

Last updated: June 25, 2024 [View the latest guidelines online](#)

## Scope of the Journal

*Chem & Bio Engineering* is a peer-reviewed, open-access journal that publishes significant advances in various aspects of chemical and biological engineering.

The field of chemical and biological engineering faces emerging challenges of developing efficient and sustainable solutions in areas such as manufacturing, energy, environmental stewardship, and healthcare. In this regard, *Chem & Bio Engineering* aims to be a premier journal for chemical and biological engineers to share and discuss innovative and inspirational research that seeks to address these multifaceted challenges.

More information can be found [here](#).

## Manuscript Types

### Article

Articles should report a significant advance in the field of chemical and biological engineering, being characterized by the editor and referees as in the top 10% of advances in the field. Articles must exhibit high scientific quality, originality, significance, and conceptual novelty. They are not intended to be follow-up papers, unless they contain new and extensive information that will substantially advance the understanding of the field.

Manuscripts should describe the research concisely and accurately. While there are no page length restrictions, a suggested guideline is around 7,000 words, including the abstract, main text, tables, and legends (excluding references and Supporting Information). References should accurately represent previous theoretical and practical research that has guided the development of the hypothesis and experimental aspects of the work. The abstract should be limited to 300 words, summarizing the research context, key results, and conclusions. Abbreviations and acronyms should only be introduced if essential. Additionally, articles should include 5-7 lowercase keywords and a graphical Table of Contents entry to visually highlight the importance of the research outcomes.

### Letter

Letters are short publications that report results whose immediate availability to the science and engineering community is deemed important. Letters are limited to 3,000 words including the abstract, main text, tables, and legends, excluding references. Letters can contain up to 5 figures and 50 references; no section headings are used. Letters should include a graphical Table of Contents entry. Special efforts will be made to expedite the review and the publication of Letters. Therefore, authors of Letters should ensure that manuscripts are in final, error-free form when submitted.

## Review

Reviews are comprehensive, critical examinations of a selected topic, typically over a defined period. Reviews are expected to critically evaluate published work of multiple, international groups in a field or across disciplines; be logically organized; be of general interest to the journal readership; and make the material more easily accessible to those not expert in the area through clear text and figures. Reviews should lay out the challenges and opportunities that lie ahead and provide critical discussions that can help move the field forward. Reviews should contain an abstract (300 words), a graphical Table of Contents entry, and appropriate references. The use of graphics to illustrate key concepts within the text is strongly encouraged.

A Review should generally not exceed 12,000 words including the abstract, main text, tables, and legends, excluding references. Most Reviews are expected to be substantially shorter in length, although the length should be ultimately dictated by the subject matter. If necessary, a vocabulary section can be provided, defining 5-7 terms from the text in one or two sentences.

While reviews are mostly invited, unsolicited reviews may also be considered. Authors interested in submitting a Review are strongly encouraged to contact the Editors prior to manuscript preparation and submission, to seek conditional approval of the proposed topic. A single document consisting of the following information should be sent to the Editor ([eic@cbe.acs.org](mailto:eic@cbe.acs.org)) for consideration.

1. Proposed title
2. Corresponding Author names, affiliations, and websites
3. A short (~400 words) description of the focused topic
4. A list of 5-10 lead references
5. A list of recent review articles published on this topic and an explanation of how the proposed review will differ in focus and advance the literature on the subject.

## Perspective

Perspectives are brief personal accounts of a field or area by one or a small team of authors. Perspective authors are asked to assess the status of the field with an emphasis toward identifying key recent advances, critical challenges for the field, and notable opportunities going forward. Perspectives are focused rather than comprehensive and often elaborate on important unanswered questions and approaches being taken to address them. The primary goal of a Perspective is to inspire and help direct future research efforts. Perspective may not exceed 5,000 words including the abstract (<300 words), main text, and graphical elements, up to 50 references that demonstrate the full range of activities in the field. A Table of Contents graphic is required for this type of manuscript.

Authors may be invited by the Editor to submit a Perspective. Authors interested in contributing a Perspective are strongly encouraged to contact the Editors prior to manuscript preparation and submission, to seek conditional approval of the proposed topic. A single document consisting of the following information should be sent to the Editor ([eic@cbe.acs.org](mailto:eic@cbe.acs.org)) for consideration.

1. Proposed title
2. Corresponding Author names, affiliations, and websites

3. A short (~400 words) description of the focused topic
4. A list of 5-10 lead references
5. A list of recent review articles published on this topic and an explanation of how the proposed review will differ in focus and advance the literature on the subject.

## Viewpoint

Viewpoints highlight one or more articles recently published in *Chem & Bio Engineering* or other journals. These articles provide valuable insights to our interdisciplinary readership by presenting an author's perspective on a significant scientific development in the author's area of expertise. Viewpoints generally do not include original research data and rely heavily on the author's perspective or anecdotal evidence from the author's personal experience to support the argument.

