DESCRIPTION

The *Journal of Electron Spectroscopy and Related Phenomena* publishes experimental, theoretical and applied work in the field of *electron spectroscopy* and *electronic structure*, involving techniques which use *high energy photons* (>10 eV) or *electrons* as probes or detected particles in the investigation.

The journal encourages contributions in the general area of atomic, molecular, ionic, liquid and solid state spectroscopy carried out using electron impact, synchrotron radiation (including free electron lasers) and short wavelength lasers. Papers using photoemission and other techniques, in which synchrotron radiation, Free Electron Lasers, laboratory lasers or other sources of ionizing radiation, combined with electron velocity analysis are especially welcome. The materials properties addressed include characterization of ground and excited state properties as well as time resolved electron dynamics.

The individual techniques of electron spectroscopy include photoelectron spectroscopy of both outer and inner shells; inverse photoemission; spin-polarised photoemission; time resolved 2-photon photoemission, resonant and non-resonant Auger spectroscopy including ion neutralization studies; edge techniques (EXAFS, NEXAFS,...) , resonant and non-resonant inelastic X-ray scattering (RIXS), spectro-microscopy, high resolution electron energy loss spectroscopy; electron scattering and resonance electron capture; electron spectroscopy in conjunction with microscopy; penning ionization spectroscopy including scanning tunneling spectroscopy; theoretical treatments of the photoemission, X-ray emission, Auger, energy loss and Penning ionization processes. Contributions on instrumentation and technique development, date acquisition - analysis - quantification are also welcome.

Subject areas covered include spectroscopic characterization of materials and processes concerning:
- surfaces, interfaces, and thin films;
- atomic and molecular physics, clusters;
- semiconductor physics and chemistry;
- materials for photovoltaics;
- materials science including: metal surfaces, nanoparticles, ceramics, strongly correlated systems, polymers, biomaterials and other organic films;
- catalysis
AUDIENCE

Physicists, Chemists, Surface Scientists and Technologists using the techniques of electron spectroscopy in their work.

IMPACT FACTOR

2016: 1.661 © Thomson Reuters Journal Citation Reports 2017

ABSTRACTING AND INDEXING

Chemical Abstracts
Current Contents/Physics, Chemical, & Earth Sciences
Mass Spectrometry Bulletin
Science Citation Index
Scopus

EDITORIAL BOARD

Editors:
W. Eberhardt, Inst. für Optik und Atomare Physik, Technische Universität Berlin (TUB), Straße des 17. Juni 135, 10623, Berlin, Germany
A.P. Hitchcock, Dept. of Chemistry and Chemical Biology, McMaster University, 1280 Main St., Hamilton, L8S 4M1, Ontario, Canada, Fax: +1-905-5212773
N. Kosugi, Inst. for Molecular Science (IMS), National Institutes of Natural Sciences, Nishigo-Naka 38, Myodaiji, 444-8585, Okazaki, Japan, Fax: +81-564-54-2254

Honorary Board
C.R. Brundle, California, USA
G.E. McGuire, Research Triangle Park, North Carolina, USA
T. Ohta, Shiga, Japan
J.-J. Pireaux, Namur, Belgium

Editorial Board:
H.W. Ade, North Carolina State University, Raleigh, North Carolina, USA
P.S. Bagus, University of North Texas, Denton, Texas, USA
H. Daimon, Nara Institute of Science and Technology, Ikoma Nara, Japan
F.M.F. de Groot, Utrecht University, Utrecht, Netherlands
H. Ebert, Ludwig-Maximilians-Universität München (LMU), Munich, Germany
C.S. Fadley, Lawrence Berkeley National Laboratory, Berkeley, California, USA
D.L. Feng, Fudan University, Shanghai, China
X. Gao, Chinese Academy of Sciences (CAS), Shanghai, China
M. Grioni, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
U. Hergenhahn, Max Planck Institut (MPI) für Plasmaphysik, Greifswald, Germany
D.-J. Huang, National Synchrotron Radiation Reserarch Center (NSRRC), Hsinchu, Taiwan, ROC
S. Kera, Institute for Molecular Science, Okazaki, Japan
A. Kimura, Hiroshima University, Higashi-Hiroshima, Japan
K.T. Leung, University of Waterloo, Waterloo, Ontario, Canada
C. Miron, Synchrotron Soleil, Gif-sur-Yvette Cedex, France
S. Molodtsov, European X-ray Free Electron Laser (XFEL), Hamburg, Germany
A. Naves de Brito, Universidade Estadual de Campinas (UNICAMP), Campinas, Brazil
D. Prendergast, Lawrence Berkeley National Laboratory, Berkeley, California, USA
D.D. Sarma, Indian Institute of Science, Bangalore, India
T. Schmitt, Paul Scherrer Institut (PSI), Villigen, Switzerland
S. Suzer, Bilkent University, Ankara, Turkey
M. Vos, Australian National University, Canberra, Australian Capital Territory, Australia
P. Weightman, University of Liverpool, Liverpool, UK
W. Werner, Technische Universität Wien, Vienna, Austria
H.W. Yeom, Pohang University of Science and Technology, Nam-gu, Pohang, The Republic of Korea
M. Zharnikov, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany
GUIDE FOR AUTHORS

