of Science, Rehovot, Israel
Cuie Wen, RMIT University, Melbourne, Victoria, Australia
Ann Wennerberg, Malmö University, Malmö, Sweden
Frank Witte, Charité - Universitätsmedizin Berlin, Berlin, Germany
Chengtie Wu, Shanghai Institute of Ceramics, Shanghai, China

The Board of Governors of Acta Biomaterialia

J. Ågren

Swedish Society for Metallurgy and Materials Representative Governor

H. Ai

Chinese Society for Biomaterials, Governor

K. S. Anseth

Governor

E. Cole, Jr.

ASM Governor

A. J. Coury

Board Governor

G. Dehm

Cooperating Society Governor

A. Deschamps

French Metallurgical Society Representative Governor

G. Gray, III

Chair, Treasurer and Board Governor

C. Hansson

Executive Secretary and Cooperating Society Governor

W. Kurz

FEMS Representative Governor

T. Ohji

ASM Governor

G. B. Olson

ASM Governor

J. A. Schneider

TMS Board Governor

C. A. Schuh

Coordinating Editor and Governor

M. Singh

ASM Governor

G. W. Warren

TMS Governor

GUIDE FOR AUTHORS

INTRODUCTION

Acta Biomaterialia is an international journal that publishes peer-reviewed original research reports, review papers and communications in the broadly defined field of biomaterials science. The emphasis of the journal is on the relationship between biomaterial structure and function at all length scales. The journal is committed to rapid peer-review and publication.

The scope of Acta Biomaterialia includes: Hypothesis-driven design of biomaterials Biomaterial surface science linking structure to biocompatibility, including protein adsorption and cellular interactions Biomaterial mechanical characterization and modeling at all scales Molecular, statistical and other types of modeling applied to capture biomaterial behavior Interactions of biological species with defined surfaces Combinatorial approaches to biomaterial development Structural biology as it relates structure to function for biologically derived materials that have application as a medical material, or as it aids in understanding the biological response to biomaterials Methods for biomaterial characterization Processing of biomaterials to achieve specific functionality Materials development for arrayed genomic and proteomic screening

Page charges

This journal has no page charges.

Submission checklist

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded:

Manuscript:

- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

Graphical Abstracts / Highlights files (where applicable)

Supplemental files (where applicable)

Further considerations

- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- Relevant declarations of interest have been made
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our [Support Center](#).

BEFORE YOU BEGIN

Ethics in publishing

Please see our information pages on [Ethics in publishing](#) and [Ethical guidelines for journal publication](#).

Animal Rights

All animal experiments should comply with the [ARRIVE guidelines](#) and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, [EU Directive 2010/63/EU for animal experiments](#), or the National Institutes of Health guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed.

Conflict of interest

All potential conflicts of interest must be stated within the text of the manuscript, under a separate heading titled Disclosures, which should follow the Acknowledgments. This pertains to relationships with any corporation whose products or services are related to the subject matter of the article. Such relationships include, but are not limited to, employment by an industrial concern, ownership of stock, membership on a standing advisory council or committee, or being publicly associated with the company or its products. See also <http://www.elsevier.com/conflictsofinterest>.

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 or as part of a published lecture or academic thesis or as an electronic preprint, see <http://www.elsevier.com/sharingpolicy>), that the figures or data have not previously been used without attribution, 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 CrossCheck <http://www.elsevier.com/editors/plagdetect>.

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.

Disclosures

If any potential conflicts of interest exist, please describe them under this heading at the end of the manuscript text before the References. See definition of "Conflict of Interest" above.

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.

Author rights

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

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 Open Access Publication Fee. Details of [existing agreements](#) are available online.

After acceptance, open access papers will be published under a noncommercial license. For authors requiring a commercial CC BY license, you can apply after your manuscript is accepted for publication.

Open access

This journal offers authors a choice in publishing their research:

Open access

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

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.

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

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

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 open access publication fee for this journal is **USD 3000**, excluding taxes. Learn more about Elsevier's pricing policy: <http://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 [green 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.

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.

Submission

Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article

Please submit your article via <http://ees.elsevier.com/actbio/>.

Referees

Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our [Support site](#). Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

PREPARATION

Use of word processing software

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the [Guide to Publishing with Elsevier](#)). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article structure

Papers submitted to *Acta Biomaterialia*, to be acceptable, must normally be fewer than 10 printed pages in length; as a rule of thumb, a paper of 20 double-spaced typescript pages, plus a typical number of figures (8 or so), reduces to 10 printed pages. Papers that are longer than 25 double-spaced typescript pages will likely be returned to the authors with a request that they be shortened before they are considered further. Shortening, almost always, is in the author's best interest: readers read short papers.

Page numbering

Please ensure that your manuscript is paginated, as this will help both editors and reviewers to process it promptly.

Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to "the text". Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Materials and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Studies Involving Animals or Humans When data from animal subjects are reported, institutional approval of the protocol is required and a statement should be included in the "Methods" section of the text that indicates compliance with the NIH Guide for Care and Use of Laboratory Animals or other appropriate guidelines.

For human subject data, a statement must be added to the "Methods" section indicating that an institutional review committee approved the study (with the date of approval) and that the subjects provided informed consent.

Theory/calculation

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

Results

Results should be clear and concise, in a section separate from the Discussion.

Statistical methods

Careful statistical analysis must be performed and reported to support any statements regarding the existence of differences in study groups. Statistical support should underlie hypothesis testing. Error bars are required on all experimental and calculated data points. Please include a separate Statistical Methods section in the text that includes an explanation regarding how the errors, differences, and confidence levels were determined.

