



TABLE OF CONTENTS

●	Description	p.1
●	Impact Factor	p.1
●	Abstracting and Indexing	p.1
●	Editorial Board	p.1
●	Guide for Authors	p.5



ISSN: 1570-8683

DESCRIPTION

This journal welcomes papers in the areas of **logic** which can be applied in other disciplines as well as application papers in those disciplines, the unifying theme being **logics** arising from **modelling** the human agent. For a list of areas covered see the [Editorial Board](#).

The editors keep close contact with the various application areas, with [The International Federation of Computational Logic](#) and with the book series *Studies in Logic and Practical Reasoning*.

Benefits to authors

We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our [author services](#).

Please see our [Guide for Authors](#) for information on article submission.

This journal has an [Open Archive](#). All published items, including research articles, have unrestricted access and will remain permanently free to read and download 48 months after publication. All papers in the Archive are subject to [Elsevier's user license](#).

If you require any further information or help, please visit our [Support Center](#)

IMPACT FACTOR

2016: 0.838 © Thomson Reuters Journal Citation Reports 2017

ABSTRACTING AND INDEXING

Zentralblatt MATH
Scopus

EDITORIAL BOARD

Executive Editors

Dov M. Gabbay, King's College London, London, UK
Sarit Kraus, Bar-Ilan University, Ramat Gan, Israel

Jörg Siekmann, Universität des Saarlandes, Saarbrücken, Germany

Editorial Office Manager

Jane Spurr, King's College London, London, UK

Area Scientific Editors

Philosophical Logic

Johan van Benthem, Universiteit van Amsterdam, Amsterdam, Netherlands

Lou Goble

Stefano Predelli, Nottingham, Nottingham, UK

Gabriel Sandu, University of Helsinki, Helsinki, Finland

New Applied Logics

Walter Carnielli, Centre for Logic, Epistemology & the History Sci., Campinas, SP, Brazil

David Makinson, London School of Economics, London, UK

Heinrich Wansing, Ruhr-University Bochum, Bochum, Germany

Modal and Temporal Logic

Carols Areces, INRIA Nancy Grant Est, Villers les Nancy, France

Melvin Fitting, City University of New York (CUNY), Bronx, New York, USA

Victor Marek, University of Kentucky, Lexington, Kentucky, USA

Mark Reynolds, University of Western Australia, Perth, Western Australia, Australia

Frank Wolter, University of Liverpool, Liverpool, England, UK

Michael Zakharyashev, Birkbeck, University of London, London, England, UK

Logic and Software Engineering

Manfred Broy, Technische Universität München, München, Germany

John Fitzgerald, Newcastle University, Newcastle Upon Tyne, England, UK

Kung-Kiu Lau, University of Manchester, Manchester, England, UK

Tom Maibaum, McMaster University, Hamilton, Ontario, Canada

German Puebla, Universidad Politécnica de Madrid (UPM), Madrid, Spain

Formal Methods: Specifications and Verification

Howard Barringer, University of Manchester, Manchester, England, UK

David Basin, Eidgenössische Technische Hochschule (ETH) Zürich, Zürich, Switzerland

Dines Bjørner, Danmarks Tekniske Universitet (DTU), Lyngby, Denmark

Kokichi Futatsugi, Japan Advanced Institute of Science and Technology, Ishikawa, Japan

Yuri Gurevich, Microsoft Research, Redmond, Washington, USA

Logic and Constraint Logic Programming

Manuel Hermenegildo, Universidad Politécnica de Madrid (UPM), Madrid, Spain

Antonis Kakas, University of Cyprus, Nicosia, Cyprus

Francesca Rossi, Università degli Studi di Padova, Padova, Italy

Gert Smolka, Universität des Saarlandes, Saarbrücken, Germany

Logic and Databases

Jan Chomicki, The State University of New York at Buffalo, Buffalo, New York, USA

Enrico Franconi, Libera Università di Bolzano, Bozen-Bolzano, Italy

Georg Gottlob, University of Oxford, Oxford, England, UK

Leonid Libkin, University of Edinburgh, Edinburgh, Scotland, UK

Franz Wotawa, Technische Universität Graz, Graz, Austria

Logic and Multi-Agent Systems

Michael Fisher, University of Liverpool, Liverpool, England, UK

Nick Jennings, University of Southampton, Southampton, UK

Michael Wooldridge, University of Liverpool, Liverpool, England, UK

Logic and Algebraic Programming

Jan Bergstra, Universiteit van Amsterdam, Amsterdam, Netherlands

John Tucker, Swansea University, Swansea, Wales, UK

Logic and Natural Language Processing

Wojciech Buszkowski, Uniwersytet im. Adam Mickiewicza w Poznaniu, Poznan, Poland

Hans Kamp, Universität Stuttgart, Stuttgart, Germany

Marcus Kracht, University of California at Los Angeles (UCLA), Los Angeles, California, USA