Your Paper Your Way
We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article.
To find out more, please visit the Preparation section below.

INTRODUCTION

Aims and scope
The Journal of Electron Spectroscopy and Related Phenomena publishes experimental, theoretical and applied work in the field of electron spectroscopy and electronic structure, involving techniques which use high energy photons (>10 eV) or electrons as probes or detected particles in the investigation.

The journal encourages contributions in the general area of atomic, molecular, ionic, liquid and solid state spectroscopy carried out using electron impact, synchrotron radiation (including free electron lasers) and short wavelength lasers. Papers using photoemission and other techniques, in which synchrotron radiation, Free Electron Lasers, laboratory lasers or other sources of ionizing radiation, combined with electron velocity analysis are especially welcome. The materials properties addressed include characterization of ground and excited state properties as well as time resolved electron dynamics.

The individual techniques of electron spectroscopy include photoelectron spectroscopy of both outer and inner shells; inverse photoemission; spin-polarised photoemission; time resolved 2-photon photoemission, resonant and non-resonant Auger spectroscopy including ion neutralization studies; edge techniques (EXAFS, NEXAFS,...), resonant and non-resonant inelastic X-ray scattering (RIXS), spectro-microscopy, high resolution electron energy loss spectroscopy; electron scattering and resonance electron capture; electron spectroscopy in conjunction with microscopy; penning ionization spectroscopy including scanning tunneling spectroscopy; theoretical treatments of the photoemission, X-ray emission, Auger, energy loss and Penning ionization processes. Contributions on instrumentation and technique development, date acquisition - analysis - quantification are also welcome.

Subject areas covered include spectroscopic characterization of materials and processes concerning:
- surfaces, interfaces, and thin films;
- atomic and molecular physics, clusters;
- semiconductor physics and chemistry;
- materials for photovoltaics;
- materials science including: metal surfaces, nanoparticles, ceramics, strongly correlated systems, polymers, biomaterials and other organic films;
- catalysis

For names of, for example, Arabic, Chinese, Spanish and Taiwanese extraction, please indicate the family name (for indexing purposes) by underlining.

Categories of articles
In addition to Full Papers, articles may be classified as Rapid Communications, Review Articles, Data Bank Items, and Instrumental News.

Rapid Communications are short articles of not more than four printed pages (including illustrations and tables). An abstract of not more than 75 words should be included. A Rapid Communication can be a self-contained complete article too brief to be classified as a Full Paper, preliminary notes for an on-going piece of work, extension of a previously published work, or comments on published work. The short article should in principle merit accelerated publication. No proof is sent to the author, and publication should occur within 3-4 months after the article is received complete in Shannon.
**Review Articles** will often be invited, but contributions are also encouraged. In general, the length should not exceed 30 printed pages, and authors are recommended to contact one of the Editors or Editorial Board Members if in doubt concerning the appropriateness of the subject matter. Authors may choose between a modest honorarium or 100 extra free offprints.

**Data Bank** is a category reserved for electron spectroscopy information in the form of tables or spectra with a minimum of accompanying script. It is really a means of providing data that would not otherwise be published. Compilations of literature data or references are also occasionally published within this category. There is no page limitation.

**Instrumentation News** is a category providing information on instruments or hardware used in electron spectroscopy. It is open to commercial instrument manufacturers and individual researchers alike as a place to present descriptions of new instruments, special components, etc. The manuscripts will be processed by the Editors without further refereeing because it is not intended that they be full technical papers; such papers should be submitted within the normal journal categories. This category is intended primarily as a news service to readers.

