

Last updated: March 31, 2025 [View the latest guidelines online](#)

## Manuscript Submission Requirements Checklist

- **Scope:** original knowledge in all branches of analytical chemistry
- **Cover Letter:** include the full manuscript title, the name and complete contact information of the corresponding author, the name(s) of any other author(s), a statement of why the paper is appropriate for *Analytical Chemistry*, a description of any Supporting Information for Publication and/or for Review Only Material, 4 or more individuals competent to review the manuscript, and any related or prior work that should be disclosed to the Editor in advance
- **Abstract:** describe briefly and clearly the purpose of the research, the principal results, and the major conclusions
- **Safety:** declare any unexpected, new, and/or significant hazards or risks associated with the reported work, to be included in the Experimental Section of the full article and included in the main text of a letter
- **References:** provide in the appropriate format: for example Ho, M.; Pemberton, J. E. Alkyl Chain Conformation of Octadecylsilane Stationary Phases by Raman Spectroscopy. 1. Temperature Dependence. *Anal. Chem.* **1998**, 70, 4915–4920.
- **Graphics:** attention to readability: check font size and minimize inset figures
- **Table of contents graphic:** required with the following dimensions: 8.25 cm by 4.45 cm (3.25 in by 1.75 in)
- **Paper lengths:** Article <8 pages, Technical Note 3-5 pages, Letter <4 pages, Comment <3 pages, Tutorials <8 pages, Perspective 6-10 pages. In exceptional cases justification for longer manuscripts will be considered. It is not acceptable to place important details of the experiments in the Supporting Information (SI) in order to circumvent these length guidelines.
- **Administrative considerations:** Outside of a preprint server, your paper must not be considered or published elsewhere, and information on whether the paper has been previously considered or posted elsewhere must be provided; manuscripts will be screened with plagiarism software; consider whether you agree to manuscript transfer; do not forget to list funding sources and your ORCID iD.

### Correspondence to the Editor-in-Chief should be addressed to:

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## Scope of the Journal

The Most Cited Journal in Analytical Chemistry\*

[\*Analytical Chemistry\*](#) is a peer-reviewed research journal that is devoted to the dissemination of new and original knowledge in all branches of analytical chemistry. Fundamental articles may address the general principles of chemical measurement science without directly studying existing analytical methodology as long as what is discussed relates to an important chemical parameter. Articles may be theoretical or they may report experimental results. They may contribute to any phase of analytical operations including sampling, measurements, and data analysis; the articles should target fields including, but not limited to, bioanalytical chemistry, bioengineering, chemical analysis, environmental sciences, forensics and medical sciences. Topics commonly include chemical reactions and selectivity, chemometrics and data processing, electrochemistry, elemental and molecular characterization, imaging, instrumentation, mass spectrometry, microscale and nanoscale systems, -omics, sensing, separations, spectroscopy, and surface analysis. Papers dealing with established analytical methods need to offer a significantly improved, original application of the method.

Research manuscripts include Letters, Technical Notes and Articles. The maximum lengths of Letters, Technical Notes and articles are four, five and eight journal pages, respectively. In addition, the journal publishes Tutorials, Perspectives, and Reviews. Tutorial articles are written for the generalist and are intended to broaden readers' professional interests and keep them aware of the role of analytical chemistry in the scientific arena. Perspectives point out the authors' vision of the character and importance of a new direction in analytical chemistry, analyze research reports that provide the foundation for the new direction, and discuss the nature of the opportunities perceived. Reviews are invited and highlight recent advances in a specific subfield of measurement science. See the rest of our author guidelines for more information on the journal, the manuscript types, and how to estimate paper length.

## Manuscript Types

**Articles.** The maximum length of Articles is eight journal pages. Rarely, a longer submission may be justified. If so, a convincing justification for the extra length must be made by the authors in their cover letter. The Editor will normally require condensation of longer papers but will consider the justification details provided by the authors.

**Technical Notes.** A Technical Note is a short description of a novel apparatus or technique. Authors must show ingenuity in describing the advantages of the new apparatus or technique over those already available. Technical Notes are three to five pages in length.

