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

DESCRIPTION

*Analytica Chimica Acta* has an open access mirror journal *Analytica Chimica Acta: X*, sharing the same aims and scope, editorial team, submission system and rigorous peer review. *Analytica Chimica Acta* provides a forum for the rapid publication of original research, and critical, comprehensive reviews dealing with all aspects of fundamental and applied modern analytical chemistry. The journal welcomes the submission of research papers which report studies concerning the development of new and significant analytical methodologies. In determining the suitability of submitted articles for publication, particular scrutiny will be placed on the degree of novelty and impact of the research and the extent to which it adds to the existing body of knowledge in analytical chemistry.

Manuscripts detailing fundamental research on all aspects of analytical chemistry theory and methodology (including chemometric techniques), such as innovative instrumental, chemical and biological approaches, detectors and sensors, sample treatment methods and data treatment that truly demonstrate new principles and/or important applications are especially encouraged. *Analytica Chimica Acta* focuses on fundamental new developments in analytical chemistry in general and discourages specialized application oriented submissions that are of interest to a limited number of readers. Papers describing the direct use of routine analytical methodologies or their straightforward/incremental extension of these methods to new sample matrices will normally be rejected unless new and important developments are described which can be demonstrated to give obvious and quantifiable advantages over existing approaches. In all submissions to the journal, authors must address the question of how their proposed methodology compares with those previously reported for the analytes in question even if they employed different techniques. The journal does not focus on application papers, especially those that are straightforward utilizations of commercial instrumentation or other existing techniques, regardless of how complex and expensive they may be. If submitted, application papers must clearly demonstrate a high level of general importance and interest to the analytical chemistry community at large.

It will normally be expected that where new analytical methodologies and developments are described these will be applied to a sample matrix of suitable analytical complexity. In such cases appropriate validation of the method must be provided, together with proper statistical treatment of data. Analytical performance characteristics of new methodologies must be given, including calibration, sensitivity, detection limits, accuracy, precision, and interferences. They must also clearly demonstrate substantial superiority in some important respect over existing alternatives.

Reviews are normally written by prior agreement of the reviews editors. Potential authors are encouraged to discuss the subject matter of a proposed review with the review editor, and will be
asked to provide a brief outline of the subject matter of the proposed review. Review articles should be sufficiently broad in scope to appeal to a wide cross-section of the journal's readership, but should be specific enough to permit discussion to be made at an appropriate depth. Basic methodology and principles should not be included in reviews, but suitable reference should be made to sources of this information. Above all, reviews should be critical rather than enumerative and should provide the reader with expert opinion regarding the relative merits of the various published approaches to the topic under review. Figures and Tables are encouraged in review articles. Tutorials describing the fundamental principles and practical operational details of a given analytical technique, sample processing approach or chemometric method are also welcome.

Manuscripts are considered for publication in Analytica Chimica Acta only on the basis that the work is original and unpublished. The editors and publisher are fundamentally opposed to any form of duplication and plagiarism and if discovered, not only will the manuscript be immediately rejected, the corresponding author(s) could be banned from future submissions to any Elsevier journal. Depending on the severity of the offense, the incident may also be reported to the responsible authorities at the corresponding author's institution(s).

AUDIENCE
Chemists (all disciplines) in academic institutions, industry, independent laboratories and consulting firms.

IMPACT FACTOR
2018: 5.256 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING
Analytical Abstracts
BIOSIS Citation Index
Chemical Abstracts
Current Contents - Physical, Chemical & Earth Sciences
Embase
PubMed/Medline
Mass Spectrometry Bulletin
Science Citation Index
Aluminum Abstracts
Engineered Materials Abstracts
Material Business Alerts
Metals Abstracts
Scopus

