TABLE OF CONTENTS

- Description p.1
- Audience p.2
- Impact Factor p.2
- Abstracting and Indexing p.2
- Editorial Board p.2
- Guide for Authors p.5

DESCRIPTION

The mission of Renewable and Sustainable Energy Reviews is to communicate the most interesting and relevant critical thinking in renewable and sustainable energy in order to bring together the research community, the private sector and policy and decision makers. The aim of the journal is to share problems, solutions, novel ideas and technologies to support the transition to a low carbon future and achieve our global emissions targets as established by the United Nations Framework Convention on Climate Change.

Renewable and Sustainable Energy Reviews publishes review papers, original research, case studies and new technology analyses that have a significant review element, which may take the form of a critique, comparison, or analysis. The journal also publishes a new paper type, Expert Insights, which are commissioned mini-reviews from field leaders on topics of significant interest. Case studies will only be considered if they also demonstrate the applicability of the work to other regions and/or inform the broader field of renewable and sustainable energy. A bibliographic or literature review, without critical thinking is not considered suitable.

The journal considers articles on the following themes, provided the link to renewable and sustainable energy is clear and thoroughly examined:

Energy resources - bioresources (e.g. biomass, waste), fossil fuels (including natural gas), geothermal, hydrogen, hydropower, nuclear, marine and ocean energy, solar and wind

Applications - buildings, industry and transport

Utilization - batteries, conversion technologies, fuel cells, storage technologies, technical developments and technology scaling

Environment - atmosphere, climate issues, meteorology, mitigation technologies (e.g. carbon capture and storage (CCS), carbon capture and utilization (CCU), solar radiation management)

Techno-socio-economic aspects - health, industry, policy, political, regulatory, social (e.g. access, education, equality, equity)

Systems - carbon accounting, energy-food-water nexus, energy modelling, life cycle assessment (LCA), nutrient-energy-water (NEW) nexus, smart infrastructure
**Sustainability** - the United Nations Sustainability Development Goals (SDGs)

**AUDIENCE**

Scientists, researchers and consultants involved in all aspects of renewable energy.

**IMPACT FACTOR**

2018: 10.556 © Clarivate Analytics Journal Citation Reports 2019

**ABSTRACTING AND INDEXING**

- Scopus
- Science Citation Index Expanded
- Web of Science
- RePEc
- Academic Search (EBSCO)
- Compendex
- Engineering Information Database EnCompass LIT (Elsevier)
- Engineering Index Monthly
- Arts & Humanities Search
- Current Contents
- INSPEC

**EDITORIAL BOARD**

**Editor-in-Chief**

Aoife M. Foley, Queen’s University Belfast, Belfast, United Kingdom

**Associate Editors**

**Automotive Engineering Systems**

Xiaosong Hu, Chongqing University, Chongqing, China

**Bioenergy, Waste to Energy, Biomass**

Abdul-Sattar Nizami, King Abdulaziz University, Jeddah, Saudi Arabia

**Buildings and Built Environment**

Taehoon Hong, Yonsei University Department of Architecture and Architectural Engineering, Seoul, Korea, Republic of

**Materials**

Martin Schiemann, Ruhr University Bochum, Bochum, Germany

**Policy, Economics, Biomass, Solar Thermal**

Sotirios Karellas, National Technical University Of Athens Laboratory of Steam Boilers and Thermal Plants, Zografou, Greece

**Power Systems**

S. Wang, Harbin Institute of Technology, Harbin, China

**Solar PV, Solar Thermal, Solar Integration, Solar Materials, Solar Heating and Cooling**

Yanjun Dai, Shanghai Jiao Tong University, Shanghai, China

**Transport**

Brian Caulfield, University of Dublin Trinity College, Dublin, Ireland

**Wind Energy**

Paul Leahy, University College Cork National University of Ireland, Cork, Ireland
Editorial Board Members

Air pollution, Greenhouse Gas & Climate Policy
Xi Lu, Tsinghua University, Beijing, China

Bioenergy
Lise Appels, KU Leuven Science and Technology Group Department of Chemical Engineering, Heverlee, Belgium
Suani Teixeira Coelho, University of Sao Paulo, São Paulo, Brazil