**Letters.** A Letter is a brief disclosure of significant new analytical concepts or applications and will be considered on an accelerated schedule. Letters have a maximum length of four journal pages.

**Comments.** A Comment presents important comments on the work of others already published in *Analytical Chemistry*; *Analytical Chemistry* will not accept comments concerning research published elsewhere. The authors of the work being discussed will ordinarily be allowed a chance to reply. Comments have a maximum length of three journal pages.

**Tutorials.** Tutorial articles are written for the generalist and are intended to broaden readers' professional interests and keep them aware of the role of analytical chemistry in the scientific arena. They are not comprehensive reviews, but rather a tutorial perspective on a field. These are generally

submitted by researchers in response to invitations, but unsolicited Tutorials are considered. Authors are welcome to e-mail an outline of a proposed Tutorial article to [eic@anchem.acs.org](mailto:eic@anchem.acs.org). Further instructions will be provided upon acceptance of a proposal. Tutorials have a maximum length of eight journal pages.

**Perspectives.** Perspectives point out the authors' vision of the character and importance of a new direction in analytical chemistry, analyze research reports that provide the foundation for the new direction, and discuss the nature of the opportunities perceived. They can also be articles in which authors synthesize research results with ideas and needs for additional work, as indicated by the results. Perspectives are neither reports of original research nor reviews with the traditional objective of summarizing progress in a field. They are aimed at specialists and experts in the field. The content should reflect the sophistication of the author's understanding of the topic. Perspectives are not intended to be accounts or analyses of an individual's personal research. The manuscript must be balanced, fair, and accurate in its treatment of the contemporary literature. Perspectives are typically six pages and have a maximum length of ten pages. Although most Perspectives are invited, they can be submitted without invitation. The Editor encourages a preliminary contact by prospective authors for unsolicited submissions ([eic@anchem.acs.org](mailto:eic@anchem.acs.org)).

**Reviews.** Reviews are invited and details will be provided to authors when the invitation is accepted. (However, on occasion, suggested topics for Reviews will be considered; topic proposals must be emailed in advance to [eic@anchem.acs.org](mailto:eic@anchem.acs.org).)

Manuscript length refers to the final production length, including all text, figures, tables and references (the TOC Graphic is the only component that is not considered in the length calculation). To estimate length, assume 1000 words/page. If using Microsoft Word, use the word count tool to highlight all text elements, including citations, to get the total word count. Size all tables and figures at their final production size. The effective length of figures and tables can be approximated by counting single-column figures as 250 words and double-column as 500 words (assuming that when sized at the final production size, they are ¼ and ½ page, respectively). Tables have the same size requirements as figures. If a table has been created using the Tables function in Word and has been counted in the word count, subtract the word count for the table, and instead, count the space occupied by the table as you would a figure.

If the total estimated length is close to the length limit for the manuscript type or if the figures and tables are large, then a more accurate estimate may be needed and can be determined as follows (maximum height for all graphics is 9 in, including the caption; please allow 12 pts for each line of caption text).

- **Single-column graphics (preferred):** Maximum width is 240 points (3.33 in). Measure the height of the graphic (point or inches), divide by 1320 points (18 in), and multiply by 1000 for the word equivalent. Example (in inches) for a single-column figure measuring 4.5 in. high:  $4.5/18 = .25 \times 1000 = 250$  words.
- **Double-column graphics:** Size can range between 300 to a maximum of 504 points (4.17 to 7 in) wide. Measure the height of the graphic (points or inches), divide by 660 points (or 9 in), and multiply by 1000 for the word equivalent. Example (in inches) for a double-column figure measuring 4.5 in. high:  $4.5/9 = .5 \times 1000 = 500$  words.
- If you submit tables/figures in **landscape orientation** greater than 3.3 in wide (and thus cannot be presented in a single-column, portrait orientation), an entire page of text (or 1000 words) will be displaced in order to accommodate the landscape presentation. More details and examples on calculating length of a figure are available [here](#). Another option for ensuring your manuscript meets the length guidelines is to use the [available electronic templates](#).