Viewpoints are typically very short articles of about 2,000 words, including abstract, main text, references, and figure legends. They are usually solicited by the Editors from experts in the field. Authors interested in submitting a Viewpoint should send a proposal of no more than 300 words to the Editors ([eic@cbe.acs.org](mailto:eic@cbe.acs.org)) for consideration. Although Viewpoints are generally not peer-reviewed, they may be reviewed at the Editor's discretion.

## Commentary

Commentaries are in-depth analyses of political, ethical, educational, regulatory, or scientific issues of interest to the field of chemical and biological engineering. Commentary articles should be timely, provocative, and forward-looking, provide a personal insight into an issue of public or scientific importance, and be of general interest to a broad readership. Commentaries should not exceed 2500 words in total (including abstract, main text, references, and figure legends). Commentaries are usually invited by the journal Editors, but pre-submission proposals are also welcome. Authors interested in submitting a Commentary should send a proposal of no more than 300 words to the Editor ([eic@cbe.acs.org](mailto:eic@cbe.acs.org)) for consideration. Although Commentaries are generally not peer-reviewed, they may be reviewed at the Editor's discretion.

## 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 the [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 ACS Paragon Plus, ACS Publications' manuscript submission and peer review environment, 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

*Chem & Bio Engineering* does not require the use of any document templates. 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.

Recommended information includes the following:

- Title
- Names of all authors
- The type of manuscript submitted
- A paragraph explaining why the article appeals to the broad audience that *Chem & Bio Engineering* serves, clearly indicating what is/are key advance(s) of the work relative to the

state-of-the-art

- If the manuscript was previously declined by any other ACS journal, it is helpful to provide the name of the journal, the manuscript number, an explanation of the basis for the rejection, and a statement granting *Chem & Bio Engineering* permission to obtain the Editor's decision letter and reviews for the declined manuscript. Please provide a response to each reviewer's comments
- A description of any Supporting Information and/or Review-Only Material
- A statement confirming the manuscript has not been previously published by any of the authors and/or is not under consideration for publication in another journal at the time of submission
- A note of any use of a preprint server, and as appropriate, how the manuscript has been adjusted/updated between deposition and submission
- The names and e-mail addresses of at least four potential reviewers. These suggested reviewers must not be former mentors, mentees, collaborators, or coauthors within the past five years. Ideally, two or more suggested referees will work in different countries than the authors. Non-preferred reviewers may be denoted, along with a reason for their designation.

## Manuscript Text Components

**Title.** Titles should clearly and concisely reflect the emphasis and content of the manuscript. Titles are of great importance for current awareness and information retrieval and should be carefully constructed for these purposes. Titles of manuscripts may not contain the words "New" or "Novel" nor any part number or series number without permission from the Editor. Claims of precedence should not be made in a title, so use of "First" in titles for this purpose is prohibited. Additionally, "Superb", "Excellent", "Exceptional", "Outstanding" or other similar descriptive words, are strongly discouraged. Acronyms and abbreviations are not permitted in manuscript titles unless they are broadly familiar to readers in all disciplines of chemical and biological engineering. Titles should not be phrased as a question.

**Author List.** Bylines should include all those who have made substantial contributions to the work. To facilitate indexing and retrieval and for unique identification of an author, use first names, initials, and surnames (e.g., Jody R. Smith) or first initials, second names, and last names (e.g., J. Riley Smith). Do not use only initials with surnames (e.g., J. R. Smith). Deceased persons who meet the criteria for inclusion as coauthors should be included, with an Author Information note indicating the date of death. Do not include professional or official titles or academic degrees. At least one author must be designated with an asterisk as the person to whom correspondence should be addressed.

The full names and e-mail addresses of all coauthors must be provided on the Authors & Institutes page upon submission of the manuscript in ACS Paragon Plus. Use of ORCID identifiers is encouraged.

Addition or deletion of an author or authors after submission of the manuscript requires justification from the Corresponding Author and is subject to approval by the Editor.

**Institution Address.** The author affiliation(s) listed should be the institution(s) where the work was conducted. If the present address of an author differs from that at which the work was done, that address should be given in an Author Information note.

Many Funders and Institutions require that institutional affiliations are identified for all authors listed in the work being submitted. ACS facilitates this requirement by collecting institution information during manuscript submission under Step 2: Authors and Affiliations in ACS Paragon

Plus.

**Abstract.** All Articles, Letters, Reviews, Perspectives, Viewpoints and Commentaries must include an abstract, including an abstract graphic (TOC), in the manuscript document. The abstract should briefly state the purpose of the research, the principal results, and the main conclusions. Abstracts may not contain the words “superb”, “excellent”, “exceptional”, “outstanding”, or other similar descriptive words unless rigorously supported by a thorough comparison with the state-of-the-art in the manuscript. As with manuscript titles, the words “New”, “First”, or “Novel” are generally not acceptable in abstracts.

