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
- **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, Features <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:

Jonathan V. Sweedler, Editor-in-Chief, *Analytical Chemistry*
Department of Chemistry, 63-5, University of Illinois, Urbana, IL 61801
Phone: 217-244-7866
Fax: 217-265-6290
Email: eic@anchem.acs.org

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 Features, Perspectives, and Reviews. Feature 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.

**Features.** Feature 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 Features are considered. Authors are welcome to e-mail an outline of a proposed article analytical@acs.org. Further instructions will be provided upon acceptance of a proposal. Features 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).

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.)

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 Publishing Center

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 the ACS Publishing Center 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 ACS Paragon Plus, ACS Publications’ manuscript submission and peer review environment.
- 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.

Manuscript Preparation

Review Ready Submission

All ACS journals and partner journals have simplified their formatting requirements in favor of a streamlined and standardized review-ready 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.
- A two-column manuscript template is available and can be used for manuscripts submitted to any ACS journal or partner journal. Templates are not required but may be useful to approximate how an article will compose. For manuscripts with word count limits, authors are not required to fit content into a page limit based on the template.
- References can be provided in any style, but they must be complete, including titles.
- Supporting Information should be submitted as a separate file(s).
- Author names and affiliations on the manuscript must match what is entered into ACS.

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 ACS Paragon Plus. 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 Features, 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. 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. Use Chemical Abstracts Service Source Index abbreviations for journal names (http://cassi.cas.org/search.jsp) and provide article title, publication year, volume, and page number (inclusive pagination is recommended). Chemical Abstracts reference information for foreign publications that are not readily available should also be supplied.

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:


**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](https://www.fundref.com).

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](https://www.acs.org/content/acs/en/authors/author-support.html#software) 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 description of each file is required, and the paragraph and descriptions should be placed at the end of the manuscript before the list of references. The appropriate format is as follows:

**Supporting Information.** Brief descriptions in nonsentence format listing the contents of the files supplied as Supporting Information.

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.

**Data Requirements**

Please refer to the [ACS Math Style Sheet](https://www.acs.org/content/acs/en/authors/author-support.html#math) and [NMR Guidelines](https://www.acs.org/content/acs/en/authors/author-support.html#nmr) for guidance.

**Language and Editing Services**

A well-written paper helps share your results most clearly. ACS Publications’ [English Editing Service](https://www.acs.org/content/acs/en/authors/author-support.html#editing) 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 Figures service generates publication-ready figures that conform to your chosen journal’s specifications. This includes changes to file type, resolution, color space, font, scale, line weights, and layout (to improve readability and professional appearance).

**Preparing for Submission**

Manuscripts, graphics, supporting information, and required forms, as well as manuscript revisions, must all be submitted in digital format through ACS Paragon Plus, 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.

A properly completed and signed Journal Publishing Agreement must be submitted for each manuscript. ACS Paragon Plus provides an electronic version of the Agreement that will be available on the My Authoring Activity tab of the Corresponding Author’s Home page once the manuscript has been assigned to an Editor. A PDF version of the Agreement is also available, but Authors are strongly encouraged to use the electronic Journal Publishing Agreement. If the PDF version is used, all pages of the signed PDF Agreement must be submitted. If the Corresponding Author cannot or should not complete either the electronic or PDF version for any reason, another Author should complete and sign the PDF version of the form. Forms and complete instructions are available here.

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 by ACS Paragon Plus 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 “Articles ASAP” 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)](https://publicationethics.org/) 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 ACS Paragon Plus 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.
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 Publishing Center 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.

Safety Considerations

Authors must emphasize any unexpected, new, and/or significant hazards or risks associated with the reported work. This information should be in the Experimental Section of a full article and included in the main text of a letter. Additional information on communicating safety information from the ACS Guide to Scholarly Communication is freely available here.

Conflict of Interest Disclosure

A statement describing any financial conflicts of interest or lack thereof is published in each ACS journal and partner journal article.

During the submission process, the Corresponding Author must provide a statement on behalf of all authors of the manuscript, describing all potential sources of bias, including affiliations, funding sources, and financial or management relationships, that may constitute conflicts of interest. If the manuscript is accepted, the statement will be published in the final article.

If the manuscript is accepted and no conflict of interest has been declared, the following statement will be published in the final article: “The authors declare no competing financial interest.”

Plagiarism

In publishing only original research, ACS is committed to deterring plagiarism, including self-plagiarism. ACS Publications uses CrossCheck’s iThenticate software to screen submitted manuscripts for similarity to published material. Note that your manuscript may be screened during the submission process.

Further information about plagiarism can be found in Part B of the Ethical Guidelines to Publication of Chemical Research. See also the press release regarding ACS’ participation in the CrossCheck initiative.

Author List and Coauthor Notification
Authors are required to obtain the consent of all their coauthors prior to submitting a manuscript. The submitting author accepts the responsibility of notifying all coauthors that the manuscript is being submitted.

