Waste Management is devoted to the presentation and discussion of information on solid waste generation, characterization, minimization, collection, separation, treatment and disposal, as well as manuscripts that address waste management policy, education, and economic and environmental assessments. The journal addresses various types of solid wastes including municipal (e.g., residential, institutional, commercial), agricultural and special (e.g. construction and demolition, household hazardous, sewage sludge, and non-hazardous industrial) wastes.

We welcome both fundamental and applied research that can be related to problems of interest to solid waste researchers, practitioners and/or policy makers. Well documented case studies will be considered but they must describe results that can be applied beyond the specific location of the case study. Manuscripts that focus on the use of a waste material in a new product are often more suitable for a journal that focuses on the material properties of the product. In considering whether a manuscript is suitable for publication in Waste Management, consider whether the information is of potential use to solid waste researchers, practitioners and/or policymakers.

The following are some of the major areas in which papers are solicited:
- Generation and characterization
- Minimization
- Recycling and reuse
- Storage, collection, transport, and transfer
- Treatment (mechanical, biological, chemical, thermal, other)
- Landfill disposal
- Environmental assessments
- Economic analysis
- Policy and regulations
- Education and training
- Planning

Scientists, engineers and technical managers concerned with waste treatment and the engineering problems related to environmental protection laws.
IMPACT FACTOR

2018: 5.431 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING

BIOSIS Citation Index
Chemical Abstracts
Engineering Index
Pascal Francis
Web of Science
Chemical Hazards in Industry
Environmental Periodicals Bibliography
GeoSciTech
Cambridge Scientific Abstracts
Elsevier BIOBASE
Current Contents - Engineering, Technology & Applied Sciences
Energy Data Base
Energy Research Abstracts
Embse
Engineering Village - GEOBASE
Health and Safety Science Abstracts
Pollution Abstracts
Research Alert
Safety Science Abstracts
Scopus
INSPEC
Science Citation Index Expanded

EDITORIAL BOARD

Editors-in-Chief
U. Arena, Università degli Studi della Campania "Luigi Vanvitelli", Italy
M. Barlaz, North Carolina State University, Raleigh, North Carolina, United States
P. J. He, Tongji University, Shanghai, China

Managing Editor
F. Lü, Tongji University, Shanghai, China

Associate Editors
A. Akcil, Suleyman Demirel University, Isparta, Turkey
S.M.S. Al-Salem, Kuwait Institute for Scientific Research, Safat, Kuwait
C. A. Bareither, Colorado State University Department of Civil and Environmental Engineering
N. D. Berge, University of South Carolina, Columbia, South Carolina, United States
G. Bonifazi, University of Rome La Sapienza, Roma, Italy
H. Carrère, INRA Laboratoire de Biotechnologie de l’Environnement, France
D. Z. Chen, Tongji University, Shanghai, China
J. Fellner, TU Wien University, Wien, Austria
J.Y. Kim, Seoul National University College of Engineering, Seoul, Korea, Republic of
P. Kjeldsen, Technical University of Denmark, Kgs Lyngby, Denmark
D. Komilis, Democritus University of Thrace, Komotini, Greece
N. Lapa, New University of Lisbon Faculty of Science and Technology, Caparica, Portugal
D. Lavee, Tel Hai Academic College, Upper Galilee, Israel
L. Lombardi, University Niccolo Cusano, Roma, Italy
A. Massarutto, University of Udine, Udine, Italy
T. Matsuto, Hokkaido University, Sapporo, Japan
I. Pikaar, University of Queensland, Brisbane, Queensland, Australia
D. R. Reinhart, University of Central Florida, Orlando, Florida, United States
A. Sánchez, Autonomous University of Barcelona, Barcelona, Spain
K. Shih, University of Hong Kong Department of Civil Engineering, Hong Kong, Hong Kong
M. Takaoka, Kyoto University, Kyoto, Japan
D. Tonini, European Commission, Seville, Spain
G. Yu, Tianjin University, Tianjin, China