**Keywords.** All Articles, Letters, Reviews, and Perspectives must be accompanied by 5–10 keywords. These keywords will appear in the PDF version of the article and will also be used as a search term in the HTML version of the article.

**Text.** Standard Article format should be used for preparing a manuscript for submission as an Article, including appropriate section headings (e.g. Introduction, Methods or Experimental Section, Results and Discussion). Section headings should not be used in a Letter. Articles and Letters should both begin with an introductory text that clearly and concisely explains the purpose and significance of the research and puts it into context with earlier work in the area. It should be possible to do this without excessively increasing the length of the Article. Extensive reviews of the literature cannot be accepted. The Methods or Experimental Section can be placed in the main text or in the Supporting Information. It should include sufficient detail for other researchers to reproduce the work, as well as notes on potential hazards or safety considerations. The results, and a discussion of the results, should follow and be accompanied by schemes and figures with well-composed captions. It is strongly recommended that the main point(s) of the manuscript be summarized in a Conclusions section (for Articles) or at the end of the manuscript (for Letters), along with a forward-looking perspective on how these conclusions relate to the field(s) of study and what may come next.

**Acknowledgment.** Include financial support, technical assistance, advice from colleagues, gifts, etc. Be precise and thorough when acknowledging funders and include grant numbers where appropriate.

**Author Information Notes.** The e-mail address(es) of the Corresponding Author or authors must be provided as a Corresponding Author note. Present addresses for individual authors that differ from the address(es) at which the work was done should be given in a Present Address(es) note.

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

**References and Footnotes.** *All the references and footnotes must be placed together in a list at the end of the manuscript text.* In the Web edition, many of them will have links to other Web resources, such as the corresponding abstracts in *Chemical Abstracts* and the full text from other American Chemical Society journals. Because of this electronic linking, and to aid scientific research, *it is crucial that authors verify the accuracy of all references.*

Unnecessarily long lists of references should be avoided, and excessive self-citation is not permitted. However, authors must reference all previous publications in which portions of the present work have appeared. Each literature reference should be assigned one number and placed in the text as a superscript Arabic numeral. Footnotes to the text should be combined with

references and numbered in ordinal sequence. Long footnotes should be avoided in Articles and are not permitted in Communications; additional data and peripheral discussion should be placed in the Supporting Information rather than in footnotes.

Bibliographic references to classified documents and reports or references to unpublished materials that are not generally available to the scientific public should not be used. Authors must obtain written permission from any person whose work is cited as a personal communication, unpublished work, or work in press. Copies of letters of permission and documentation should be appended to the cover letter file. If the manuscript is accepted but the necessary permissions have not been received, the Editor will ask the author to remove the reference(s) and dependent text.

List submitted articles as “in press” only if they have been formally accepted for publication. Otherwise, use “unpublished work” with the name of the place where the work was done and the date. For work published online (ASAP, in press), the DOI should be furnished in addition to the author name(s), article title, journal name, and year. DOI is an accepted form of citation before and after the article appears in an issue.

#### Example of a journal reference:

Yue, Q.; Liu, W.; Zhu, X. n-Type Molecular Photovoltaic Materials: Design Strategies and Device Applications. *J. Am. Chem. Soc.* **2020**, *142*, 11613–11628.

#### Example of an in-press journal reference:

Ham, J. S.; Park, B.; Son, M.; Roque, J. B.; Jurczyk, J.; Yeung, C. S.; Baik, M.-H.; Sarpong, R. C–H/C–C Functionalization Approach to N-Fused Heterocycles from Saturated Azacycles. *J. Am. Chem. Soc.* **2020**, DOI: 10.1021/jacs.0c04278.

#### Example of a reference to a book with no editors:

Desiraju, G. R.; Vittal, J. J.; Ramanan, A. *Crystal Engineering: A Textbook*; World Scientific Publishing Co Pte Ltd.: Singapore, 2011.

#### Example of a reference to a book with editors:

Byrn, S. R.; Stowell, J. G. Impurities in Drug Substances and Drug Products. In *Validation of Active Pharmaceutical Ingredients*; Berry, I. R., Harpaz, D., Eds.; CRC Press: Boca Raton, 2001; pp 271–292.

Authors should consult the [ACS Guide to Scholarly Communication](#) for the appropriate style to use in citations of journal articles, books, and other publications. In literature references, article titles must be included and journal abbreviations should be those used in the [Chemical Abstracts Service Source Index \(CASSI\)](#).

## 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, nonsentence 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.

*Chem & Bio Engineering* applies ACS Research Data Policy **Level 1**, meaning the journal encourages all authors to publicly share all the data underlying the results reported in the paper, preferably via archiving in an appropriate public repository. Authors are also encouraged to provide a [Data Availability Statement](#) describing the public availability of the data supporting the article’s conclusions. Publicly available data sets should be [cited appropriately](#).