If a submission exceeds the length guidelines, it will be returned to the authors to be shortened or modified to fit another manuscript category. Although it may be appropriate that some experimental detail be included in the Supporting Information, **it is not acceptable to place important details of the experiments there in order to circumvent the length guidelines.**

## ACS Researcher Resources

While this document will provide basic information on how to prepare and submit the manuscript as well as other critical information about publishing, we also encourage authors to visit [ACS Researcher Resources](#) for additional information on everything that is needed to prepare (and review) manuscripts for ACS journals and partner journals, such as

- [Mastering the Art of Scientific Publication](#), which shares editor tips about a variety of topics including making your paper scientifically effective, preparing excellent graphics, and writing cover letters.
- Resources on [how to prepare and submit a manuscript](#) to the ACS Publications manuscript submission and peer review system, including details on selecting the applicable [Journal Publishing Agreement](#).
- [Sharing your research](#) with the public through the ACS Publications open access program.
- [ACS Reviewer Lab](#), a free online course covering best practices for peer review and related ethical considerations.
- [ACS Author Lab](#), a free online course that empowers authors to prepare and submit strong manuscripts, avoiding errors that could lead to delays in the publication process.
- [ACS Inclusivity Style Guide](#), a guide that helps researchers communicate in ways that recognize and respect diversity in all its forms.

## Manuscript Preparation

### Submit with Fast Format

All ACS journals and partner journals have simplified their formatting requirements in favor of a streamlined and standardized format for an initial manuscript submission. Read more about the requirements and the benefits these serves authors and reviewers [here](#).

Manuscripts submitted for initial consideration must adhere to these standards:

- Submissions must be complete with clearly identified standard sections used to report original research, free of annotations or highlights, and include all numbered and labeled components.
- Figures, charts, tables, schemes, and equations should be embedded in the text at the point of relevance. Separate graphics can be supplied later at revision, if necessary.
- When required by a journal's structure or length limitations, manuscript templates should be used.
- References can be provided in any style, but they must be complete, including titles. For information about the required components of different reference types, please refer to the [ACS Style Quick Guide](#).
- Supporting Information must be submitted as a separate file(s).

### Document Templates and Format

The templates facilitate the peer review process by allowing authors to place artwork and tables close to the point where they are discussed within the text. Learn more about document templates [here](#).

General information on the preparation of manuscripts may also be found in the [ACS Guide to Scholarly Communication](#).

## Acceptable Software, File Designations, and TeX/LaTeX

See the list of [Acceptable Software](#) and appropriate [File Designations](#) to be sure your file types are compatible with the submission system. Information for manuscripts generated from [TeX/LaTeX](#) is also available.

## Cover Letter

A cover letter must accompany every manuscript submission. During the submission process, you may type it or paste it into the submission system, or you may attach it as a file.

A letter should contain the following elements:

- the full manuscript title;
- the name of the corresponding author and that person's complete contact information (mailing address, phone, fax, and email);
- the name(s) of any other author(s);
- a statement of why the paper is appropriate for Analytical Chemistry;
- a description of any Supporting Information for Publication and/or for Review Only Material;
- four to six individuals competent to review the manuscript; and
- any related or prior work that should be disclosed to the Editor in advance.

Additionally, authors should note any length issues, whether the manuscript was discussed with an Editor before submission, and other issues important for the review process.

### **Authors are required to suggest four or more potential reviewers, including email addresses.**

Suggested reviewers may not be at the same institutes as any of the manuscript authors and will be used at the discretion of the Editors. Ideally, several reviewer suggestions should be from different continents. An author may request that a certain person not be used as a reviewer. The request will generally be honored, unless the Editor feels that this individual's opinion, in conjunction with the opinions of other reviewers, is vital to the evaluation of the manuscript.

## Manuscript Text Components

**Title.** Use specific and informative titles with a high keyword content. Avoid acronyms and subtitles. Either the title or the abstract must contain the name(s) of the central measurement methodology (or methodologies) used in the paper.