Biomass
Purushothaman Abhilash, Banaras Hindu University Institute of Environment & Sustainable Development, Varanasi, India
Shurong Wang, Zhejiang University State Key Laboratory of Clean Energy Utilization, Hangzhou, China

Biomass and Solar
Abdul Ghani Olabi, University of Sharjah, Sharjah, United Arab Emirates

Buildings, Construction and Architecture
Jian Zuo, The University of Adelaide, Adelaide, South Australia, Australia

Carbon Fluxes
John D Albertson, Cornell University, Ithaca, New York, United States

Energy Economics and Financing
IIhan Ozturk, Cag University, Fac. of Business and Economics, Mersin, Turkey

Energy Modelling, Optimisation, Policy and Markets
Reinhard Haas, TU Wien University, Wien, Austria
Denis Sidorov, Hunan University, Changsha, China, and ESI, Russian Academy of Sciences, Irkutsk, Russian Federation

Heat Transfer
Qiuwang Wang, Xi’an Jiaotong University School of Energy and Power Engineering, Xian, China

Hydrogen Energy
Faik Bilgili, Erciyes University Faculty of Economics and Administrative Sciences, Kayseri, Turkey
Andreas W. Schäfer, University College London, London, United Kingdom

Hydrogen, Waste to Energy and Sustainable Energy
Yong Sik Ok, Korea University Division of Environmental Science and Ecological Engineering, Seoul, Korea, Republic of

Infrastructure and Society
Lindsay C. Beevers, Heriot-Watt University, Edinburgh, United Kingdom

Marine Energy
AbuBakr S. Bahaj, University of Southampton, Southampton City, United Kingdom
Barbara Zanuttigh, University of Bologna, Bologna, Italy

Materials
Chaoying Wan, University of Warwick International Institute for Nanocomposites Manufacturing, Warwick, United Kingdom

Ocean Atmosphere Interactions and Ocean Energy
António Franco de Oliveira Falcão, University of Lisbon, Lisbon, Portugal
Kieran O’Driscoll, Queen’s University Belfast, Belfast, United Kingdom
Wanan Sheng

Policy and Assessment
Douglas J. Arent, National Renewable Energy Laboratory, Scientific Computing and Energy Analysis, Golden, Colorado, United States
Mark F. Jentsch, Bauhaus University Weimar, Weimar, Germany
Noam Lior, University of Pennsylvania, Philadelphia, Pennsylvania, United States

Renewable Energy Infrastructure
Leyla Ozgener, Manisa Celal Bayar University, Manisa, Turkey
Renewable Energy Integration
Gareth Harrison, Edinburgh, United Kingdom

Renewable energy and power systems
Xiangjun Li, China Electric Power Research Institute, Energy Storage and Electro-technics Department, Beijing, China
Ji Ping, Hohai University College of Energy and Electrical Engineering, Nanjing, China

Resource Assessment and Solar
David Renne, Dave Renne Renewables, Boulder, Colorado, United States

Smart Cities
Diana Reckien, University of Twente, Enschede, Netherlands

Smart Grids and Power Systems
Liana Cipcigan, Cardiff University Cardiff School of Engineering, Cardiff, United Kingdom
Qinglai Guo, Tsinghua University, Beijing, China
George Kariniotakis, MINES ParisTech - Sophia Antipolis Campus, Sophia Antipolis Cedex, France

Solar Thermal
Brian Norton, Technological University Dublin, Dublin, Ireland

Solar photovoltaics and solar energy
Joshua Pearce, Michigan Technological University Department of Materials Science and Engineering, Houghton, Michigan, United States
Simon Philipps, Fraunhofer Institute for Solar Energy Systems ISE, Freiburg, Germany

Stochastic Optimisation in Energy Systems
Antonino Marvuglia, Luxembourg Institute of Science and Technology Environmental Research and Innovation Research Department, Belvaux, Luxembourg

Subsurface Resource, Sustainability, Techno-Socio-Economic Assessment
Ray (Zhenhua) Rui, Massachusetts Institute of Technology Department of Mechanical Engineering, Cambridge, Massachusetts, United States