EDITORIAL BOARD
Editors
Neil Barnett, Deakin University, School of Life and Environmental Sciences - Geelong Campus at Waurn Ponds, Geelong, Australia
Wolfgang Buchberger, Johannes Kepler University Linz Institute of Physical Chemistry and Linz Institute for Organic Solar Cells, Linz, Austria
Lutgarde M. C. Buydens, Radboud University Institute for Molecules and Materials, Nijmegen, Netherlands
Nicola Cioffi, University of Bari Department of Chemistry, Bari, Italy
Paul Francis, Deakin University, School of Life and Environmental Sciences - Geelong Campus at Waurn Ponds, Geelong, Australia
Charles S. Henry, Colorado State University, Dept. of Chemistry, Fort Collins, Colorado, United States
Ulrich Krull, University of Toronto Mississauga, Dept. of Chemistry, Mississauga, Ontario, Canada
Rebecca Lai, University of Nebraska-Lincoln, Dept. of Chemistry, Lincoln, Nebraska, United States
James Landers, University of Virginia, Dept. of Pathology, Charlottesville, Virginia, United States
Liang Li, University of Alberta Department of Chemistry, Edmonton, Alberta, Canada
Yuehe Lin, Washington State University, School of Mechanical and Materials Engineering, Pullman, Washington, United States

Janusz Pawliszyn, University of Waterloo, Dept. of Chemistry, Waterloo, Ontario, Canada

Jing-Juan Xu, State Key Laboratory of Analytical Chemistry for Life Science School of Chemistry and Chemical Engineering Nanjing University, Nanjing, China

Xiu-Ping Yan, Jiangnan University, School of Food Science and Technology, Wuxi, China

Manuel Miró, University of the Balearic Islands, Palma de Mallorca, Spain

**Editorial Advisors**

Russ Algar, The University of British Columbia, Dept. of Chemistry, Vancouver, British Columbia, Canada

José Manuel Amigo, University of Copenhagen, Chemometrics and Analytical Technologies, Department of Food Science, Frederiksberg, Denmark

Jared Anderson, Iowa State University, Dept. of Chemistry, Ames, Iowa, United States

Richard Baldwin, University at Buffalo Department of Chemistry, Louisville, Kentucky, United States

Michael C. Breadmore, University of Tasmania, School of Natural Sciences, Hobart, Tasmania, Australia

Frank Bright, University at Buffalo Department of Chemistry, Buffalo, New York, United States

Tim Causon, University of Natural Resources and Life Sciences Vienna Department of Chemistry, Wien, Austria

Purnendu Dasgupta, University of Texas at Arlington, Dept. of Chemistry & Biochemistry, Arlington, Texas, United States

Dan Du, Washington State University, School of Mechanical and Materials Engineering, Pullman, Washington, United States

Qun Fang, Zhejiang University Department of Chemistry, Hangzhou, China

Xianlin Han, Sanford Burnham Prebys Medical Discovery Institute Orlando, Orlando, Florida, United States

Peter Hauser, University of Basel Department of Chemistry, Basel, Switzerland

Conor Hogan, La Trobe University Department of Chemistry and Biology, Bundoora, Australia

Anna de Juan, University of Barcelona, Dept. Chemical Engineering, Barcelona, Spain

Hiroyuki Kataoka, Shujitsu University School of Pharmacy Graduate School of Pharmacy, Okayama, Japan

Spas Kolev, University of Melbourne School of Chemistry, Parkville, Australia

William LaCourse, University of Maryland Baltimore County Department of Chemistry and Biochemistry, Baltimore, Maryland, United States

Rebecca Lai, University of Nebraska-Lincoln, Dept. of Chemistry, Lincoln, Nebraska, United States

Éder Cláudio Lima, Federal University of Rio Grande do Sul Chemistry Institute, PORTO ALEGRE, Brazil

Jin-Ming Lin, Tsinghua University Department of Chemistry, Beijing, China

Zhen Liu, Nanjing University College of Life Sciences, Nanjing, China

Maria Llompart, University of Santiago de Compostela Department of Analytical Chemistry Nutrition and Food Science, Lugo, Spain

Margaretha de Loos-Vollebregt, Ghent University Department of Analytical Chemistry, Gent, Belgium

David M. Lubman, University of Michigan Department of Surgery, Ann Arbor, Michigan, United States