**Authorship.** Give authors' full names, the complete mailing address of the place where the work was done, and the current addresses of the authors, if different, as a footnote. Indicate the corresponding author by an asterisk and provide an e-mail address for that person.

**Abstract.** Abstracts (80–250 words) are required for Articles, Letters, and Technical Notes and should describe briefly and clearly the purpose of the research, the principal results, and the major conclusions. Remember that the abstract will be the most widely read portion of the paper and will be used by abstracting services. An abstract graphic will appear with the abstract text.

**Text.** Consult the publication for the general writing style. Write for the specialist (except for Tutorials, which should be written for the scientific generalist). It is not necessary to include information and details or techniques that should be common knowledge to those in the field.

**Section Headings.** Informative section headings and subheadings are encouraged; the “Introduction” heading is not used. Sections are not numbered. Keep all information pertinent to a particular section and avoid repetition.

**Introduction.** The Introduction should state the purpose of the investigation and must include appropriate citations of relevant, precedent work but should not include an extensive review of marginally related literature. If the manuscript describes a new method, indicate why it is preferable to older methods. If the manuscript describes an improved analysis of a substance, the competing methods must be referenced and compared. Absence of appropriate literature references can be grounds for rejection of the paper.

**Experimental Section.** Use complete sentences (i.e., do not use outline form). Be consistent in voice and tense. For apparatus, list only devices of a specialized nature. List and describe preparation of special reagents only. Do not list those normally found in the laboratory and preparations described in standard handbooks and texts. Because procedures are intended as instructions to permit work to be repeated by others, give adequate details of critical steps. While it is acceptable to report some of the detailed procedures as supporting information, important and unique experimental procedures must remain in the main manuscript.

Published procedures should be cited but not described, except where the presentation involves substantial modifications. While an experimental section is required to be in the main article and should provide sufficient detail to understand the experiments, detailed procedures may be presented in the Supporting Information.

For research that uses animals or involves human subjects, approvals from the appropriate institutional committees (i.e., the Committee on Care and Use of Laboratory Animals, Institutional Review Board, etc.) must be documented in the Experimental Section, and the requirements found within [The Ethical Guidelines to Publication of Chemical Research](#) must be followed.

**Results and Discussion.** The results may be presented in tables or figures; however, many simple findings can be presented directly in the text with no need for tables or figures. The discussion should be concise and deal with the interpretation of the results.

**Conclusions.** Use the conclusion section only for interpretation and not to summarize information already presented in the text or abstract.

**References.** References in the final published article to notes/comments and to the permanent literature should be numbered in one consecutive series by order of mention in the text with each reference individually numbered. Reference numbers in the text must be superscripted. The accuracy and completeness of the references are the authors' responsibility.

List submitted articles as “in press” only if formally accepted for publication and give the article title, volume number, and year, if known. Otherwise, use “unpublished work” with the name of the place where the work was done and the date. Include name, affiliation, and date for “personal communications”. For work published online (ASAP, in press), the DOI should be furnished in addition to the standard bibliographic information.

Examples of the reference format:

1. Ho, M.; Pemberton, J. E. Alkyl Chain Conformation of Octadecylsilane Stationary Phases by Raman Spectroscopy. 1. Temperature Dependence. *Anal. Chem.* **1998**, *70*, 4915–4920.
2. Bard, A. J.; Faulker, L. R. *Electrochemical Methods*, 2nd ed.; Wiley: New York, 2001.
3. Francesconi, K. A.; Kuehnelt, D. In *Environmental Chemistry of Arsenic*; Frankenberger, W. T., Jr., Ed.; Marcel Dekker: New York, 2002; pp 51–94.
4. Pratt, D. A.; van der Donk, W. A. Theoretical Investigations into the Intermediacy of Chlorinated Vinylcobalamins in the Reductive Dehalogenation of Chlorinated Ethylenes *J. Am. Chem. Soc.* **2004**, DOI: 10.1021/ja047915o.