Johanna Moore, University of Edinburgh, Edinburgh, Scotland, UK

Michael Moortgat, Utrecht University, Utrecht, Netherlands

Manfred Pinkal, Universität des Saarlandes, Saarbrücken, Germany
Hans Uszkoreit, Universität des Saarlandes, Saarbrücken, Germany

Automated Inference Systems and Model Checking

Ed Clarke, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA
Ulrich Furbach, Universität Koblenz-Landau, Koblenz, Germany
Hans Juergen Ohlbach, Technische Universität München, München, Germany
Volker Sorge, University of Birmingham, Birmingham, UK
Andrei Voronkov, Uppsala Universitet, Uppsala, Sweden
Toby Walsh, University of York, York, England, UK

Logic and Rewriting

Claude Kirchner, Loria, Vandoeuvre-lès-Nancy Cedex, France
José Meseguer, Thomas M. Siebel Center for Computer Science, Urbana, Illinois, USA

Tactical Theorem Proving and Proof Planning

Alan Bundy, University of Edinburgh, Edinburgh, UK
Amy Felty, University of Ottawa, Ottawa, Ontario, Canada
Jacques Fleuriot, University of Edinburgh, Edinburgh, Scotland, UK
Dieter Hutter, DFKI GmbH, Saarbrücken, Germany
Manfred Kerber, University of Birmingham, Birmingham, UK
Christopher Kreitz, Cornell University, Ithaca, New York, USA

Logic in Mechanical and Electrical Engineering

Rudolf Kruse, Otto-von-Guericke-Universität Magdeburg, Magdeburg, Germany

Logic for Knowledge Representation and Semantic Web

Franz Baader, Technische Universität Dresden, Dresden, Germany
Pat Hayes, University of West Florida, Pensacola, USA
Ian Horrocks, University of Manchester, Manchester, England, UK
Maurizio Lenzerini, Università di Roma "La Sapienza", Roma, Italy
Bernhard Nebel, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany

Mathematical Logic

Wilfrid A. Hodges, Queen Mary, University of London (QMUL), London, UK
Janos Makowsky, Technion - Israel Institute of Technology, Haifa, Israel

Proof Theory

Sam Buss, University of California at San Diego (UCSD), San Diego, La Jolla, California, USA
Wolfram Pohlers, Westfälische Wilhelms-Universität Münster, Münster, Germany

Algebraic Methods in Logic

Miklos Ferenczi, Technical University of Budapest, Budapest, Hungary
Rob Goldblatt, Victoria University of Wellington, Wellington, New Zealand
Robin Hirsch, University College London (UCL), London, England, UK
Ildikó Sain, Hungarian Academy of Sciences, Budapest, Hungary

Applied Non-classical Logic

Luis Fariñas del Cerro, Université Paul Sabatier (Toulouse III), Toulouse Cedex, France
Nicola Olivetti, Université Paul Cézanne, Marseille Cedex 20, France

Logic Applied in Mathematics

(including e-Learning Tools for Mathematics and Logic)

Bruno Buchberger, Johannes Kepler University Linz, Linz, Austria
Robert L. Constable, Cornell University, Ithaca, New York, USA
F. Kamareddine, Heriot-Watt University, Edinburgh, Scotland, UK
Michael Kohlhase, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany
Erica Melis, Universität des Saarlandes, Saarbrücken, Germany

Logic and Neural Networks

Artur d'Avila Garcez, City, University of London, London, UK
Steffen Holldobler, Technische Universität Dresden, Dresden, Germany

Non-monotonic Logics and Logics of Change

Jürgen Dix, Clausthal University of Technology, Clausthal, Germany
Vladimir Lifschitz, University of Texas at Austin, Austin, Texas, USA
Michael J. Maher, UNSW Australia, Sydney, New South Wales, Australia

Donald Nute, University of Georgia, Athens, Georgia, USA
D. Pearce, Universidad Politécnica de Madrid (UPM), Madrid, Spain

Type Theory for Theorem Proving Systems

Peter Andrews, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA
Christoph Benz Müller, Freie Universität Berlin, Berlin, Germany
Chad Brown, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA
Dale Miller, École Polytechnique, Palaiseau, France
C. Schürmann, Yale University, New Haven, Connecticut, USA

Logic and Learning

Luc De Raedt, KU Leuven, Heverlee, Belgium
John Lloyd, Australian National University, Canberra, Australian Capital Territory, Australia
Stephen H. Muggleton, Imperial College London, London, UK

Cognitive Robotics: Actions and Causation

Gerhard Lakemeyer, RWTH Aachen University (RWTH), Aachen, Germany
Michael Thielscher, UNSW Australia, Sydney, Australia

Logic and Planning

Susanne Biundo, Universität Ulm, Ulm, Germany
Patrick Doherty, Linköping Universitet, Linköping, Sweden
Henry Kautz, University of Rochester, Rochester, New York, USA
Paolo Traverso, Automated Reasoning Systems (SRA) Division ITC/IRS, Trento, Italy