**IWWG Editorial Strategy Group**

U. Arena, Università degli Studi della Campania "Luigi Vanvitelli", Italy  
W.P. Clarke, University of Queensland, Brisbane, Queensland, Australia  
R. Cossu, University of Padua, Padova, Italy  
L.F. Diaz, CalRecovery Inc, Concord, California, United States  
E. Gidarakos, Technical University of Crete School of Environmental Engineering, Chania, Greece  
P. J. He, Tongji University, Shanghai, China  
P. Kjeldsen, Technical University of Denmark, Kgs Lyngby, Denmark  
A. Lagerkvist, Lulea University of Technology, Luleå, Sweden  
Y. Matsufuji, Fukuoka University, Fukuoka, Japan  
T. Matsuto, Hokkaido University, Sapporo, Japan  
D.R. Reinhart, University of Central Florida, Orlando, Florida, United States  
H. Robinson, Jacobs UK Limited Shrewsbury, Shrewsbury, United Kingdom  
R. Stegmann, Hamburg University of Technology, Hamburg, Germany  
C. Trois, University of KwaZulu-Natal Discipline of Psychology, Durban, South Africa

**Editorial Board**

F. Berruti, Western University, London, Ontario, Canada  
A.C. Cabral, University of Sherbrooke, Sherbrooke, Quebec, Canada  
P. Canu, University of Padua, Padova, Italy  
Y.M. Chen, Zhejiang University, Hangzhou, China  
H. Corvellec, Lund University Department of Service Management, Helsingborg, Sweden  
P. Ferrão, Foundation for Science and Technology, Lisboa, Portugal  
K. Knox, Knox Associates Ltd, Nottingham, United Kingdom  
U. Krogmann, Rutgers The State University of New Jersey, New Brunswick, New Jersey, United States  
B. Leckner, Chalmers University of Technology, Goteborg, Sweden  
S.-I. Sakai, Kyoto University, Kyoto, Japan  
K. Spokas, USDA Agricultural Research Service, St. Paul, Minnesota, United States  
S. Thorneloe, US Environmental Protection Agency Office of Research and Development, Research Triangle Park, North Carolina, United States  
C. Visvanathan, Asian Institute of Technology Department of Energy Environment and Climate Change, Klong Nueng, Thailand  
H. Wang, Tsinghua University, Beijing, China  
Z. Xu, Shanghai Jiaotong University, China  
J. Yan, Zhejiang University, Hangzhou, China  
N. Yeşiller, California Polytechnic State University, San Luis Obispo, California, United States  
C. Zurbrugg, Eawag Department Sanitation Water and Solid Waste for Development, Duebendorf, Switzerland
INTRODUCTION

Journal scope

*Waste Management* is devoted to the presentation and discussion of information on solid waste generation, characterization, minimization, collection, separation, recycling, treatment and disposal, as well as manuscripts that address solid waste management policy, education, and economic and environmental assessments. The journal addresses various types of solid wastes including municipal (e.g., residential, institutional, commercial), agricultural, construction and demolition, household hazardous, coal combustion residues and other non-hazardous industrial wastes.

Manuscripts on the treatment and disposal of biosolids from wastewater treatment will only be considered if the manuscript describes a process that is also applicable to other solid wastes (e.g., anaerobic digestion, char production, thermal treatment, but not dewatering).

The following topics are not in the journal's scope: wastewater, hazardous industrial waste, mining waste, radioactive waste, material science, land application of waste-derived products. Manuscripts on waste valorization are welcome in cases where the waste is a major part of the valorization process.

We welcome both fundamental and applied research that can be related to problems of interest to solid waste researchers, practitioners and/or policy makers. Well documented case studies will be considered but they must describe results that can be applied beyond the specific location of the case study. Manuscripts that focus on the use of a waste material in a new product are often more suitable for a journal that focuses on the material properties of the product. For example, studies on the use of a waste in transportation materials (concrete, asphalt) should be sent to journals that focus on those materials. In considering whether a manuscript is suitable for publication in Waste Management, authors should consider whether the information is of potential use to solid waste researchers, practitioners and/or policymakers. The following are some of the major areas in which papers are solicited: Generation and characterization Minimization Recycling and reuse Storage, collection, transport, and transfer Treatment (mechanical, biological, chemical, thermal, other) Landfill disposal Environmental assessments Economic analysis Policy and regulations Education and training Planning

Types of article

*Waste Management* considers the following types of papers for publication:

**Full Length Articles** (maximum of 6500 words) - a traditional full-length manuscript that describes original research or a well-documented case study. More detail on the word count is given below.

**Review Articles** - A synthesis and critical analysis of a research area. Reviews that focus on bibliometric information are not of interest to *Waste Management*. Authors wishing to submit a Review Article must first send a letter to the Editorial Office describing the topic of the review, the proposed contents of the review, and the senior author's expertise and resume in the area of the review. The Editors-in-Chief will decide on whether a review will be considered.