**Acknowledgments.** Authors may acknowledge technical assistance, gifts, the source of special materials, financial support, meeting presentation information, and the auspices under which work was done, including permission to publish. During manuscript submission, the submitting author is asked to select funding sources from the list of agencies included in the [FundRef Registry](#).

If the article is dedicated to another scholar, a brief statement, such as “This article is dedicated to [name]”, can be included.

Statements about author contributions to the work or equal contributions of work should be included as a separate statement.

## Supporting Information

This information is provided to the reviewers during the peer-review process (for Review Only) and is available to readers of the published work (for Publication). Supporting Information must be submitted at the same time as the manuscript. See the list of [Acceptable Software by File Designation](#) and confirm that your Supporting Information is [viewable](#).

If the manuscript is accompanied by any supporting information files for publication, these files will be made available free of charge to readers. A brief, non-sentence description of the actual contents of each file, including the file type extension, is required. This description should be labeled Supporting Information and should appear before the Acknowledgement and Reference sections. Examples of sufficient and insufficient descriptions are as follows:

Examples of sufficient descriptions: “Supporting Information:  $^1\text{H}$  NMR spectra for all compounds (PDF)” or “Additional experimental details, materials, and methods, including photographs of experimental setup (DOC)”.

Examples of insufficient descriptions: “Supporting Information: Figures S1-S3” or “Additional figures as mentioned in the text”.

When including supporting information for review only, include copies of references that are unpublished or in-press. These files are available only to editors and reviewers.

## Research Data Policy

All ACS journals strongly encourage authors to make the research data underlying their articles publicly available at the time of publication.

*Research data* is defined as materials and information used in the experiments that enable the validation of the conclusions drawn in the article, including primary data produced by the authors for the study being reported, secondary data reused or analyzed by the authors for the study, and any other materials necessary to reproduce or replicate the results.

The [ACS Research Data Policy](#) provides additional information on Data Availability Statements, Data Citation, and Data Repositories.

## Data Requirements

Please refer to the [ACS Math Style Sheet](#) and [NMR Guidelines](#) for guidance.

## Language and Editing Services

A well-written paper helps share your results most clearly. ACS Publications' [English Editing Service](#) is designed to help scientists communicate their research effectively. Our subject-matter expert editors will edit your manuscript for grammar, spelling, and other language errors so your ideas are presented at their best.

## Preparing Graphics

The quality of illustrations in ACS journals and partner journals depends on the quality of the original files provided by the authors. Figures are not modified or enhanced by journal production staff. All graphics must be prepared and submitted in digital format.



Graphics should be inserted into the main body whenever possible. Please see Appendix 2 for additional information.

Any graphic (figure chart, scheme, or equation) that has appeared in an earlier publication should include a [credit line](#) citing the original source. Authors are responsible for [obtaining written permission](#) to re-use this material.

## Figure and Illustration Services

The impact of your research is not limited to what you can express with words. Tables and figures such as graphs, photographs, illustrations, diagrams, and other visuals can play a significant role in effectively communicating your findings. Our [Artwork Editing](#) and [Graphical Abstract](#) services generate publication-ready figures and Table of Contents (TOC) graphics that conform to your chosen journal's specifications. For figures, this includes changes to file type, resolution, color space, font, scale, line weights, and layout (to improve readability and professional appearance). For TOC graphics, our illustrators can work with a rough sketch or concept or help extract the key findings of your manuscript directly for use as a visual summary of your paper.

## Preparing for Submission

Manuscripts, graphics, supporting information, and required forms, as well as manuscript revisions, must all be submitted in digital format through [ACS Publishing Center](#), which requires an ACS ID to log in. Registering for an ACS ID is fast, free, and does not require an ACS membership. Please refer to Appendix 1 for additional information on preparing your submission

## Prior Publication Policy

*Analytical Chemistry* considers for publication original work that has not been previously published and is not under consideration for publication elsewhere. Related work under consideration for publication in any medium must be cited in the manuscript and the Editor informed at the time of submission. In addition, an author must inform the Editor of prior dissemination of the content in print or electronic formats in the cover letter. *Analytical Chemistry* authors are allowed to deposit an initial draft of their manuscript on a recognized preprint server such as [ChemRxiv](#), bioRxiv, arXiv, or the applicable repository for their discipline prior to submission. Please note any use of a preprint server in the cover letter and include a link to the preprint, and as appropriate, state how the manuscript has been adjusted /updated between deposition and submission. Upon publication in *Analytical Chemistry*, authors are advised to add a link from the preprint to the published paper via the Digital Object Identifier (DOI). ChemRxiv and bioRxiv add this link for authors automatically after publication.