Mirek Macka, University of Tasmania School of Chemistry, Hobart, Tasmania, Australia

Federico Marini, University of Rome La Sapienza Department of Chemistry, Roma, Italy

Ian McKelvie, University of Melbourne School of Chemistry, Parkville, Australia

Kenith Meissner, Swansea University, Swansea, United Kingdom

Kermit Murray, Louisiana State University Department of Chemistry, Baton Rouge, Louisiana, United States

Pavel Nesterenko, Lomonosov Moscow State University Department of Chemistry, Moskva, Russian Federation

Susan Olesiuk, Ohio State University Department of Chemistry and Biochemistry, Columbus, Ohio, United States

Gangfeng Ouyang, Sun Ye-sen University School of Chemistry and Chemical Engineering, Guangzhou, China

Nicole Pamme, University of Hull Department of Physics and Mathematics, Hull, United Kingdom

Charles J. Patton, US Geological Survey National Water Quality Laboratory, Denver, Colorado, United States

Valérie Pichon, City of Paris Industrial Physics and Chemistry Higher Educational Institution, Paris, France

Elia Psillakis, Technical University of Crete, School of Environmental Engineering, Chania - Crete, Greece

Cyril Ruckebusch, Laboratory of Infrared and Raman Spectrochemistry, Villeneuve d’Ascq, France

Julie Schappler, Pharmacy College Geneva-Lausanne, Geneva, Switzerland

Kevin Schug, University of Texas at Arlington, Dept. of Chemistry & Biochemistry, Arlington, Texas, United States

Andrew Shalliker, Western Sydney University School of Science and Health, Penrith, Australia

Paul Worsfold, University of Plymouth School of Geography Earth and Environmental Sciences, Plymouth, United Kingdom

Guowang Xu, Dalian Institute of Chemical Physics, Dalian, China

Chengzhou Zhu, Central China Normal University School of Chemistry, Wuhan, China
INTRODUCTION

*Analytica Chimica Acta* has an open access mirror journal, *Analytica Chimica Acta X.*

*Analytica Chimica Acta* provides a forum for the rapid publication of original research, and critical, comprehensive reviews dealing with all aspects of fundamental and applied modern analytical chemistry. The journal welcomes the submission of research papers which report studies concerning the development of new and significant analytical methodologies. In determining the suitability of submitted articles for publication, particular scrutiny will be placed on the degree of novelty and impact of the research and the extent to which it adds to the existing body of knowledge in analytical chemistry.

Manuscripts detailing fundamental research on all aspects of analytical chemistry theory and methodology (including chemometric techniques), such as innovative instrumental, chemical and biological approaches, detectors and sensors, sample treatment methods and data treatment that truly demonstrate new principles and/or important applications are especially encouraged. *Analytica Chimica Acta* focuses on fundamental new developments in analytical chemistry in general and discourages specialized application-oriented submissions that are of interest to a limited number of readers. Papers describing the direct use of routine analytical methodologies or their straightforward/incremental extension of these methods to new sample matrices will normally be rejected unless new and important developments are described which can be demonstrated to give obvious and quantifiable advantages over existing approaches. In all submissions to the journal, authors must address the question of how their proposed methodology compares with those previously reported for the analytes in question even if they employed different techniques. The journal does not focus on application papers, especially those that are straightforward utilizations of commercial instrumentation or other existing techniques, regardless of how complex and expensive they may be. If submitted, application papers must clearly demonstrate a high level of general importance and interest to the analytical chemistry community at large.

It will normally be expected that where new analytical methodologies and developments are described these will be applied to a sample matrix of suitable analytical complexity. In such cases appropriate validation of the method must be provided, together with proper statistical treatment of data. Analytical performance characteristics of new methodologies must be given, including calibration, sensitivity, detection limits, accuracy, precision, and interferences. They must also clearly demonstrate substantial superiority in some important respect over existing alternatives.