Transport Electrification
Xiaosong Hu, Chongqing University, Chongqing, China

Turbomachinery, combustion and renewable energy
Patrick Hendrick, ULB, Bruxelles, Belgium

Water, Hydraulics and Hydropower
Li He, Tianjin University, Tianjin, China

Wind
Robert W. Thresher, National Renewable Energy Laboratory, Golden, Colorado, United States

Wind Energy and Energy Forecasting
Jethro Browell, University of Strathclyde, Glasgow, Scotland, United Kingdom

"Carbon materials, and catalysts
Michela Alfe, Institute for Research on Combustion (IRC), Napoli, Italy
INTRODUCTION
The mission of Renewable and Sustainable Energy Reviews is to communicate the most interesting and relevant critical thinking in renewable and sustainable energy in order to bring together the research community, the private sector and policy and decision makers. The aim of the journal is to share problems, solutions, novel ideas and technologies to support the transition to a low carbon future and achieve our global emissions targets as established by the United Nations Framework Convention on Climate Change.

The journal considers articles on the following themes, provided the link to renewable and sustainable energy is clear and thoroughly examined: Applications - buildings, industry and transport Energy resources - bioresources (e.g. biomass, waste), fossil fuels (including natural gas), geothermal, hydrogen, hydropower, nuclear, marine and ocean energy, materials, solar and wind Environment - atmosphere, climate issues, meteorology, mitigation technologies (e.g. carbon capture and storage (CCS), carbon capture and utilization (CCU), solar radiation management) Education - informing society including policy makers and decision-makers and teaching undergraduates and postgraduates on matters relating to renewable and sustainable energy Systems - carbon accounting, energy-food-water nexus, energy modelling, life cycle assessment (LCA), nutrient-energy-water (NEW) nexus, smart infrastructure including smart cities Sustainability - the United Nations Sustainability Development Goals (SDGs) Techno-socio-economic aspects - health, industry, markets, policy, political, regulatory, social (e.g. access, education, equality, equity) Utilization - batteries, conversion technologies, fuel cells, storage

Types of Paper
Renewable and Sustainable Energy Reviews publishes 'Addendum,' 'Editorials,' 'Full-length articles' (i.e. complete report on original research), 'Retractions/Corrigendum' and 'Review articles.' The journal also publishes two specific article types, 'Expert Insights,' a mini-review and 'Cutting Edge,' a concise research article. These articles are by invitation only from the Editor in Chief to field leaders on topics of significant interest. Special issue articles are also by invitation only and authors of papers submitted to a Special Issue must state clearly in their cover letter the article type (i.e. either a 'Review article' or 'Full-length article'). Case studies and new technology analyses must have a significant review element, which may take the form of a critique, comparison, or analysis. Case studies will only be considered if they also demonstrate the applicability of the work to other regions and/or inform the broader field of renewable and sustainable energy. A case study will be classified as a 'Full-length article.' A bibliographic or literature review, without critical thinking is not considered suitable. If an author selects an incorrect article type, their paper can be rejected by the journal at any stage of consideration for publication.

Authors are responsible for selecting the correct article type when submitting their paper. Authors are also advised to state in their cover letter and the 'RSER Author Checklist' to be submitted with all new articles effective November 2018. It is important that the correct article type is selected as it feeds through the review and publishing process to the final article published and the article type assigned to the article for indexing. Note that the journal no longer accepts two part articles (i.e. two separate submissions).

Paper Lengths - As a guide, 'Full-length articles' should be between 4000 and 8000 words (excluding title, author names and affiliations, keywords, abbreviations, table/figure captions, acknowledgements and references) and 'Review articles' should be up to 10,000 words (excluding title, author names and affiliations, keywords, abbreviations, table/figure captions, acknowledgments and references). Authors must state the number of words in their manuscript at submission stage underneath the abstract as a 'word count.' Case studies as 'Full-length articles' should also be between 4000 and 8000 words (excluding title, author names and affiliations, keywords, abbreviations, table/figure captions, acknowledgements and references). Expert Insights as mini-review article should be about 4,000 (excluding title, author names and affiliations, keywords, abbreviations, table/figure captions, acknowledgements and references). Cutting Edge as concise research articles should be about 4,000 (excluding title, author names and affiliations, keywords, abbreviations, table/figure captions, acknowledgements and references). Any departure from the above word counts are by
prior agreement with the Editor in Chief in advance only of making a submission. Word counts for Retractions/Corrigendum, Addendum and Editorials are at the discretion of the Editor in Chief, again by prior agreement.