**Contact Details for Submission**
Authors should submit their papers, via the online submission tool [http://ees.elsevier.com/elspec/](http://ees.elsevier.com/elspec/), and select the Editor to whom they wish to submit their paper. Normally authors should select the Editor in their geographical region:

**Editor:**
- Manuscripts from Europe and Africa: **Professor W. Eberhardt**
- Manuscripts from Asia and Oceana: **Professor N. Kosugi**
- Manuscripts from the Americas: **Professor A.P. Hitchcock**

**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)
- 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://ees.elsevier.com/elspec/).

**BEFORE YOU BEGIN**
**Ethics in publishing**

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

**Declaration of interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. If there are no conflicts of interest then please state this: 'Conflicts of interest: none'. [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 or as part of a published lecture or academic thesis or as an electronic preprint, see 'Multiple, redundant or concurrent publication' section of our ethics policy 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 CrossCheck.

**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 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 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.

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

**Subscription**
- Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs.
- No open access publication fee payable by authors.

**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.

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

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

The open access publication fee for this journal is **USD 2200**, excluding taxes. Learn more about Elsevier's pricing policy: [http://www.elsevier.com/openaccesspricing](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.

**Elsevier Publishing Campus**
The Elsevier Publishing Campus ([www.publishingcampus.com](http://www.publishingcampus.com)) is an online platform offering free lectures, interactive training and professional advice to support you in publishing your research. The College of Skills training offers modules on how to prepare, write and structure your article and explains how editors will look at your paper when it is submitted for publication. Use these resources, and more, to ensure that your submission will be the best that you can make it.

**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.

**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.

**Refereeing**

All scientific articles submitted will be refereed. The Editors reserve the right to reject articles and to edit manuscripts when necessary.

**Page charge**

The *Journal of Electron Spectroscopy and Related Phenomena* has no page charges.

**PREPARATION**

**NEW SUBMISSIONS**

Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

**References**

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 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.

**Formatting requirements**

There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections.

**Figures and tables embedded in text**

Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

**Peer review**

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.
Use of word processing software
Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. 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 artwork.
To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Article Structure
Paginate the entire manuscript on the top right-hand corner of the pages.
Underline words that should be in italics, and do not underline any other words.
Excessive use of italics for emphasis should be avoided.
Manuscripts should be organized in the following order.
(a) Title
(b) Name of author and affiliation
(c) Abstract
(d) Up to six keywords for indexing
(e) Introduction
(f) Experimental (methods, techniques, and materials studied)
(g) Results
(h) Discussion
(i) Conclusions
(j) Acknowledgements
(k) Appendices
(l) References
(m) Captions for the illustrations
(n) Tables
(o) Illustrations (figures and other artwork) Elsevier reserves the privilege of returning to the author for revision accepted manuscripts and illustrations which are not in the proper form given in this guide.

Abstract
A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. 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.

Highlights
Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and 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). You can view example Highlights on our information site.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

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.).
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 build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

Artwork
Electronic artwork
General points
- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files.

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
Regardless of the application used, 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 the font or save the text as ‘graphics’.
TIFF (or JPEG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
TIFF (or JPEG): Bitmapped line drawings: use a minimum of 1000 dpi.
TIFF (or JPEG): Combinations bitmapped line/halftone (color or grayscale): a minimum of 500 dpi is required.

Please do not:
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- 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. 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
Authors should take notice of the limitations set by the size and lay-out of the journal. A table should not exceed the printed area of the page. If this seems impossible, try reversing columns and rows. Large tables should be avoided or should be published as Supplementary material (see section below). Tables should be numbered using arabic numerals according to their sequence in the text. The text should include mention of all tables. Tables should be typewritten on separate pages and added to the manuscript after the reference list. Each table should have a brief and self-explanatory title.
Column headings should be concise. Units should be added between parentheses or after a solidus (virgule). Vertical lines should not be used to separate columns; instead, leave some extra space between the columns. Any explanations essential to the understanding of the table should be given in footnotes at the bottom of the table.

**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.

**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 encouraged.

A DOI can be used to cite and link to electronic articles where an article is in-press and full citation details are not yet known, but the article is available online. 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., Ambeh 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.

**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:


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 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:** 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.

**Examples:**

Reference to a journal publication:

Reference to a book:

Reference to a chapter in an edited book:

Reference to a website:

Reference to a dataset:

**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 in total. Any single file should not exceed 50 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.

**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 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.

**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.

**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