



APPLIED RADIATION AND ISOTOPES

A journal of nuclear and radiation techniques and their applications in the physical, chemical, biological, medical, earth, planetary, environmental, security and engineering science.

AUTHOR INFORMATION PACK

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.4



ISSN: 0969-8043

DESCRIPTION

Applied Radiation and Isotopes provides a high quality medium for the publication of substantial, original and scientific and technological papers on the development and applications of nuclear, radiation and radionuclide techniques in chemistry, physics, biochemistry, biology, medicine, security, engineering and in the earth, planetary and environmental sciences. Nuclear techniques are defined in the broadest sense and both experimental and theoretical papers are welcome. They include the development and use of α - and β -particles, X-rays and γ -rays, neutrons and other nuclear particles and radiations from all sources, including radionuclides, synchrotron sources, cyclotrons and reactors and from the natural environment.

Papers dealing with radiation processing, or the biological, chemical or physical effects of radiation are not appropriate for publication in *Applied Radiation and Isotopes*. Manuscripts dealing with radiation processing, or the chemical or physical effects of radiation should be directed to our sister journal *Radiation Physics and Chemistry*.

Manuscripts describing the results of measurements of radioactive or other substances in any medium that have been obtained using well-established analytical methods will not be accepted unless they also describe substantial innovations or improvements in the analytical methodology. Relevant topics for *Applied Radiation and Isotopes* include the following, however, authors are encouraged to suggest other topics which might also be published in the journal: Radiation Sources: design, construction, production, characteristics. Radionuclides: production, activation cross-sections, target design, processing, quality control procedures. Synthesis of Labelled Compounds: synthesis, purification, quality control, in vitro testing of radionuclide-labelled compounds/ radiopharmaceuticals. Measurement of Radiation and Radioactivity: measurement of X-rays, γ -rays, α - and β -particles and other forms of radiation; nuclear instrumentation, including radiation spectrometry, dosimetry, novel counting systems and whole-body counters, novel radiation detector systems. Radioanalytical Methods: activation analysis, isotope dilution analysis, radioimmunoassay, radionuclide tomography, radiation spectrometry. Nuclear Physics and Chemistry topics including data compilations, directly relevant to practical applications. Nuclear Magnetic Resonance/Electron Spin Resonance: dosimetry, dating, imaging, biomedical applications and radiation accidents. Accelerator Mass Spectrometry: methodology, biomedical, environmental and other applications. Nuclear Geophysics: studies of the earth's crust, the hydrosphere, the atmosphere and planetary bodies; nuclear methods for exploration, extraction, transport and use of water, oil, gas, coal and other minerals. Radiochemistry: chemical behaviour and speciation of radionuclides. Environment: chemical behaviour and speciation of radionuclides and labelled compounds other than

those of direct clinical interest, in geological, environmental, human, animal or plant systems; factors which modify this behaviour.

Manuscripts, which will be subject to peer review, should take one of the following forms: Full length articles, which should be definitive and describe a reasonably complete investigation. Short Communications, which may describe new, unpublished information, including preliminary communications and work in progress. Letters to the Editors, containing comments related to articles previously published in the journal. This type of communication should not exceed two printed pages in order to expedite their publication. Review articles and conference proceedings may also be accepted for publication, following discussion with an editor of the journal. Sponsored issues publication: The journal Applied Radiation and Isotopes offers interested parties the option of fast publication in (supplemental) sponsored issues. For more information please click [here](#).

The journal aims to publish papers with significance to an international audience, containing substantial novelty and scientific impact. The Editors reserve the rights to reject, with or without external review, papers that do not meet these criteria.

AUDIENCE

Researchers involved in the production, measurement and application of radionuclides and radiation, in the physical, chemical, biological, medical, earth, planetary, environmental and engineering sciences.

