



## Instructions to Authors

### Submission checklist

It is hoped that this list will be useful during the final checking of an article prior to sending it to the journal's editor for review. Please consult this Guide for Authors for further details of any item.

### Ensure that the following items are present:

- One author designated as corresponding author
- E-mail address
- Full postal address
- Telephone and fax numbers
- All necessary files have been included
- Keywords
- All figure captions
- All tables (including title, description, footnotes)

### Further considerations

- Manuscript has been “spellchecked”
- 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 Web)
- Colour figures are clearly marked as being intended for colour reproduction or to be reproduced in black-and-white

**For any further information please contact the Author Support Department at [authorsupport@elsevier.com](mailto:authorsupport@elsevier.com).**

### 1. Submission of articles

#### *1.1. General*

Articles must be written in good English. We recommend that authors whose native language is not English have their manuscripts checked before submitting. A high standard of English is a criterion of acceptance for the review process. Articles not written in acceptable English will be returned to the author without review.

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, without the written consent of the Publisher. Authors are requested to inform the Editor if their submission has been previously submitted to and rejected by another publication.

Upon acceptance of an article, authors will be asked to transfer copyright (for more information on copyright see <http://authors.elsevier.com>). This transfer will ensure the widest possible dissemination of information. A letter will be sent to the corresponding author confirming receipt of the manuscript. A form facilitating transfer of copyright will be provided.

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Should authors be requested by the editor to revise the text, the revised version should be submitted within 2 months.

#### Submission Addresses

Authors are invited to submit their manuscript to **one** of the following editors:

**M.F. Fingas**, Environmental Technology Centre, Environment Canada, 3439 River Road, Ottawa, Ontario, Canada, Tel.: +1 613 998 9622, Fax: +613 991 9485, E-mail: [fingas.merv@etc.ec.gc.ca](mailto:fingas.merv@etc.ec.gc.ca)

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#### *1.2. Submission to the journal prior to acceptance*

Authors should send an electronic version of their article by e-mail to the address given in the "Submission addresses" above. This electronic version will be used for the reviewing process. Authors, Reviewers and Editors send and receive all correspondence by e-mail and no paper correspondence is necessary.

### *1.3. On-line submission to the journal prior to acceptance*

Authors can also upload their article as a **LaTeX**, **Microsoft® (MS) Word®**, **WordPerfect®**, **PostScript or Adobe® Acrobat® PDF** document via the “Author Gateway” page of this journal (<http://authors.elsevier.com>), where you will also find a detailed description on its use. The system generates an Adobe Acrobat PDF version of the article, which is used for the reviewing process. It is crucial that all graphical and tabular elements be placed within the text, so that the file is suitable for reviewing. Authors, Reviewers and Editors send and receive all correspondence by e-mail and no paper correspondence is necessary.

### *1.4. Format requirements for accepted articles not submitted online*

#### *General points*

We accept most wordprocessing formats, but Word, WordPerfect or LaTeX is preferred. An electronic version of the text should be submitted together with the final hardcopy of the manuscript. The electronic version must match the hardcopy exactly. Always keep a backup copy of the electronic file for reference and safety. Label storage media with your name, journal title, and software used. Save your files using the default extension of the program used. No changes to the accepted version are permissible without the explicit approval of the Editor. Electronic files can be stored on 3½ inch diskette, ZIP-disk or CD (either MS-DOS or Macintosh).

## **2. Preparation of text**

### *2.1. Presentation of manuscript*

#### *General*

Please write your text in good English (American or British usage is accepted, but not a mixture of these).

Use double spacing and wide (3 cm) margins. (Avoid full justification, i.e., do not use a constant right-hand margin.) Ensure that each new paragraph is clearly indicated. Present tables and figure legends on separate pages at the end of the manuscript. If possible, consult a recent issue of the journal to become familiar with layout and conventions. Number all pages consecutively.

*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 unclear (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 is willing to handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address.**

*Abstract.* A concise and factual abstract consisting of one paragraph is required (100–200 words). The abstract should state briefly the scope, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. The abstract should be informative, not descriptive. It should not serve as an introduction, nor contain references.

*Keywords.* Immediately after the abstract, provide a maximum of 5 keywords, 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 at their first occurrence in the article: in the abstract but also in the main text after it. Ensure consistency of abbreviations throughout the article.

## 2.2. Arrangement of the article

*Subdivision of the article.* 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 of the article.* Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply ‘the text.’

Write your article in continuous style, without division into subsections. The reference list is, however, mentioned separately.

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

*Experimental/Materials and methods.* Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

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

*Results.*

*Discussion.* This should explore the significance of the results of the work, not repeat them.

*Conclusions.* A short Conclusions section is to be presented and should be divided into specific points.

*Glossary.* Please supply, as a separate list, the definitions of field-specific terms used in your article.

*Nomenclature.* Please supply, as a separate list, the definitions of field-specific terms used in your article. The use of nomenclature and symbols adopted by IUPAC is recommended.

*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 forth.

*Acknowledgements.* Place acknowledgements, including information on grants received, before the references, in a separate section, and not as a footnote on the title page.

*References.* See separate section, below.

