



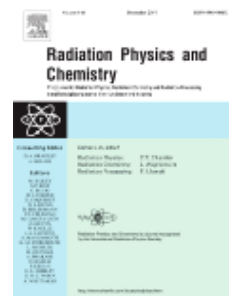
RADIATION PHYSICS AND CHEMISTRY

The Journal for Radiation Physics, Radiation Chemistry and Radiation Processing

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

●	Description	p.1
●	Audience	p.3
●	Impact Factor	p.3
●	Abstracting and Indexing	p.3
●	Editorial Board	p.3
●	Guide for Authors	p.5



ISSN: 0969-806X

DESCRIPTION

Radiation Physics and Chemistry is a multidisciplinary journal that provides a medium for publication of substantial and original papers, reviews, and short communications which focus on research and developments involving **ionizing radiation** in **radiation physics**, **radiation chemistry** and **radiation processing**.

Radiation Physics and Chemistry aims to publish articles with significance to an international audience, containing substantial novelty and contributions to science. We expect that articles present new insight or hypothesis testing, that they focus on radiation effects or applications of ionizing radiation, provide uncertainties and statistical analysis where relevant, and present their findings in context with discussion of past and recent literature. The editors reserve the right to reject, with or without external review, articles which do not meet these criteria. This could include articles which are very similar to previous publications, except that target substrates, materials, analyzed sites or experimental methods have been changed.

A fuller though not exhaustive list of topics that are considered for publication include:

Radiation Physics

Fundamental processes in radiation physics

- Interaction mechanisms for example scattering and absorption of photon and particle radiations
- Attenuation coefficients
- X-ray fluorescence
- Cherenkov effect
- Polarization
- Effects of periodic structures (Bragg diffraction, channelling, parametric x-radiation, etc)
- Mathematical methods in radiation physics, reference data

Radiation sources and detectors

- Accelerator and radionuclide spectra and other properties
- Radiation fields from point and extended sources
- Detector response functions
- Basic physics of Dosimetry
- Radiation transport
- Buildup factors

Radiation Chemistry

- Ionizing radiation induced ionic and radical reactions
- Kinetics and mechanism of radiolysis reactions
- Pulse radiolysis technique and measurements
- Nanoparticle production by ionizing radiation
- Radiation induced chain reactions, polymerization
- Irradiation effects on polymers
- Dose and dose rate effects
- LET effects on chemical reactions
- Pollutant removal by ionizing radiation
- Computational models on radiation chemical reactions

Papers on photochemistry, microwave chemistry and thermochemistry are believed to belong to the scope of RPC only if they have strong relevance to radiation chemistry. EPR papers will only be considered for publication when the method is used for clarifying radiation chemical processes, e.g. by determining the nature of the transient intermediates. Radiochemistry papers such as tracer technique, radon or other radionuclide measurements, isotopic constitutions fall outside the scope of the journal.

Radiation Processing

Radiation Sterilization

- Microbiology
- Toxicology
- Biocompatibility
- Validation

Food irradiation

- Microbiological quality
- Chemical effects
- Nutrition
- Detection induced radioactivity

Polymers

- Synthesis
- Polymerization
- Curing
- Grafting
- Crosslinking
- Degradation
- Composites

Environmental

- Effluent gas
- Waste water
- Water purification
- Toxin reduction
- Sludge
- Recycling of wastes

Radiation effects

- Semiconductors
- Gemstones
- Crystals
- Ceramics

Dosimetry and process control

- Dosimeter systems
- Analytical instrumentation

- Environmental influence
- Measurement uncertainty

Radiation sources and facilities for radiation processing

- Electron Accelerators
- Gamma and x-ray facilities
- Safety issues
- Transport of radioisotopes

AUDIENCE

Chemists and physicists working with ionizing radiation and its applications.