IMPACT FACTOR

2013: 1.056 © Thomson Reuters Journal Citation Reports 2014

ABSTRACTING AND INDEXING

Analytical Abstracts
Applied Health Physics Abstracts
BIOSIS
Elsevier BIOBASE
Cambridge Scientific Abstracts
Chemical Abstracts
Current Contents/BIOMED Database
Current Contents/Life Sciences
Current Contents/Physics, Chemical, & Earth Sciences
Current Contents/SciSearch Database
MEDLINE®
EMBASE
Engineering Index
Health and Safety Science Abstracts
INSPEC
PASCAL/CNRS
Research Alert
SSSA/CISA/ECA/ISMEC
Science Citation Index
Toxicology Abstracts
Scopus

EDITORIAL BOARD

Editors-in-Chief:

R.P. Hugtenburg, School of Medicine, Inst. of Life Science, Swansea University, Singleton Park, Swansea, SA2 8PP, Wales, UK
(Monte Carlo methods; solid-state dosimetry; microdosimetry; photon scattering)

B.E. Zimmerman, National Institute of Standards and Technology (NIST), 100 Bureau Drive, M/S 8462, Bldg. 245, Room C114, Gaithersburg, MD 20899-8260, USA
(Radiation measurement and medical applications of ionizing radiation)

Consulting Editors:

D.A. Bradley

(Photon interactions and biomedical applications of synchrotron sources)

B.M. Coursey

D.M. Taylor

(Radiopharmaceutical/radionuclide biochemistry; internal dosimetry; bioinorganic chemistry of actinides)

Editors:

V. Correcher, CIEMAT, Av. Complutense 40. Ed. 2., 28040, Madrid, Spain

(Thermoluminescence and cathodoluminescence properties of natural, ceramic and synthetic materials)

R. Engelbrecht, Dept. of Radiation Safety and Applications, Seibersdorf Labor GmbH, 2444, Seibersdorf, Austria
(Internal dosimetry; Whole Body Counting; Excretion analysis; Radiochemistry; Environmental radioactivity)

J.E. Fernandez, Dept. of Industrial Engineering, Laboratory of Montecuccolino, Alma Mater Studiorum-University of Bologna, via dei Colli 16, 40136, Bologna, Italy

(Photon transport, Monte Carlo simulation, Multiple scattering, Detector response, Interactions of radiation with matter)

A. Harms, Environment Laboratories, International Atomic Energy Agency (IAEA), 4a, Quai Antoine 1er, 98000, Monaco, Monaco

(Radiochemistry; environmental radioactivity; radioactivity measurement)

N. Hermanspahn, Environmental Radioactivity, Inst. of Environmental Science and Research Ltd. (ESR), 27 Creyke Road, 8041, Christchurch, New Zealand

(Environmental radioactivity)

E.M.A. Hussein, Fac. of Engineering, University of Regina, 3737 Wascana Parkway, Regina, S4S 0A2, Saskatchewan, Canada

(Detection of threat-materials, Industrial and medical imaging, gauging, probing and monitoring)

F. Mourtada, Christiana Care Health System, Clinical Physics, Helen F. Graham Cancer Center, Newark, DE 19713, Delaware, USA

(Medical applications of radiation/medical physics)

V. Nagy, Armed Forces Radiobiology Research Institute, 8901 Wisconsin Ave., Bethesda, MD 20899-5603, Maryland, USA

(Dosimetry and radiobiology)

G. Reischl, Dept. of Radiology, Universitätsklinikum Tübingen, Röntgenweg 15, D-72076, Tübingen, Germany
(Radiopharmaceuticals, PET, Radiochemistry, Radionuclide production)

S.C. Roy, Indian Science News Association, 92 Acharya P.C. Road, 700009, Kolkata, India

(Fundamental interactions, Detector and Radiation measurements)

R. Schibli, Eidgenössische Technische Hochschule (ETH) Zürich, Schafmattstrasse 18, CH-8093, Zürich, Switzerland

J.S. Schweitzer

(Nuclear logging; geological elemental analysis; nuclear techniques in the oil industry; nuclear data for borehole logging and mineral analysis)

F. Szelecsényi, Inst. for Nuclear Research, Hungarian Academy of Sciences, H-4026, Debrecen, Hungary
(Production of radioactive isotopes with charged particle accelerators including PET, SPECT and therapeutically relevant isotopes, Production related nuclear data measurement and evaluation, Radiochemistry including automation of medical radioisotope production.)