Reviews are normally written by prior agreement of the reviews editors. Potential authors are encouraged to discuss the subject matter of a proposed review with the review editor, and will be asked to provide a brief outline of the subject matter of the proposed review. Review articles should be sufficiently broad in scope to appeal to a wide cross-section of the journal's readership, but should be specific enough to permit discussion to be made at an appropriate depth. Basic methodology and principles should not be included in reviews, but suitable reference should be made to sources of this information. Above all, reviews should be critical rather than enumerative and should provide the reader with expert opinion regarding the relative merits of the various published approaches to the topic under review. Figures and Tables are encouraged in review articles. Tutorials describing the fundamental principles and practical operational details of a given analytical technique, sample processing approach or chemometric method are also welcome.

The *Types of paper* *Analytica Chimica Acta* publishes original papers, and reviews dealing with every aspect of contemporary analytical chemistry. Short papers will also be considered for publication but they must be a brief account (two to four journal pages) of either innovative instrumentation or a new technique. It is incumbent upon the authors to effectively describe the significant advancement that the proposed novel approach brings to analytical chemistry in comparison to those currently in use.

Reviews are normally written with the prior agreement of the review editor. Potential authors are required to discuss the proposed topic with the review editor and will be asked to provide a concise outline of the subject matter to be covered. Review articles must be sufficiently broad in scope to appeal to a wide cross-section of the journal’s readership, but should be specific enough to permit
discussion to be made at an appropriate depth. Basic methodology and principles should not be included in reviews, but suitable references should be made to sources of this information. Above all, reviews must be critical and comprehensive rather than an exhaustive list of published works on the proposed topic. Consequently, reviews must provide the reader with expert opinion regarding the relative merits of the various published works on the particular topic. Figures and Tables are encouraged in review articles. Tutorials describing the fundamental principles and practical operational details of a given analytical technique, sample processing approach or chemometric method are also welcome.

Note: *Analytica Chimica Acta* does not distinguish between papers submitted individually or via a symposium. Consequently symposium papers are subject to the same stringent refereeing procedures as other papers.

**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.
- Ensure that page numbers and double spacing are added to the manuscript.

**BEFORE YOU BEGIN**

**Ethics in publishing**

Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

**Declaration of interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors should complete the declaration of interest statement using this template and upload to the submission system at the Attach/Upload Files step. If there are no interests to declare, please choose: ‘Declarations of interest: none’ in the template. This statement will be published within the article if accepted. More information.
Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

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

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

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

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the 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 preprint forms for use by authors in these cases.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

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

Open access
Authors wishing to publish open access can choose to publish open access in Analytica Chimica Acta X https://www.journals.elsevier.com/analytica-chimica-acta-x, the open access mirror journal of Analytica Chimica Acta. One, unified editorial team manages the peer-review for both titles using the same submission system. The authors choice of publishing model will determine in which journal, Analytica Chimica Acta or Analytica Chimica Acta X, the accepted manuscript will be published. The choice of publishing model will be blinded to referees, ensuring the editorial process is identical.

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 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- incorporates 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 12 months.

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

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

Submission
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 submit your article via https://www.elsevier.com/locate/issn/00032670

Referees
Authors are encouraged to identify four persons who are qualified to serve as reviewers. Authors are requested not to suggest reviewers with whom they have a personal or professional relationship, especially if that relationship would prevent the reviewer from having an unbiased opinion of the work of the authors. A working e-mail address for each reviewer is essential for rapid review in the event that reviewer is selected from those that are identified by the authors. You may also select reviewers you do not want to review your manuscript, but please state your reason for doing so.
PREPARATION

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

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

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

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

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

Materials and methods
The experimental methods should be described after the introductory material. Detailed experimental descriptions should be restricted to one section of the paper. Sufficient detail should be given to allow any experienced worker to implement the procedures described. Procedural steps should not be numbered.

Results
Results should be clear and concise.

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

Conclusions
This should include key findings of the research, quantitative analytical performance figures (if appropriate) and their significance to real sample matrices.

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 at the beginning of the manuscript file.
• Article title. Concise and informative. Titles are often used in information-retrieval systems. No abbreviations should be used and avoid 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.