IMPACT FACTOR

2016: 1.315 © Thomson Reuters Journal Citation Reports 2017

ABSTRACTING AND INDEXING

Aqualine Abstracts
Cambridge Scientific Abstracts
Chemical Abstracts
Current Contents/ASCA
Current Contents/Physics, Chemical, & Earth Sciences
Current Contents/SciSearch Database
Current Contents/Social & Behavioral Sciences
Materials Science Citation Index
Health and Safety Science Abstracts
INSPEC
PASCAL/CNRS
Research Alert
Toxicology Abstracts
Scopus

EDITORIAL BOARD

Editors-in-Chief:

Christopher Chantler, School of Physics, University of Melbourne, Parkville, 3010, Victoria, Australia
(Radiation Physics)

Piotr Ulański, Inst. of Applied Radiation Chemistry, Lodz University of Technology, Wroblewskiego 15, 93-590,
Lodz, Poland
(Radiation Processing)

Laszlo Wojnárovits, Inst. of Isotopes, Centre for Energy Research, Hungarian Academy of Sciences, P.O. Box
49, H-1525, Budapest, Hungary, Fax: +36 1 392 2533
(Radiation Chemistry)

Consulting Editors:

David Bradley, University of Surrey, Guildford, Surrey, UK
Photon interactions and biomedical applications of synchrotron sources

Arne Miller, Technical University of Denmark (DTU), Roskilde, Denmark
(Radiation Processing)

Associate Editors in Radiation Physics:

Mark Bailey, Risø High Dose Reference Laboratory, Technical University of Denmark (DTU), Frederiksborgvej
399, 4000, Roskilde, Denmark
(Monte-Carlo Modelling, Dosimetry, Radiation Interactions, Radiation Effects in Materials, Radiation
Processing)

Stephen Best, School of Chemistry, University of Melbourne, Melbourne, VIC 3010, Australia

(Coordination Chemistry, Bioinorganic Chemistry, Metalloenzymes, XAS, XAFS, Electrochemistry, Catalysis)

Malcolm Cooper, Dept. of Physics, University of Warwick, Bransford Avenue, CV4 7AA, Coventry, UK
(Photon Scattering, Synchrotron Radiation, Magnetic Materials)

William Dunn, Dept. of Mechanical and Nuclear Engineering, Kansas State University, 3002 Rathbone Hall, Manhattan, KS 66506, USA

(Nondestructive Evaluation Methods, Monte Carlo Methods, Modeling and Analysis of Radiation Measurement Systems)

Manuel García-León, Centro Nacional de Aceleradores, University of Seville, Facultad de Física, 41080, Sevilla, Spain

(Radioactivity, Radiation Detection, Environmental Radioactivity, Accelerator Mass Spectrometry (AMS), Ion Beam Analysis Techniques, XRF, 14C Dating, Applied Nuclear Physics)

Alessio Mangiarotti, Instituto de Física, University of Sao Paulo (USP), Rua do Matão nr.1371, Butantã, 05508090, São Paulo, Brazil

(Bremsstrahlung, Photon Scattering, Electron Scattering, Monte Carlo Simulation, Charged Particle Detector)

Ladislav Musilek, Fac. of Nuclear Sciences and Physical Eng., Czech Technical University in Prague (Ceské Vysoké Učení Technické), Brehova 7, 115 19, Praha 1, Czech Republic

(Radiation Measurements and Applications)

Hiroyuki Oyanagi, AIST Central 2, Photonics Research Institute, 1-1-1 Umezono, 305-8568, Ibaraki, Japan

Patrick Regan, Dept. of Physics, University of Surrey, GU2 7XH, Guildford, Surrey, UK

Eric Shirley, Sensor Science Division, National Institute of Standards and Technology (NIST), 100 Bureau Drive, Gaithersburg, MD 20899-8441, USA

Associate Editors in Radiation Chemistry:

Emilio Bucio, Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México (UNAM), Circuito Exterior s/n, Ciudad Universitaria, 04510, Mexico City, Mexico

(Radiation-Grafting, Smart Polymers, Drug Delivery)

Xavier Coqueret, UFR Sciences Exactes et Naturelles, Moulin de la Housse, Institute of Molecular Chemistry, BP 1039, 51687, Reims Cedex 2, France

Marie Davídková, Nuclear Physics Institute, The Czech Academy of Sciences, Řež 130, 250 68, Řež, Czech Republic