J. Tickner, Process Science and Engineering, CSIRO, Locked Bag 2005, Kirrawee, NSW 2232, Australia

(Nuclear instrumentation (especially fast neutrons, X-rays and gamma-rays);

M. Venkatesh, Div. of Physical and Chemical Sciences, International Atomic Energy Agency (IAEA), Vienna, Austria

(radiochemistry, radionuclide production, radiopharmaceuticals, radiometric assays)

GUIDE FOR AUTHORS

INTRODUCTION

Applied Radiation and Physics: A journal of nuclear and radiation techniques and their applications in the physical, chemical, biological, medical, earth, planetary, environmental, security and engineering science. The journal aims to publish papers with significance to an international audience, containing substantial novelty and scientific impact. The Editors reserve the rights to reject, with or without external review, papers that do not meet these criteria.

Types of Article

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

Original Papers, which should be definitive and describe a reasonably complete investigation;
Short Communications, which 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 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;
Conference proceedings may be accepted for publication, following discussion with the Publisher and the Editors-in-Chief of the Journal; **Letters to the editor** are meant to comment to a previously published paper and should be in the order of approximately 1,500 words. The journal will see to it that this type of article will be refereed and published faster than original papers.

BEFORE YOU BEGIN

Ethics in publishing

For information on Ethics in publishing and Ethical guidelines for journal publication see <http://www.elsevier.com/publishingethics> and <http://www.elsevier.com/journal-authors/ethics>.

Human and animal rights

If the work involves the use of animal or human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans <http://www.wma.net/en/30publications/10policies/b3/index.html>; EU Directive 2010/63/EU for animal experiments http://ec.europa.eu/environment/chemicals/lab_animals/legislation_en.htm; Uniform Requirements for manuscripts submitted to Biomedical journals <http://www.icmje.org>. Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

Conflict of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work. See also <http://www.elsevier.com/conflictsofinterest>. Further information and an example of a Conflict of Interest form can be found at: http://help.elsevier.com/app/answers/detail/a_id/286/p/7923.

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 <http://www.elsevier.com/postingpolicy>), 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 <http://www.elsevier.com/editors/plagdetect>.

Changes to authorship

This policy concerns the addition, deletion, or rearrangement of author names in the authorship of accepted manuscripts:

Before the accepted manuscript is published in an online issue: Requests to add or remove an author, or to rearrange the author names, must be sent to the Journal Manager from the corresponding author of the accepted manuscript and must include: (a) the reason the name should be added or removed, or the author names rearranged and (b) written confirmation (e-mail, fax, 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. Requests that are not sent by the corresponding author will be forwarded by the Journal Manager to the corresponding author, who must follow the procedure as described above. Note that: (1) Journal Managers will inform the Journal Editors of any such requests and (2) publication of the accepted manuscript in an online issue is suspended until authorship has been agreed.

After the accepted manuscript is published in an online issue: Any requests to add, delete, or rearrange author names in an article published in an online issue will follow the same policies as noted above and 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 about this can be found here: <http://www.elsevier.com/authors/article-transfer-service>.

Copyright

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

For subscription articles

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (for more information on this and copyright, see <http://www.elsevier.com/copyright>). 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 (please consult <http://www.elsevier.com/permissions>). 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: please consult <http://www.elsevier.com/permissions>.

For open access articles

Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (for more information see <http://www.elsevier.com/OAauthoragreement>). Permitted reuse of open access articles is determined by the author's choice of user license (see <http://www.elsevier.com/openaccesslicenses>).

Retained author rights

As an author you (or your employer or institution) retain certain rights. For more information on author rights for:

Subscription articles please see <http://www.elsevier.com/journal-authors/author-rights-and-responsibilities>.
Open access articles please see <http://www.elsevier.com/OAauthoragreement>.

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 agreements and developed policies to allow authors whose articles appear in journals published by Elsevier, to comply with potential manuscript archiving requirements as specified as conditions of their grant awards. To learn more about existing agreements and policies please visit <http://www.elsevier.com/fundingbodies>.

Open access

This journal offers authors a choice in publishing their research:

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 their research funder

Subscription

- Articles are made available to subscribers as well as developing countries and patient groups through our access programs (<http://www.elsevier.com/access>)
- No page charges

All articles published open access will be immediately and permanently free for everyone to read and download. Permitted reuse is defined by your choice of one of the following Creative Commons user licenses:

Creative Commons Attribution (CC BY): lets others distribute and copy the article, to create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), to include in a collective work (such as an anthology), to 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-ShareAlike (CC BY-NC-SA): for non-commercial purposes, lets others distribute and copy the article, to create extracts, abstracts and other revised versions, adaptations or derivative works of or from an article (such as a translation), to include in a collective work (such as an anthology), to text and data mine the article, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, do not modify the article in such a way as to damage the author's honor or reputation, and license their new adaptations or creations under identical terms (CC BY-NC-SA).