*Figure legends, tables, figures, schemes.* Present these, in this order, at the end of the article. They are described in more detail below. High-resolution graphics files must always be provided separate from the main text file (see Preparation of illustrations).

### 2.3. Specific remarks

*Mathematical formulae.* Present simple formulae in the line of normal text where possible. In principle, variables are to be presented in italics. Use the solidus (/) instead of a horizontal line,

e.g.,  $X_p/Y_m$  rather than  $\frac{X_p}{Y_m}$

Powers of e are often more conveniently denoted by exp.

Number consecutively any equations that have to be displayed separate from the text (if referred to explicitly in the text).

*Footnotes.* Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors 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 on a separate sheet at the end of the article. Do not include footnotes in the Reference list.

*Table footnotes.* Indicate each footnote in a table with a superscript lowercase letter.

*Tables.* Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

*Nomenclature and units.* Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI.

*Preparation of supplementary data.* Elsevier now accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, movies, animation sequences, 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 ensure that data is provided 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 Author Gateway at <http://authors.elsevier.com>

#### *Short communications*

Short Communications report the results of preliminary studies, partial research results from an ongoing study, results from studies limited in scope, or raise a critical issue or question based on such results. Short communications should follow all the basic requirements of full paper manuscripts, but must not exceed 12 double-spaced manuscript pages including figures, tables, text and references. An abstract must be submitted with a Short Communication. Short Communications should be identified as such at the time of submission.

### **3. References**

Responsibility for the accuracy of bibliographic citations lies entirely with the authors.

*Citations in the text:* Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Unpublished results and personal communications should be avoided. Citation of a reference as ‘in press’ implies that the item has been accepted for publication.

*Citing and listing of web references.* As a minimum, the full URL should be given. Any further information, if known (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.

*Text:* Indicate references by number(s) in square brackets in line with the text. The actual authors can be referred to, but the reference number(s) must always be given.

Example: “. . . as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result . . .”

*List:* Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

*Examples:*

Reference to a journal publication:

- [1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2000) 51–59.

Ensure the full title is included.

Reference to a book:

- [2] W. Strunk Jr., E.B. White, *The Elements of Style*, third ed., Macmillan, New York, New York, 1979.

Reference to a chapter in an edited book:

- [3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 1999, pp. 281–304.

## **4. Preparation of illustrations**

### *4.1 Preparation of electronic illustrations*

Submitting your artwork in an electronic format helps us to produce your work to the best possible standards, ensuring accuracy, clarity and a high level of detail.

#### *General points*

- Always supply high-quality printouts of your artwork, in case conversion of the electronic artwork is problematic.
- Make sure you use uniform lettering and sizing of your original artwork.
- Save text in illustrations as “graphics” or enclose the font.
- Only use the following fonts in your illustrations: Arial, Courier, Helvetica, Times, Symbol.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files, and supply a separate listing of the files and the software used.
- Provide all illustrations as separate files and as hardcopy printouts on separate sheets.
- Provide captions to illustrations separately.
- Produce images near to the desired size of the printed version.

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#### *4.2. Non-electronic illustrations*

Provide all illustrations as high-quality printouts, suitable for reproduction (which may include reduction) without retouching. Number illustrations consecutively in the order in which they are referred to in the text. They should accompany the manuscript, but should not be included within the text. Clearly mark all illustrations on the back (or — in case of line drawings — on the lower front side) with the figure number and the author's name and, in cases of ambiguity, the correct orientation.

Mark the appropriate position of a figure in the article.

#### *4.3. Captions*

Ensure that each illustration has a caption. Supply captions on a separate sheet, 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.

#### *4.4. Line drawings*

Supply high-quality printouts on white paper produced with black ink. The lettering and symbols, as well as other details, should have proportionate dimensions, so as not to become illegible or unclear after possible reduction; in general, the figures should be designed for a reduction factor of two to three. The degree of reduction will be determined by the Publisher. Illustrations will not be enlarged. Consider the page format of the journal when designing the illustrations.

Photocopies are not suitable for reproduction. Do not use any type of shading on computer-generated illustrations.

#### *4.5. Photographs (halftones)*

Please supply original photographs for reproduction, printed on glossy paper, very sharp and with good contrast. Remove non-essential areas of a photograph. Do not mount photographs unless they form part of a composite figure. Where necessary, insert a scale bar in the illustration (not below it), as opposed to giving a magnification factor in the legend.

Note that photocopies of photographs are not acceptable.

#### *4.6. Colour illustrations*

Submit colour illustrations as original photographs, high-quality computer prints or transparencies, close to the size expected in publication, or as 35 mm slides. Polaroid



colour prints are *not* suitable. If, together with your accepted article, you submit usable colour figures then Elsevier will ensure, at no additional charge, that these figures will appear in colour on the web (e.g. ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in colour in the printed version. For colour reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. For further information on the preparation of electronic artwork, please see <http://authors.elsevier.com/artwork>

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

### **5. Proofs**

When your manuscript is received by the Publisher it is considered to be in its final form. Proofs are not to be regarded as 'drafts'.

One set of page proofs in PDF format will be sent by e-mail to the corresponding author, to be checked for typesetting/editing. No changes in, or additions to, the accepted (and subsequently edited) manuscript will be allowed at this stage. Proofreading is solely your responsibility.