**Short Communications** (less than 3,500 words) - A presentation of original research or a case study that is significant but more limited in scope than a full-length article.

**Discussions** (less than 3,500 words) - An editorial or a comment on a published manuscript. Editorials are only considered with prior approval of the Editors-in-Chief.

The word count does not include the abstract, references, nomenclature, acknowledgements, and appendices. Full length articles are limited to a combined total of 8 tables and figures. If the length of the manuscript, by either the word count or the number of tables and figures, exceeds the limit, then the authors must justify this in their cover letter.

Manuscripts that do not adhere to the length limits will be returned for revision prior to review. Additional material may be included in the E-component and will be published in electronic form only.

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
- Nomenclature or Abbreviation list
- 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)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- 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](http://www.elsevier.com/locate/wasman).

**BEFORE YOU BEGIN**

**Ethics in publishing**
Please see our information pages on [Ethics in publishing](http://www.elsevier.com/locate/wasman) and [Ethical guidelines for journal publication](http://www.elsevier.com/locate/wasman).

**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 conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors should complete the declaration of interest statement using [this template](http://www.elsevier.com/locate/wasman) and upload to the submission system at the Attach/Upload Files step. If there are no interests to declare, please choose: 'Declarations of interest: none' in the template. This statement will be published within the article if accepted. 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](http://www.elsevier.com/locate/wasman).

**Preprints**
Please note that [preprints](http://www.elsevier.com/locate/wasman) can be shared anywhere at any time, in line with Elsevier's [sharing policy](http://www.elsevier.com/locate/wasman). 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').

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.

Open access
Please visit our Open Access page from the Journal Homepage for more information.

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 Author Services.
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/wm

Referees and expectations
Authors are required to suggest at least three potential reviewers for each submission. Please include a brief note as to why each reviewer is appropriate. We expect reviewers to have a record of scholarly publication or other demonstrated expertise in the topic of the manuscript. Reviewers from the same university should not be suggested. It is important that the Authors report the correct institution and email address of the proposed reviewers. Authors may also request that certain reviewers not be used.

Authors that submit manuscripts to Waste Management are also expected to provide reviews to Waste Management when asked. This is considered as a professional responsibility.

PREPARATION

Peer review
Waste Management operates a single blind review process. All contributions will be initially assessed by the Editors-in-Chief for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two and more typically three 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.

Once a manuscript is rejected, it may not be revised and resubmitted unless invited to do so by the Editor. In such a case, the decision will be Reject, resubmission encouraged. In this case, the author's resubmission must reference the original manuscript number in the Cover letter and include a point by point response to the reviewer's comments. A tracked changes version should not be resubmitted in this case.

Appeal procedure
If the authors of a manuscript wish to appeal a decision, then they must send a letter to the journal editorial office within 30 days of receiving the decision. The letter must provide a careful explanation of why the authors think that a manuscript decision is not correct. The Editor in Chief's decision is final.

Use of wordprocessing software
It is important that the file be saved in the native format of the wordprocessor used. The text should be in single-column format. Manuscripts must be typewritten with a font size of 12 pt, double-spaced with wide margins, and lines should be numbered consecutively. 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 wordprocessor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. Do not embed "graphically designed" equations or tables, but prepare these using the wordprocessor's facility. 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). See also the section on Electronic illustrations.

Please use page and line numbers in your manuscript. When submitting a revised manuscript, please upload a track changes manuscript (together with a clean version).

Cover letter
Submission of a manuscript must be accompanied by a cover letter that addresses two areas. First, the letter should describe the importance of the manuscript and its relevance to some aspect of solid waste management. Second, the letter should summarize the manuscript objectives and the findings that constitute a significant contribution to the literature. In addition, the cover letter must
provide a word count using the instructions given above. Manuscripts that do not comply with the cover letter requirements and manuscript requirements will be returned for corrections before being sent for review.

Each manuscript will be cross-checked to detect similarity before being sent for review.

If the manuscript has been published as a preprint, or it is a part of thesis work or governmental report, please disclose this information in the Cover letter.

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.

Subdivision - numbered sections
Manuscripts should be divided 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 for internal cross-referencing, i.e., do not just refer to 'the text'. Every subsection should be given a brief but descriptive heading. Each heading should appear on a separate line.