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.

To provide open access, this journal has a publication fee which needs to be met by the authors or their research funders for each article published open access.

Your publication choice will have no effect on the peer review process or acceptance of submitted articles.

The open access publication fee for this journal is **\$2200**, excluding taxes. Learn more about Elsevier's pricing policy: <http://www.elsevier.com/openaccesspricing>.

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 (<http://webshop.elsevier.com/languageediting/>) or visit our customer support site (<http://support.elsevier.com>) for more information.

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 on the journal homepage <http://ees.elsevier.com/ari> to submit your paper.

PREPARATION

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: <http://www.elsevier.com/guidepublication>). 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.

LaTeX

You are recommended to use the Elsevier article class *elsarticle.cls* (<http://www.ctan.org/tex-archive/macros/latex/contrib/elsarticle>) to prepare your manuscript and BibTeX (<http://www.bibtex.org>) to generate your bibliography.

For detailed submission instructions, templates and other information on LaTeX, see <http://www.elsevier.com/latex>.

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.** Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. 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 phone numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address. Contact details must be 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

An abstract of not more than 80 words must be supplied for all articles, and preferentially a short summary for Technical Notes.

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). See <http://www.elsevier.com/highlights> for examples.

Acknowledgements

Follow this order when typing manuscripts: Title, Authors, Affiliations, Abstract, Keywords, Main text, Acknowledgements, Appendix, References, Vitae, Figure Captions and then Tables. Do not import the Figures or Tables into your text. The corresponding author should be identified with an asterisk and footnote. All other footnotes (except for table footnotes) should be identified with superscript Arabic numbers.

Nomenclature and Units

Preferably, Systeme International (SI) units should be used throughout with equivalent quantities in older usage indicated in parentheses. NBS Special Publication 330 The International System of Units (SI) or the Systeme International d'Unites' may be helpful in this respect. Chemical and biological nomenclature should conform to International Union of Pure and Applied Chemistry (IUPAC) recommendations. The IUPAC Rules can be found in the Handbook of Chemistry and Physics, CRC Press Inc., Boca Raton, FL. Radioactive labels should be indicated by the radionuclide's

symbol in square brackets before the labelled compound, e.g. [3H]H₂O, [14sC]Carbon dioxide, 2-amino-4-([11C]methylthio) butyric acid (not [11C]methyl-methionine), N-[11C]methyl-nomorphine, etc. Carrier-free compound only should be designated as 3H₂, ¹³NH₃, etc. No-carrier-added compounds should be written as [13N]NH₃, [11C]CO₂ unless proof of specific activity is given. Metastable (isomeric) and ground state of nuclei are designated by an "m" or "g" respectively, placed after the atomic-mass number, e.g. ^{99m}Tc and ^{99g}Tc although the "g" may be omitted if no ambiguity results.

Artwork

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the printed version.
- Submit each illustration as a separate file.

A detailed guide on electronic artwork is available on our website:

<http://www.elsevier.com/artworkinstructions>

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. For further information on the preparation of electronic artwork, please see <http://www.elsevier.com/artworkinstructions>.

Please note: Because of technical complications that can arise by converting color figures to 'gray scale' (for the printed version should you not opt for color in print) please submit in addition usable black and white versions of all the color illustrations.

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.

Line Drawings

Good quality printouts on white paper produced in black ink are required. All lettering, graph lines and points on graphs should be sufficiently large and bold to permit reproduction when the diagram has been reduced to a size suitable for inclusion in the journal. Dye-line prints or photocopies are not suitable for reproduction. Do not use any type of shading on computer-generated illustrations.

Photographs

Original photographs must be supplied as they are to be reproduced (e.g. black and white or colour). If necessary, a scale should be marked on the photograph. Please note that photocopies of photographs are not acceptable.

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.