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

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.

## Data Requirements

*Chem & Bio Engineering* does not have specific data requirements. Some resources are available in the [ACS Researcher Resources](#), such as the [ACS Math Style Sheet](#) and [NMR Guidelines](#).

## 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 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

Submission of a manuscript to *Chem & Bio Engineering* is contingent upon the agreement by all the authors that the reported work has not received prior publication and that no portion of this or any other closely related work is under consideration for publication.

*Chem & Bio Engineering* authors may deposit an initial draft of their manuscript in a preprint service such as [ChemRxiv](#), [bioRxiv](#), [arXiv](#), or the applicable repository for their discipline before the manuscript is accepted for publication in *Chem & Bio Engineering*. Authors may revise the preprint version of their manuscript up until a final acceptance decision has been issued. 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. All other prior/redundant publication is forbidden. Upon publication in *Chem & Bio Engineering*, authors should add a link from the preprint to the published article via the Digital Object Identifier (DOI). Some preprint servers, including ChemRxiv and bioRxiv, add this link for authors automatically after publication. For further details, contact the Editorial Office. For the ACS Publications policy on theses and dissertations, click [here](#).

## Editorial Policies

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**Review Process Summary.** Editors evaluate all submissions, and they consult with Editorial Advisory Board members in some cases. Some submissions are rejected shortly after submission, for example, those that fall outside the scope of the journal or are not deemed of sufficient interest to the broad readership. For manuscripts considered further, additional peer reviewers and the Editorial Advisory Board members are consulted to evaluate the originality, quality, clarity, and significance. Editors review all feedback and make final decisions. Reviewers may be asked to consider subsequent versions of manuscripts, particularly where new data or information is included, and in those cases, blind copies of reviewers comments may be sent to all reviewers to encourage a consensus recommendation and allow Editors to respond to authors with valuable and timely feedback.

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 *Chem & Bio Engineering* are expected to review manuscripts submitted by other researchers from time to time. More information about peer review at ACS Publications can be found here: ([https://researcher-resources.acs.org/publish/peer\\_reviews](https://researcher-resources.acs.org/publish/peer_reviews)).

**Revised Manuscripts.** When a revision is requested after peer review, the authors must return the revised manuscript promptly. Requests for extensions should be sent to the assigned Editor for consideration. After the allotted time, a revised manuscript will be handled as a new submission and will be given a new receipt date.

If a manuscript has been declined by *Chem & Bio Engineering* and the author wishes to submit a revised version, the author is required to first gain consent from the Associate Editor who handled the initial submission. If the Associate Editor's consent to resubmit is received (which does not guarantee ultimate acceptance), the cover letter must explicitly state that permission was obtained from the Associate Editor and must describe the changes that have been made in the manuscript and include justification for reconsideration. The manuscript will be assigned to the same Associate Editor who handled the initial submission.

**Pre-submission Inquiries.** If an author is unsure of the fit of their manuscript in *Chem & Bio Engineering*, the editorial board is willing to examine manuscripts prior to formal submission via inquiry to the editorial office via email ([eic@cbe.acs.org](mailto:eic@cbe.acs.org)).

**Self-Citations.** The use of excessive self-citations, as assessed by the referees and editor(s), is not permitted.

**Nomenclature.** Registered trademark names should be capitalized whenever used. Trade and

trivial names should not be capitalized. It is not necessary to use the trademark, registered trademark, or service mark symbol to ensure legal protection for the trademark.

## Providing Potential Reviewer Names

Please suggest at least 4 reviewers from at least two different countries who could evaluate the work. 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 "ASAP Articles" page on the web as soon as page proofs are corrected, all author concerns are resolved, and payment has been received. ASAP publication usually occurs within a few working days of receipt of page proof corrections (provided payment has been resolved), 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 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 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.

## 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

As a U.S.-based non-profit organization, the American Chemical Society (ACS) is required to comply with U.S. sanctions laws and regulations administered by the [U.S. Treasury Department's Office of Foreign Assets Control](#) (OFAC). While these laws and regulations permit U.S.-based publishers like ACS to engage in publishing-related activities with authors located in sanctioned regions in many cases, ACS may be prohibited under U.S. law from engaging in publishing-related activities in some cases, including, but not limited to, instances where an author or the institution with which an author is affiliated is located in a particular sanctioned region or has been designated by OFAC as a [Specially Designated National](#) (SDN) pursuant to certain U.S. sanctions programs. ACS reserves the right to refrain from engaging in any publishing-related activities that ACS determines in its sole discretion may be in violation of U.S. law.

### 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. Statement examples can be found in the [Safety Statement Style Sheet](#) and 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.

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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.

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## **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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