Vladimir Feldman, Dept. of Chemistry, M.V. Lomonosov Moscow State University, Vorobyovy Gory, 119991, Moscow, Russian Federation

(Free Radicals in Solids and Polymers, EPR, Low Temperatures, Matrix Isolation)

Jay LaVerne, Radiation Lab., University of Notre Dame, Notre Dame, IN 46556, USA

(Aqueous Systems, LETF Effects)

Dušan Ražem, Radiation Chemistry and Dosimetry Lab., Bijenicka cesta 54, Ruđer Bošković Institute, P.O. Box 180, 10000, Zagreb, Croatia

(Chemical Kinetics)

Gustavo Varca, Nuclear and Energy Research Institute (IPEN/CNEN-SP), University of Sao Paulo (USP), Avenida Lineu Prestes 2242, Cidade Universitária, 05508-000, São Paulo, Brazil

(Pharmaceuticals, Nanobiotechnology, Biomacromolecules, Polymers)

Associate Editors in Radiation Processing:

Dieter Ehlermann, Brüsseler Ring 63, 76344 Eggenstein-Leopoldshafen, Germany

(Food Irradiation)

Olgun Guven, Kimya Bolumu, Hacettepe University, Beytepe, 06532, Ankara, Turkey

(Polymers)

Wolfgang Knolle, Institut für Oberflächenmodifizierung e.V., Permoserstrasse 15, D-04303, Leipzig, Germany

(Polymers)

Kim Morehouse, Food and Drug Administration, FDA, Center for Food Safety and Applied Nutrition, 5100 Paint Branch Parkway, College Park, MD 20740, USA

(Radiation Processing, Food Irradiation)

Anuradha Prakash, Food Science Program, Chapman University, One University Drive, Orange, CA 92866, USA

(Food Quality, Food Processing, Food Irradiation)

Andrew Whittaker, Centre for Magnetic Resonance, University of Queensland, Research Road, Brisbane, QLD 4072, Australia

(Polymers)

GUIDE FOR AUTHORS

Your Paper Your Way

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

To find out more, please visit the Preparation section below.

INTRODUCTION

The Journal for Radiation Physics, Radiation Chemistry and Radiation Processing

A multidisciplinary journal linking science and industry

Novelty and relevance

Radiation Physics and Chemistry aims to publish articles with significance to an international audience, containing substantial novelty and contributions to science. We expect that articles present new insight or hypothesis testing, that they focus on radiation effects or applications of ionizing radiation, provide uncertainties and statistical analysis where relevant, and present their findings in context with discussion of past and recent literature. The editors reserve the right to reject, with or without external review, articles which do not meet these criteria. This could include articles which are very similar to previous publications, except that target substrates, materials, analyzed sites or experimental methods have been changed.

General considerations Note that each new submission will be checked against the CrossCheck database to detect (self)-plagiarism. CrossCheck uses originality detection software to compare manuscripts against a unique database of 30+ million articles from 200+ publishers. Normally, RPC will not expect the total number of tables and figures to exceed 10 unless it concerns an extensive review article or in other exceptional cases. Figures and tables that are not essential to the paper can best be submitted as online supplementary material. Please provide reproducible data where possible and include measurement uncertainties and error analyses Data should be presented with a number of decimals that matches the data best

Types of paper

Manuscripts, which will be subject to peer review, should take one of the following forms:

Full Length Article

It should be definitive and describe a reasonably complete investigation

Short Communications

It should describe ideas, data or investigations that are not completed, or can otherwise not justify publication of an original paper. Short communications should normally not exceed two published pages. The journal will see to it that this type of article will be refereed and published faster than original papers.

Review articles

Review articles are in principal only considered when solicited by the Editor. Unsolicited review article ideas should always be discussed upfront and authors should contact the relevant Editor-in-Chief with a comprehensive proposal.

For Radiation Physics: C. Chantler

For Radiation Chemistry: L. Wojnarovits

For Radiation Processing: P. Ulanski

Conference proceedings

It will be accepted for publication, following discussion with the Publisher and the Editors-in-Chief of the Journal.