Electronic posting of conference presentations or posters secured by subscription or institutional logins are not considered prior publication works.

For further details, contact the Editorial Office.

For the ACS Publications policy on theses and dissertations, view the [American Chemical Society's Policy on Theses and Dissertations](#).

## Editorial Policies

Authors must submit the following material as separate files:

- Manuscript File (as a single .doc or docx file with figures, tables, and captions);
- cover letter;
- Supporting Information for Publication, if applicable; and
- any additional materials for review, if needed (submit as Supporting Information for Review Only).

A Manuscript PDF File is optional. If uploaded, this file will be used as the PDF proof during the peer review process. Authors must view and approve the PDF version of their manuscript prior to formal submission to the Editor.

**Manuscript Evaluation.** Submitted manuscripts should not be published or under consideration elsewhere and may be examined using software to detect duplication of already published material.

**Reject with editorial review.** The Editors identify submissions that in their expert opinions would not fare well during the review process; these manuscripts are rejected without additional external reviewers. Oftentimes, more than one Editor will be consulted during this initial screening. This shortens the time to decision and ensures a manageable workload for reviewers. Examples of manuscripts that would not be peer reviewed include the following: the paper is a routine extension or minor technical improvement of research already published; the science lies outside the scope of *Analytical Chemistry*; the science does not meet *Analytical Chemistry* standards; insufficient data are provided to properly substantiate the claims and conclusions made; closely related work has already been published and few, if any, new insights are provided; the work is narrowly focused and not of broad, general appeal to the readership of *Analytical Chemistry*; the manuscript is a resubmission of a paper that has been previously declined, without the addition of adequate new science and/or without notification in the cover letter of previous submission; or the manuscript deals with known analytical methods and does not offer a significant, original application of the method, a noteworthy improvement, or results on an important analyte.

**The editorial decision.** Reviewers evaluate the manuscript on the basis of originality, technical quality, clarity of presentation, and importance to the field. The Editors evaluate the reviewers' arguments in the context of the scope and aims of the journal and make the final decision on each manuscript. The possible decisions include: accept; revise to address the concerns of the reviewers before the editors make a final decision; reject but consider a resubmission if significant additional work is completed; or decline on the grounds of major technical or interpretational flaws, insufficient advance, or lack of novelty and interest.

In cases when reviewers make different or conflicting recommendations, the Editors may request additional information from the reviewers, consult other experts, and/or ask the authors to clarify sections in question. Some manuscripts that are declined may be considered upon resubmission if significant additional work is completed, but authors are required to let the Editor know that the work is being resubmitted for reconsideration.

Reviewers may be asked to review subsequent versions of the manuscript, especially if new data have been added to the paper, to evaluate whether the authors have addressed the scientific concerns. In such

cases, blind copies of all reviewers' comments are normally sent to the reviewers. The Editors will expedite any additional rounds of reviews to ensure timely publication.

Any appeals should be addressed to the Editor who handled the manuscript and should include a concise statement of the specific reason for appeal.

The Editors strongly disapprove of any attempts by authors to determine the identity of reviewers or to confront potential reviewers. The editorial policy of this journal is neither to confirm nor to deny any speculation about the identities of our reviewers. Authors whose manuscripts are published in *Analytical Chemistry* are expected to review manuscripts submitted by other researchers from time to time. [Information for Reviewers](#) is published separately.

### **Providing Potential Reviewer Names**

Please suggest 4 or more reviewers, including email addresses. Authors are encouraged to avoid suggesting reviewers from the authors' institutions. Do not suggest reviewers who may have a [real or perceived conflict of interest](#). Whenever possible, suggest academic email addresses rather than personal email addresses.