**Highlights**

Highlights are optional yet highly encouraged for this journal, as they increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

**Abstract**

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

**Keywords**

 Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). No abbreviations should be used. These keywords will be used for indexing purposes.

**Abbreviations**

Define abbreviations that are not standard in this field (the standard abbreviations can be viewed at here in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined a 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, yyyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzzz]; 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.

**Nomenclature, abbreviations and symbols**

Please use L for litres. Always leave a space between units and use superscripts rather than /. For instance: use mg mL\(^{-1}\) and not mg/ml. Do not use ppm or ppb to denote solid/liquid concentrations.
Do not use abbreviations in the title or keywords. Define abbreviations that are not standard in this field at their first occurrence in both the abstract and the main text. Ensure consistency of abbreviations throughout the remainder of the manuscript.

In all other cases, the recommendations of the International Union of Pure and Applied Chemistry (IUPAC) should be followed, and attention should be given to the recommendations of the Analytical Chemistry Division in the journal *Pure and Applied Chemistry* (see also IUPAC Compendium of Analytical Nomenclature, Definitive Rules, 1987).

**Math formulae**

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

**Footnotes**

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

**Artwork**

**Electronic artwork**

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

A detailed guide on electronic artwork is available.

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

**Formats**

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

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

- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/halftone (color or grayscale), keep to a minimum of 500 dpi.

**Please do not:**

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

**Color artwork**

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.
Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables
Please submit tables as editable text and not as images. Tables 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.

Biographies and photographs
Authors of reviews and tutorials will be required to upload a colour image and short biography of each individual author. Biographies should contain 2 to 3 sentences (max 100 words) indicating authors' present affiliation, number of publications, awards, current research interests and website if available.

References
Citation in text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Web references
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

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

Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/analytica-chimica-acta

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.
Reference style
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 within ScienceDirect and to abstracting and indexing services, such as Scopus, CrossRef or 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 the link creation. When copying references, please be careful as they may already contain an error.

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. Author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume and issue/book chapter and the pagination must be present. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that incorrect or missing data will be highlighted at proof stage for the author to correct.

The reference style used by this journal is Numbered. If you do wish to format the references yourself they should be arranged according to the following examples:

Number system with article and chapter titles

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:

Reference to a book:

Reference to a chapter in an edited book:

Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.

Video
Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.
Data visualization
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

Supplementary material
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

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

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

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

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

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

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

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

For more information, visit the Mendeley Data for journals page.

Data in Brief
You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to Data in Brief where it will be editorially reviewed and published in the open access data journal, Data in Brief. Please note an open access fee of 600 USD is payable for publication in Data in Brief. Full details can be found on the Data in Brief website. Please use this template to write your Data in Brief.
MethodsX

You have the option of converting relevant protocols and methods into one or multiple MethodsX articles, a new kind of article that describes the details of customized research methods. Many researchers spend a significant amount of time on developing methods to fit their specific needs or setting, but often without getting credit for this part of their work. MethodsX, an open access journal, now publishes this information in order to make it searchable, peer reviewed, citable and reproducible. Authors are encouraged to submit their MethodsX article as an additional item directly alongside the revised version of their manuscript. If your research article is accepted, your methods article will automatically be transferred over to MethodsX where it will be editorially reviewed. Please note an open access fee is payable for publication in MethodsX. Full details can be found on the MethodsX website. Please use this template to prepare your MethodsX article.

Data statement

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

Additional information

Computer programs

Algorithms should be described clearly and concisely by means of a suitable algorithmic notation, although a standard high-level programming language may also be used. Complete program listings are not normally admissible. Flow charts should be avoided in favour of a textual or tabulated description of the program or data flow. Statements on the portability of the software described to other computer systems, as well as on its availability to interested readers, should be given.

AFTER ACCEPTANCE

Online proof correction

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

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

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

Offprints

The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier’s Author Services. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

AUTHOR INQUIRIES

Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also check the status of your submitted article or find out when your accepted article will be published.