Contact details for submission

Your online submission should be assigned to the Editor-in-Chief in charge of the section of the journal in which you want your submission to be considered. These editors-in-chief and sections are:

C. Chantler, (Radiation Physics) University of Melbourne, School of Physics, 3010 Victoria, Australia.
Email: chantler@unimelb.edu.au

P. Ulanski, (Radiation Processing) Institute of Applied Radiation Chemistry, Lodz University of Technology. Email: ulanskip@mitr.p.lodz.pl

L. Wojnarovits, (Radiation Chemistry) Institute of Isotopes, Hungarian Academy of Sciences., Budapest, Hungary. Email: wojnarovits.laszlo@energia.mta.hu

It is essential that the authors adhere to the 'Guide for Authors' in the process of article preparation. Only articles fitting within the scope of the journal and adhering to the "Guide for Authors" of the journal will be considered.

Classifications

In order to ensure the best possible match between submissions and papers, assigning correct and complete classifications is necessary. It is therefore emphasized that all submissions need to receive one or two classifications from the 'Select classifications' tab during submission. Authors are also strongly encouraged to select one or more classifications describing their expertise best in their EES profile page, and keep this page updated.

For more details, authors should consult the [Subject Classifications](#)

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. If there are no conflicts of interest then please state this: 'Conflicts of interest: none'. [More information](#).

Submission declaration and verification

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see '[Multiple, redundant or concurrent publication](#)' section of our ethics policy for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service [CrossCheck](#).

Changes to authorship

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

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 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 **USD 2200**, excluding taxes. Learn more about Elsevier's pricing policy: <http://www.elsevier.com/openaccesspricing>.

Green open access

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

This journal has an embargo period of 24 months.

Language (usage and editing services)

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the [English Language Editing service](#) available from Elsevier's WebShop.

Submission

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

Please go to the submission page <http://ees.elsevier.com/rpc> to submit your paper.

NEW SUBMISSIONS

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

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

References

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

Formatting requirements

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

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

Divide the article into clearly defined sections.

Figures and tables embedded in text

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

Peer review

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [More information on types of peer review.](#)

REVISED SUBMISSIONS

Use of word processing software

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the [Guide to Publishing with Elsevier](#)). See also the section on Electronic artwork.

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

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.

Subdivision

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. Follow this general outline when writing manuscripts:

Title, Authors, Affiliations, Abstract, Keywords. Introduction, Experimental, Results, Discussion, Conclusion. Acknowledgements, Appendix, References, Figure legends, Tables. The introduction should briefly describe the background and reason for doing the work described. The experimental should provide enough information for readers to repeat the experiment. The discussion should evaluate the results and their relationship to comparable works. The conclusion should briefly summarize the obtained results.

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. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
- **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that 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.

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view [example Highlights](#) on our information site.

Keywords

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

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.

Math formulae

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

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

Artwork

Electronic artwork

General points

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

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

Formats

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

EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.

TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

Color artwork

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

Figure captions

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

Tables

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.

References in a special issue

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

Reference management software

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

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:

<http://open.mendeley.com/use-citation-style/radiation-physics-and-chemistry>

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, but authors are strongly encouraged to put the references of the submission in the correct journal reference style as this will make it easier for Editors and reviewers to assess the paper. In any case, the reference style should be consistent, and 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.

Reference style

Text: All citations in the text should refer to:

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

Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

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

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

Examples:

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. *J. Sci. Commun.* 163, 51–59.

Reference to a book:

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

Reference to a chapter in an edited book:

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

Reference to a website:

Cancer Research UK, 1975. Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> (accessed 13 March 2003).

Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T., 2015. Mortality data for Japanese oak wilt disease and surrounding forest compositions. *Mendeley Data*, v1. <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.

RESEARCH DATA

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

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

Data linking

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

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

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

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

Mendeley Data

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

For more information, visit the [Mendeley Data for journals page](#).

Data statement

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

ARTICLE ENRICHMENTS

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.

Author benefits

No page charges

Publishing in Radiation Physics and Chemistry is free.

Fast online publication

Accepted articles will be published online in their untypeset version within five days after acceptance. These articles can be cited by doi.

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](#).