### **Manuscript Transfer**

If your submission is declined for publication by this journal, the editors might deem your work to be better suited for another ACS Publications journal or partner journal and suggest that the authors consider transferring the submission. [Manuscript Transfer](#) simplifies and shortens the process of submitting to another ACS journal or partner journal, as all the coauthors, suggested reviewers, manuscript files, and responses to submission questions are copied to the new draft submission. Authors are free to accept or decline the transfer offer.

Note that each journal is editorially independent. Transferring a manuscript is not a guarantee that the manuscript will be accepted, as the final publication decision will belong to the editor of the next journal.

## **PRODUCTION AND PUBLICATION**

### **Proofs via ACS Direct Correct**

Correction of the galley proofs is the responsibility of the Corresponding Author. The Corresponding Author of an accepted manuscript will receive e-mail notification and complete instructions when page proofs are available for review via [ACS Direct Correct](#). Extensive or important changes on page proofs, including changes to the title or list of authors, are subject to review by the editor.

It is the responsibility of the Corresponding Author to ensure that all authors listed on the manuscript agree with the changes made on the proofs. Galley proofs should be returned within 48 hours in order to ensure timely publication of the manuscript.

### **Publication Date and Patent Dates**

Accepted manuscripts will be published on the ACS Publications Web site as soon as page proofs are corrected and all author concerns are resolved. The first date on which the document is published on the Web is considered the publication date.

Publication of manuscripts on the Web may occur weeks in advance of the cover date of the issue of publication. Authors should take this into account when planning their patent and intellectual property activities related to a document and should ensure that all patent information is available at the time of first publication, whether ASAP or issue publication.

All articles published ahead of print receive a unique Digital Object Identifier (DOI) number, which is used to cite the manuscript before and after the paper appears in an issue. Additionally, any supplemental information submitted along with the manuscript will automatically be assigned a DOI and hosted on Figshare to promote open data discoverability and use of your research outputs.

## **ASAP Publication**

Manuscripts will be published on the “ASAP Articles” page on the web as soon as page proofs are corrected and all author concerns are resolved. ASAP publication usually occurs within a few working days of receipt of page proof corrections, which can be several weeks in advance of the cover date of the issue.

## **Post-Publication Policies**

The American Chemical Society follows guidance from the [Committee on Publication Ethics](#) (COPE) when considering any ethical concerns regarding a published article, Retractions, and Expressions of Concern.

## **Additions and Corrections**

Additions and Corrections may be requested by the author(s) or initiated by the Editor to address important issues or correct errors and omissions of consequence that arise after publication of an article. All Additions and Corrections are subject to approval by the Editor, and should bring new and directly relevant information and corrections that fix scientific facts. Minor corrections and additions will not be published. Readers who detect errors of consequence in the work of others should contact the corresponding author of that work.

Additions and Corrections must be submitted as new manuscripts via the ACS Publishing Center by the Corresponding Author for publication in the “Addition/Correction” section of the Journal. The corresponding author should obtain approval from all coauthors prior to submitting or provide evidence that such approval has been solicited. The manuscript should include the original article title and author list, citation including DOI, and details of the correction.

## **Retractions**

Articles may be retracted for scientific or ethical reasons and may be requested by the article author(s) or by the journal Editor(s), but are ultimately published at the discretion of the Editor. Articles that contain seriously flawed or erroneous data such that their findings and conclusions cannot be relied upon may be retracted in order to correct the scientific record. When an article is retracted, a notice of Retraction will be published containing information about the reason for the Retraction. The originally published article

will remain online except in extraordinary circumstances (e.g. where deemed legally necessary, or if the availability of the published content poses public health risks).

## Expressions of Concern

Expressions of Concern may be issued at the discretion of the Editor if:

- there is inconclusive evidence of research or publication misconduct by the authors;
- there is evidence that the findings are unreliable but the authors' institution will not investigate the case;
- an investigation into alleged misconduct related to the publication either has not been, or would not be, fair and impartial or conclusive;
- an investigation is underway but a judgment will not be available for a considerable time.