**RSER Author Checklist**

Use the Checklist here, to check if you have prepared your paper correctly. The GFA 'RSER Author Checklist' must be submitted along with the Cover Letter. All papers must be in accordance with the GFA, if not they will automatically be rejected. Check the relevant section in this GFA for more details.

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 should complete the declaration of interest statement using this template 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.

**Preprints**

Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

**Use of inclusive language**

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

**Author contributions**

For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. More details and an example

**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 Editor-in-Chief. 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-in-Chief 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-in-Chief will result in a corrigendum.

Article transfer service
This journal is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. More information.

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 for more information.

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

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
Submission of papers proceeds fully online via http://ees.elsevier.com/rser You will be guided stepwise through the creation and uploading of the various files. The system automatically converts source files to a single Adobe Acrobat PDF version of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF at submission for the review process, these source files are needed for further processing after acceptance. Correspondence takes place online only via email.


Corresponding author: Clearly indicate who is responsible for correspondence at all stages of refereeing and publication, including post-publication. Ensure that your email address, telephone number (with country and area code) and full postal address are provided.

Co-author: Full postal addresses must be given for all co-authors. Please consult a recent journal paper for style if possible.

Original material: 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), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, without the written consent of the Publisher.

Editor’s requirements: No special requirements for this journal.

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.

Additional Information
Detailed instructions on manuscript preparation and artwork instructions can be found below. The editor reserves the right to return manuscripts that do not conform to the instructions for manuscript preparation and artwork instruction, as well as paper that do not fit the scope of the journal, prior to refereeing.

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

Our Guidelines has full details.

**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. **Line Numbering:** RSER journal is automatic line numbering feature enabled, therefore authors are requested to submit their source files without line numbers.

**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.

**Theory/calculation**

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

**Results**

Results should be clear and concise.

**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.

**Data Availability**

Authors are encouraged to include a 'Data Availability' section in their manuscript which is visible in ALL reading formats and may refer to data hosted in ANY repository. It should be placed before the references to provide readers with information about where they can obtain the research data required to reproduce the work reported in the manuscript, and typically consists of a simple sentence giving the URL(s) of and citation(s) to the dataset(s). Full information can be found here.

**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 lowercase 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.

**Highlights**

Highlights are mandatory for this journal as they help 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**

A concise and factual abstract is required, we recommend a maximum of 250 words with no abbreviations or acronyms. The abstract should state briefly the purpose of the research, the principal results and major conclusions/key findings and state any next steps. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, references should not be used in the abstract. Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. Avoid unnecessary use of abbreviations.

**KEYWORDS**

Immediately after the abstract, provide a minimum 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.

**Abbreviations**

Provide a list of abbreviations, units and nomenclature underneath the keywords in the manuscript.

**Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references. Do not include any acknowledgements on the title page, as a footnote to the title or otherwise. List in the acknowledgements of any 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.

**Units**

Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.
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 solids (/) 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 very 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 List of References.

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.
• Embed the artwork in the main body of the manuscript where it is referred to in the text.
• 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.
Tables
Please submit tables as editable text and not as images. Tables must be placed next to the relevant text in the main body of the manuscript. 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.

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

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. If this style is not used a manuscript will be desk rejected.

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:
[5] Oguro M, Imahiro S, Saito S, Nakashizuka T. Mortality data for Japanese oak wilt disease and surrounding forest compositions, Mendeley Data, v1; 2015. https://doi.org/10.17632/xwj98nb39r1. Note shortened form for last page number. e.g., 51–9, and that for more than 6 authors the first 6 should be listed followed by 'et al.' For further details you are referred to 'Uniform Requirements for Manuscripts submitted to Biomedical Journals' (J Am Med Assoc 1997;277:927–34) (see also Samples of Formatted References).

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.

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

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.

To maximise the visibility of your data, authors are invited to add a citation to their datasets by including a data reference in their Reference List as per the 'Data References' instructions elsewhere on this 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.

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.