References

All publications cited in the text should be presented in a list of references following the text of the manuscript. In the text refer to the author's name (without initials) and year of publication (e.g. "Since Peterson (1993) has shown that ?" or "This is in agreement with results obtained later (Kramer, 1994)"). For three or more authors use the first author followed by "et al.", in the text. The list of references should be arranged alphabetically by authors' names. The manuscript should be carefully checked to ensure that the spelling of authors' names and dates are exactly the same in the text as in the reference list.

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.

Citation in Text

References should be given in the following form:

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.

Web References

Dadachova, E., Smith, S.V., Mirzadeh, S., 1996. Electrolytic reduction of carrier-free rhenium-188. *Appl. Radiat. Isot.* 47 (3), 289-292.

References in Special Issue

Walling, D.E., Quine, T.A., He, Q., 1993. Investigating contemporary rates of floodplain sedimentation. In: Carling, P.A., Petts, G.E. (Eds.), *Low-land Floodplain Rivers: Geomorphological Perspectives*. Wiley, Chichester, pp. 166-184.

Reference management software

This journal has standard templates available in key reference management packages EndNote (<http://www.endnote.com/support/enstyles.asp>) and Reference Manager (<http://refman.com/support/rmstyles.asp>). Using plug-ins to wordprocessing packages, authors only need to select the appropriate journal template when preparing their article and the list of references and citations to these will be formatted according to the journal style which is described below.

Reference formatting

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

Reference style

Text: 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.

Video data

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 50 MB. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect: <http://www.sciencedirect.com>. 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 at <http://www.elsevier.com/artworkinstructions>. 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.

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 at <http://www.elsevier.com/audioslides>. Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

Supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier Web products, including

ScienceDirect: <http://www.sciencedirect.com>. In order to ensure that your submitted material is directly usable, please provide the data in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed instructions please visit our artwork instruction pages at <http://www.elsevier.com/artworkinstructions>.

MATLAB FIG files

MATLAB FIG files (optional): You can enrich your online articles by providing supplementary MATLAB figure files with the .FIG file extension. These files will be visualized using an interactive viewer that allows readers to explore your figures within the article. The FIG files can be uploaded in our online submission system, and will be made available to download from your online article on ScienceDirect. For more information, please see <http://www.elsevier.com/matlab>.

Interactive plots

This journal encourages you to include data and quantitative results as interactive plots with your publication. To make use of this feature, please include your data as a CSV (comma-separated values) file when you submit your manuscript. Please refer to <http://www.elsevier.com/interactiveplots> for further details and formatting instructions.

Submission checklist

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

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
- Phone numbers

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- 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)

Printed version of figures (if applicable) in color or black-and-white

- Indicate clearly whether or not color or black-and-white in print is required.
- For reproduction in black-and-white, please supply black-and-white versions of the figures for printing purposes.

For any further information please visit our customer support site at <http://support.elsevier.com>.

AFTER ACCEPTANCE

Use of the Digital Object Identifier

The Digital Object Identifier (DOI) may be used to cite and link to electronic documents. The DOI consists of a unique alpha-numeric character string which is assigned to a document by the publisher upon the initial electronic publication. The assigned DOI never changes. Therefore, it is an ideal medium for citing a document, particularly 'Articles in press' because they have not yet received their full bibliographic information. Example of a correctly given DOI (in URL format; here an article in the journal *Physics Letters B*):

<http://dx.doi.org/10.1016/j.physletb.2010.09.059>

When you use a DOI to create links to documents on the web, the DOIs are guaranteed never to change.

Online proof correction

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Offprints

The corresponding author, at no cost, will be provided with a personalized link providing 50 days free access to the final published version of the article on [ScienceDirect](#). This link can also be used for sharing via email and social networks. 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 (<http://webshop.elsevier.com/myarticleservices/offprints>). Authors requiring printed copies of multiple articles may use Elsevier WebShop's 'Create Your Own Book' service to collate multiple articles within a single cover (<http://webshop.elsevier.com/myarticleservices/booklets>).

Author Benefits

No Pages Charges

Publishing in Applied Radiation and Isotopes 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.

Discount

Contributors to Elsevier journals are entitled to a 30% discount on all Elsevier books. Please find relevant information via this link: <http://www.elsevier.com/wps/find/authorsview.authors/authordiscount>.

© Copyright 2014 Elsevier | <http://www.elsevier.com>