Upon completion of any related investigation, and when a final determination is made about the outcome of the article, the Expression of Concern may be replaced with a Retraction notice or Correction.

## Sharing Your Published Article

At ACS Publications, we know it is important for you to be able to share your peer reviewed, published work with colleagues in the global community of scientists. As sharing on sites known as scholarly collaboration networks (SCNs) is becoming increasingly prevalent in today's scholarly research ecosystem, we would like to remind you of the many ways in which you, a valued ACS author, can [share your published work](#).

Publishing open access makes it easy to share your work with friends, colleagues, and family members. In addition, ACS Publications makes it easy to share your newly published research with ACS Articles on Request (see below). Don't forget to promote your research and related data on social media, at conferences, and through scholarly communication networks. Increase the impact of your research using the following resources: [Altmetrics](#), [Figshare](#), [ACS Certified Deposit](#)

## E-Prints

When your article is published in an ACS journal or partner journal, corresponding authors are provided with a link that offers up to 50 free digital prints of the final published work. This link is valid for the first 12 months following online publication, and can be shared via email or an author's website. After one year, the access restrictions to your article will be lifted, and you can share the [Articles on Request](#) URL on social media and other channels. To access all your Articles on Request links, log in to your ACS Researcher Resources account and visit the "My Published Manuscripts" page.

## Appendix 1: PREPARING FOR SUBMISSION

We've developed ACS' publishing and editorial policies in consultation with the research communities that we serve, including authors and librarians. Browse our policies below to learn more.

### Ethical Guidelines

ACS editors have provided [Ethical Guidelines](#) for persons engaged in the publication of chemical research—specifically, for editors, authors, and reviewers. Each journal also has a specific [policy on prior publication](#).

## OFAC Compliance

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## Appendix 2: Preparing Graphics

### Resolution

Digital graphics pasted into manuscripts should have the following minimum resolutions:

- Black and white line art, 1200 dpi
- Grayscale art, 600 dpi
- Color art, 300 dpi

### Size

Graphics must fit a one- or two-column format. Single-column graphics can be sized up to 240 points wide (3.33 in.) and double-column graphics must be sized between 300 and 504 points (4.167 in. and 7 in.). The maximum depth for all graphics is 660 points (9.167 in.) including the caption (allow 12 pts. For each line of caption text). Lettering should be no smaller than 4.5 points in the final published format. The text should be legible when the graphic is viewed full-size. Helvetica or Arial fonts work well for lettering. Lines should be no thinner than 0.5 point.

### Color

Color may be used to enhance the clarity of complex structures, figures, spectra, and schemes, etc., and color reproduction of graphics is provided at no additional cost to the author. Graphics intended to appear in black and white or grayscale should not be submitted in color.

### Type of Graphics

#### Table of Contents (TOC)/Abstract Graphic

Consult the Guidelines for [Table of Contents/Abstract Graphics](#) for specifications.

Our team of subject-matter experts and graphical designers can also help generate a compelling TOC graphic to convey your key findings. Learn more about our [Graphical Abstract service](#).

### Figures

A caption giving the figure number and a brief description must be included below each figure. The caption should be understandable without reference to the text. It is preferable to place any key to symbols used in the artwork itself, not in the caption. Ensure that any symbols and abbreviations used in the text agree with those in the artwork.

### Charts

Charts (groups of structures that do not show reactions) may have a brief caption describing their contents.

### Tables

Each table must have a brief (one phrase or sentence) title that describes the contents. The title should be understandable without reference to the text. Details should be put in footnotes, not in the title. Tables should be used when the data cannot be presented clearly in the narrative, when many numbers must be presented, or when more meaningful inter-relationships can be conveyed by the tabular format. Tables should supplement, not duplicate, information presented in the text and figures. Tables should be simple and concise.

## Schemes

Each scheme (sequences of reactions) may have a brief caption describing its contents.

## Chemical Structures

Chemical structures should be produced with the use of a drawing program such as ChemDraw.

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