If any change in authorship is necessary after a manuscript has been submitted, the Corresponding Author must e-mail a signed letter to the Editor-in-Chief confirming that all of the original coauthors have been notified and have agreed to the change. If the change involves the removal of a coauthor’s name, the Corresponding Author must, in addition, arrange for the coauthor involved to e-mail a separate signed letter to the Editor-in-Chief consenting to the change. No changes in the author list will be permitted after a manuscript has been accepted.

During manuscript submission, the submitting author must provide contact information (full name, email address, institutional affiliation, and mailing address) for all of the coauthors. Because all of the author names are automatically imported into the electronic Journal Publishing Agreement, the names must be entered into ACS Paragon Plus in the same sequence as they appear on the first page of the manuscript. (Note that coauthors are not required to register in ACS Paragon Plus.)

**Patent Activities and Intellectual Property**

Authors are responsible for ensuring that all patent activities and intellectual property issues are satisfactorily resolved prior to first publication (ASAP or in issue). Acceptance and publication will not be delayed for pending or unresolved issues of this nature.

**Open Researcher and Contributor ID (ORCID)**

Authors submitting manuscript revisions are required to provide their own personal, validated ORCID iD before completing the submission, if an ORCID iD is not already associated with their ACS Paragon Plus user profiles. This ID may be provided during original manuscript submission or when submitting the manuscript revision. All authors are strongly encouraged to register for an ORCID iD, a unique researcher identifier. The ORCID iD will be displayed in the published article for any author on a manuscript who has a validated ORCID iD associated with ACS when the manuscript is accepted.

ORCID iDs should not be typed into the manuscript. ACS publishes only those ORCID iDs that have been properly verified and linked **before the manuscript is accepted**. After your ORCID iD is linked, it will be displayed automatically in all subsequently accepted manuscripts for any/all ACS journals. We do not publish ORCID iDs provided during proof review or via other communications after a manuscript is accepted for publication.

With an ORCID iD, you can create a profile of your research activities to distinguish yourself from other researchers with similar names, and make it easier for your colleagues to find your publications. If you do not yet have an ORCID iD, or you wish to associate your existing ORCID iD with your ACS Paragon Plus account, you may do so by clicking on “Edit Your Profile” from your ACS Paragon Plus account homepage and following the ORCID-related links. Learn more at [www.orcid.org](http://www.orcid.org).

**Copyright and Permissions**

To obtain forms and guidelines for copyright transfer, obtaining permissions from copyright owners, and to explore a Copyright Learning Module for chemists, click [here](http://www.orcid.org).
Funder Reporting Requirement

Authors are required to report funding sources and grant/award numbers. Enter ALL sources of funding for ALL authors in BOTH the Funder Registry Tool in ACS Paragon Plus and in your manuscript to meet this requirement.

Open Access Compliance

ACS offers options by which authors can fulfill the requirements for open access and deposition into repositories for funded research. Visit our ACS Open Science site to see how to fulfill requirements for specific funders and to find out if you are eligible to publish under a Read + Publish agreement between ACS and your institution. You can also find out more about Open Access Compliance and ACS Open Science initiatives.

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 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.

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.

Cover Art

Analytical Chemistry authors are encouraged to submit images to be considered for use on the journal's front cover or Supplementary Covers at the time of the submission of their revised manuscript. If your article is accepted for publication, your suggestion may also be selected for use on one of the journal's covers. Images chosen for the front cover will be published at no cost to the author. If your art is selected for front cover, ACS will send you information about how to request one complimentary 18" by 24" printed poster featuring your work.

Cover art should be colorful and eye-catching, ideally without text, and must convey the importance and significance of the research. In general, we discourage submissions of structures, graphs, and chemical schema. We do encourage artistic renditions of molecules, cells, and data. The final cover image should be 20.8 cm in width and 25.4 cm in height (8.19 x 10.0 inches), with a resolution of 300 dpi or higher, preferably in the .jpg or .tif format. The logo will cover 5.6 cm (2.2 inches) at the top, so make sure that the main part of the image is in the field that will not get covered (but please do not add the logo at the top). Cover art files, as well as a short (<50-word), clear caption explaining the image, should be uploaded to ACS Paragon Plus as supplementary files during the final revision process. These images may be modified or enhanced by an ACS graphic artist. Cover art may delay issue publication of the associated Article; however, ASAP publication will not be delayed.

If you wish to be considered only for the front cover, and not a paid supplementary cover, please respond NO accordingly to the Supplementary Cover art question in ACS Paragon Plus. For more information on the Supplementary Covers program, please see this webpage.
**Web Enhanced Objects (WEO)**

The Web editions of ACS journals allow readers to view multimedia attachments such as animations and movies that complement understanding of the research being reported.

WEOs should be uploaded in ACS Paragon Plus with ‘Web Enhanced Object' selected as the file designation. Consult the list of [compatible WEO formats](#).