Logic and Computational Models of Scientific Reasoning

Lorenzo Magnani, Università degli Studi di Pavia, Pavia, Italy
Luís Moniz Pereira, Universidade Nova de Lisboa (Lisbon), Monte De Caparica, Caparica, Portugal
Paul Thagard, University of Waterloo, Waterloo, Ontario, Canada

Fuzzy Logic, Uncertainty and Probability

Petr Cintula, Academy of Sciences of the Czech Republic, Prague, Czech Republic
Didier Dubois, Université Paul Sabatier (Toulouse III), Toulouse, France
Jeff B. Paris, University of Manchester, Manchester, UK
Henri Prade, Université Paul Sabatier (Toulouse III), Toulouse, France
Jon Williamson, University of Kent, Canterbury, UK

Logic and Law

José Carmo, University of Madeira, Funchal, Madeira, Portugal
Lars Lindahl, Lund University, Lund, Sweden
Marek Sergot, Imperial College London, London, UK

Human Reasoning

Peter Bruza, Queensland University of Technology, Brisbane, Queensland, Australia
Niki Pfeifer, Ludwig-Maximilians-Universität München, Munich, Germany
John Woods, University of British Columbia, Vancouver, British Columbia, Canada

Logic and Category Theory

Samson Abramsky, University of Oxford, Oxford, England, UK
Martin Hyland, University of Cambridge, Cambridge, England, UK
Jim Lambek, McGill University, Montréal, Quebec, Canada

Logic and Physics (space time, relativity and quantum theory)

Hajnal Andréka, Hungarian Academy of Sciences, Budapest, Reáltanoda, Hungary
Kurt Engesser, King's College London, London, UK
Daniel Lehmann, Hebrew University of Jerusalem, Jerusalem, Israel
Istvan Nemeti, Hungarian Academy of Sciences, Budapest, Reáltanoda, Hungary
Victor Pambuccian, Arizona State University West, Phoenix, Arizona, USA

Fuzzy Logic

George Metcalfe, Vanderbilt University, Nashville, Tennessee, USA

Publisher

Hannah Foreman, Elsevier BV, Amsterdam, Netherlands

Journal Founding Editors

D.M. Gabbay, King's College London, London, UK
J. Siekmann, Universität des Saarlandes, Saarbrücken, Germany

GUIDE FOR AUTHORS

Contract details for submission

Manuscripts should be submitted as electronic attachments in postscript or pdf format (whenever possible) to Jane Spurr (jal@kcl.ac.uk). The message should include the author(s) names and affiliations, the title of the paper and the name of the editor-in-chief who is best suited to deal with the submission.

Should authors be requested by the Editor to revise the text, the revised version should be submitted within 12 weeks. After this period, the article will be regarded as a new submission.

Please note: Papers previously presented in conference proceedings of limited circulation may be judged eligible for publication in revised form. The Editor-in-Chief to whom the paper is sent must be informed of such prior presentation at the time a manuscript is submitted.

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](#).

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. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. [More information](#).

Submission declaration

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 including electronically in the same form, in English or in any other language, without the written consent of the copyright-holder.

Authorship

All authors should have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

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.

Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the Open Access Publication Fee. Details of [existing agreements](#) are available online.

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 **\$1500**, excluding taxes. Learn more about Elsevier's pricing policy: <http://www.elsevier.com/openaccesspricing>.

Green open access

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

This journal has an embargo period of 24 months.

Elsevier Publishing Campus

The Elsevier Publishing Campus (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.

Italics

Italics are not to be used for expressions of Latin origin, for example, *in vivo*, *et al.*, *per se*. Use decimal points (not commas); use a space for thousands (10 000 and above).

Submission

Articles may be submitted online to this journal. The online 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. Contributions to this journal may be submitted either online or outside the system. Please do not submit via both routes; doing so may cause your manuscript to be reviewed and published twice!

PREPARATION

LaTeX

You are recommended to use the Elsevier article class [elsarticle.cls](#) to prepare your manuscript and [BibTeX](#) to generate your bibliography.

Our [LaTeX site](#) has detailed submission instructions, templates and other information.

Article structure

Subdivision - numbered sections

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

Introduction

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

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

Results should be clear and concise.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

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

Appendices

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

Essential title page information

- **Title.** 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.

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.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using British 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.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

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

Formatting of funding sources

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

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

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

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

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

IUPAC Organic/Inorganic Chemistry

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 and Inorganic Chemistry <http://www.iupac.org/> for further information.

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.

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/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

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

Color artwork

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

Figure captions

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

Text graphics

Text graphics may be embedded in the text at the appropriate position. If you are working with LaTeX and have such features embedded in the text, these can be left. See further under Electronic artwork.

Tables

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

References

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:

<http://open.mendeley.com/use-citation-style/journal-of-applied-logic>

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:

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

Reference to a book:

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

Reference to a chapter in an edited book:

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

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

Journal abbreviations source

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

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a preferred maximum size of 150 MB 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](#). 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.

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 500 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.

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>