Manuscripts must include page and line numbers. The line numbers should be continuous and should not restart on each page. When submitting a revised manuscript, upload both a clean version and a track changes version of the manuscript.

**Essential title page information**

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. 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. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**
- **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.

**Material and methods**

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

**Results and discussion**

The Results section or a combined Results and Discussion should present a clear and concise interpretation of the research. The text, Figures and Tables should be well-integrated such that the text does not repeat information in the Tables and Figures, but rather interprets the Tables and Figures.

**Conclusions**

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section. The Conclusions are not a summary of results but rather a statement of the key findings of the research.

**Tables and figures**

The total number of Tables and Figures should not exceed 8. Please submit tables as editable text and not as images. Both Tables and Figures should contain descriptive titles so that the reader knows what to expect. In the initial submission, the Tables and Figures along with their titles, should
be embedded in the manuscript to facilitate review. When a revised version of a manuscript is submitted in response to reviewer comments, the Tables and Figures should be placed at the end of the manuscript. Number tables and figures consecutively in accordance with their appearance in the text and place any notes below the table or figure body. Be thoughtful in the use of tables and figures and ensure that the data presented in the Tables and Figures do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells. Please, also avoid uploading the tables or figures twice (once in the manuscript and once in the additional separate files). Please ensure the resolution and font size of figures.

*Use of bullets*

All material should be presented in text form. **The use of bulleted text is not permitted.**

*Highlights*

Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

*Abstract*

The abstract should state the purpose of the research, and the **major results** and conclusions. Wherever possible, the abstract should include **quantitative information**. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. Abstracts are limited to **250 words**.

*Graphical abstract*

Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view **Example Graphical Abstracts** on our information site.

Authors can make use of Elsevier’s **Illustration Services** to ensure the best presentation of their images and in accordance with all technical requirements.

*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.
Nomenclature and units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. You are urged to consult IUPAC: Nomenclature of Organic Chemistry for further information.

Authors are to use SI (metric) units and international quantities and abbreviations. Equivalent values in other systems may be used provided their metric equivalents are included in every case.

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.
• Size the illustrations close to the desired dimensions of the published version.
• Submit each illustration as a separate file.
• Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available.
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/halftone (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.
References

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. Please avoid lumped references. If necessary, kindly provide a short description for each of the references used.

Reference links

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambhe W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, https://doi.org/10.1029/2001JB000884. Please note the format of such citations should be in the same style as all other references in the paper.

Web references

As a minimum, 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. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

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. Using citation 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. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/waste-management

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Reference formatting

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by
the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

**Reference style**

**Text:** All citations in the text should refer to:
1. **Single author:** the author's name (without initials, unless there is ambiguity) and the year of publication;
2. **Two authors:** both authors' names and the year of publication;
3. **Three or more authors:** first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically, or vice versa.

**Examples:** 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000)... Kramer et al. (2010) have recently shown ...'

**List:** References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

**Examples:**

Reference to a journal publication:

Reference to a journal publication with an article number:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a website:

Reference to a dataset:

**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 file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. 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.

**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 gives 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).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.

**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 of 600 USD 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.

**MethodsX**
You have the option of converting relevant protocols and methods into one or multiple MethodsX articles, a new kind of article that describes the details of customized research methods. Many researchers spend a significant amount of time on developing methods to fit their specific needs or setting, but often without getting credit for this part of their work. MethodsX, an open access journal, now publishes this information in order to make it searchable, peer reviewed, citable and reproducible. Authors are encouraged to submit their MethodsX article as an additional item directly alongside the revised version of their manuscript. If your research article is accepted, your methods article will
automatically be transferred over to MethodsX where it will be editorially reviewed. Please note an open access fee is payable for publication in MethodsX. Full details can be found on the MethodsX website. Please use this template to prepare your MethodsX article.

**Data statement**
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

**Additional information**
Review Process: All manuscripts are sent to at least two independent referees to ensure both accuracy and relevance to the journal. The final decision regarding acceptance will be made by the Editors. Manuscripts may be sent back to authors for revision if necessary. Revised manuscripts should be submitted as soon as possible (with a default limit of 14 days for minor revisions and 28 days for significant revisions). Extensions will be considered if requested to the editorial office.

**AFTER ACCEPTANCE**

**Online proof correction**
To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. 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 Author Services. 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