Discussion

This should explore the significance of the results of the work, not repeat them. Discussion should be reported independently from Results. Avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection at the end of the Discussion section.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

Title Page

Provide the following data on the title page (in the order given).

- Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations, formulae, and new trademarked product names where possible.
- Author names and affiliations.** Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author.
- Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. **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.**
- Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a "Present address" (or "Permanent address") may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract

An abstract is required for all papers. The abstract should indicate the content of the paper, and should describe the main conclusions. An effective abstract is brief and normally less than 200 words. Abstracts must not exceed 250 words. References should be avoided, but if essential, they must be cited in full, without reference to the reference list.

Graphical abstract

A graphical abstract (GA) is mandatory for this journal. It should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. GAs should be submitted as a separate file in the online submission system. The graphical abstract will be displayed in online search result lists and the Contents List, but will not appear in the published online article PDF or print.

The GA visualizes one process or makes one point clear. For ease of browsing, images should have a clear start and end, preferably "reading" from top to bottom or left to right; try to reduce distracting and cluttering elements as much as possible. For examples please see <http://www.elsevier.com/journal-authors/graphical-abstract>. However, specifications should be followed as in this Author Guide (see below).

Specifications: GAs should be in landscape direction with a H x W of 531 x 1328 pixels using a minimum resolution of 300 dpi. The font type should be Arial 10-16 points (smaller will not be legible). Preferred file types are TIFF, EPS, PDF or MS Office files. Please note that a graphical abstract should be one image file and should not contain multiple panels.

Keywords

Immediately after the abstract, authors should list four to five keywords that appropriately represent the contents of their manuscripts.

Abbreviations

Define abbreviations and acronyms when they first appear in the article. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

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.

Math formulae

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.

- Please assure scale bars are present and legible. In SEM images, please remove small automated scale bars and replace with new clear bars.
- Size the illustrations close to the desired dimensions of the printed version.
- Submit each illustration as a separate file.
- Error bars are required on all experimental and calculated data points with an explanation in the text as to how the errors were determined. (See Statistics)

A detailed guide on electronic artwork is available on our website:

<http://www.elsevier.com/artworkinstructions>

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.

TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.

TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.

TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. [Further information on the preparation of electronic artwork.](#)

Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

All references to other papers, books, etc. must be given at the end of the paper. They should be numbered in sequence starting at the beginning of the paper. The numbers (in brackets) should appear in the text at the appropriate places.

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either "Unpublished results" or "Personal communication". Citation of a reference as "in press" implies that the item has been accepted for publication.

Web references

Archival references are preferred, but if web references must be used, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given.

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.

References in a special issue

Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support [Citation Style Language styles](#), such as [Mendeley](#) and [Zotero](#), as well as [EndNote](#). Using the word processor plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link and choosing Elsevier (numeric, with title):

<http://open.mendeley.com/use-citation-style/acta-materialia>

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice. For Zotero, please choose Elsevier (numeric, with titles):

<https://www.zotero.org/styles/elsevier-with-titles>.

Reference style

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.

Example: '..... as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result'

List: Number the references (numbers in square brackets) in the list in the order in which they appear in the text. **Please include all author names. Please include article titles of all cited articles** as in the following examples.

Examples:

Reference to a journal publication:

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59.

Reference to a book:

[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

[dataset] [4] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <http://dx.doi.org/10.17632/xwj98nb39r.1>.

A LaTeX bibliography style and article template file can be downloaded from this page:

<https://www.elsevier.com/authors/author-schemas/latex-instructions>

Journal abbreviations source

Journal names should be abbreviated according to the [List of Title Word Abbreviations](#).

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly

relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a preferred maximum size of 150 MB. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](#). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our [video instruction pages](#). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Statement of Significance

Authors are now required to submit a brief statement about the significance of their research, which should be written to a broad audience at an undergraduate level, and limited to 120 words. These statements will be peer-reviewed alongside the article and should hence be included in the initial submission. This Statement of Significance should be prepared to address (1) the novelty and significance of the work with respect to the existing literature, and (2) the scientific impact and interest to our readership.

Supplementary material

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

RESEARCH DATA

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the [research data](#) page.

Data linking

If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that give them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the [database linking page](#).

For [supported data repositories](#) a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

Open data

This journal supports Open data, enabling authors to submit any raw (unprocessed) research data with their article for open access publication under the CC BY license. [More information](#).

Data in Brief

You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for *Data in Brief* as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to *Data in Brief* where it will be editorially reviewed and published in the open access data journal, *Data in Brief*. Please note an open access fee is payable for publication in *Data in Brief*. Full details can be found on the [Data in Brief website](#). Please use [this template](#) to write your Data in Brief.

Transparency

To foster transparency, we encourage you to state the availability of your data in your submission. If your data is unavailable to access or unsuitable to post, this gives you the opportunity to indicate why. If you submit [this form](#) with your manuscript as a supplementary file, the statement will appear next to your published article on ScienceDirect.

AudioSlides

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. [More information and examples are available](#). Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

Interactive plots

This journal enables you to show an Interactive Plot with your article by simply submitting a data file. [Full instructions](#).

Virtual Microscope

The journal encourages authors to supplement in-article microscopic images with corresponding high resolution versions for use with the Virtual Microscope viewer. The Virtual Microscope is a web based viewer that enables users to view microscopic images at the highest level of detail and provides features such as zoom and pan. This feature for the first time gives authors the opportunity to share true high resolution microscopic images with their readers. [More information and examples](#). Authors of this journal will receive an invitation e-mail to create microscope images for use with the Virtual Microscope when their manuscript is first reviewed. If you opt to use the feature, please contact virtualmicroscope@elsevier.com for instructions on how to prepare and upload the required high resolution images.

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 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 2014 Elsevier | <http://www.elsevier.com>