

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

Manuscript Submission Requirements Checklist

A complete manuscript submission contains the following items, which are discussed in more detail below:

- Cover Letter, including names of recommended reviewers
- Title
- Abstract
- Body text, including tables, artwork, and references
- Table of Contents Graphic
- Supporting Information
- Web Enhanced Objects (if desired)
- Artwork to be considered for Journal cover (if desired)

Authors should review the journal's Guidelines for Authors prior to submission of a manuscript. Close attention to all the required details discussed in the Guidelines for Authors will expedite review and reduce the time to publication. Publication may be delayed if any item is missing.

Authors should submit manuscripts via the Web using [ACS Paragon Plus](#).

Note that all Crystallographic Information Files (CIFs), structure factor tables, and CheckCIF reports must be submitted to the Cambridge Crystallographic Data Centre (CCDC) **prior to manuscript submission**. See [Requirements for Depositing X-Ray Crystallographic Data](#) [PDF] for complete details on submission of CIFs and a list of file types accommodated by CCDC.

Any subsequent revisions to the CIFs or structure factor tables should be deposited directly with the CCDC before resubmitting the manuscript in ACS Paragon Plus.

Authors are required to defend/respond to A and/or B level alerts in a separate document and upload this into ACS Paragon Plus as **Supporting Information for Review Only**.

Scope of the Journal

The aim of [Crystal Growth & Design](#) is to stimulate cross fertilization of knowledge among scientists and engineers working in the fields of crystal growth, crystal engineering, and the industrial application of crystalline materials and molecular assemblies.

Crystal Growth & Design publishes theoretical and experimental studies of the physical, chemical, and biological phenomena and processes related to the design, growth, and application of crystalline materials. Synergistic approaches originating from different disciplines and technologies and integrating the fields of crystal growth, crystal engineering, intermolecular interactions, and industrial application are encouraged.

Contributions emphasizing the fundamental concepts of crystal growth or molecular assembly and supporting further understanding of the relationship between assembly conditions and resulting properties or function of the material are highlighted. The journal does not publish routine reports

of new material morphologies unless the morphology leads to significantly improved function or properties.

The journal primarily covers the following:

- Crystal engineering (e.g., organic, inorganic, and hybrid solids)
- Crystal growth of inorganic, organic, and biological substances (e.g., biomineralization)
- Molecular assembly processes related to crystallization including the formation of gels, liquid crystals, colloids and amorphous materials.
- Polymorphism, polytypism
- Development of new functional nanostructured phases
- Intermolecular interactions in the solid state (e.g., hydrogen bonding, lattice energies)
- Modeling of crystal growth processes
- Prediction of crystal structure and crystal habit
- Determination and calculation of electronic distribution in the solid state
- Nucleation theory
- Molecular kinetics and transport phenomena in crystal growth
- Phase transitions
- Solvation and crystallization phenomena, modeling of crystallization processes
- Significant new ideas in industrial crystallization

Crystal Growth & Design does not cover routine reports of crystal or molecular structures.

Manuscript Types

Crystal Growth & Design publishes communications, original full-length research articles, reviews, and perspectives. It also includes news and meeting reports, book and media reviews, and software reviews. All contributions listed below will be peer-reviewed.

Communications

Communications should be preliminary reports of original, significant research results. A statement of urgency and brief summary of the significant findings should accompany the submission and appear as a title page (see Special Instructions for Communications and Review of Manuscripts).

Articles

Articles should be comprehensive reports of original, significant, and complete results or conclusions. Authors are encouraged to take full advantage of the additional Web features available for Web Enhanced Objects (including full color, 3D animations, video, and sound).

Reviews

Reviews should be concise, complete, critical evaluations of the existing state of knowledge on a particular facet of science or technology within the scope of the journal. Reviewers should concentrate on concepts and critical comment, and not comprehensive detailing of references which could be found by a simple computer literature search. Tutorial Reviews, intended for use in undergraduate and graduate teaching, will also be considered. While still critical evaluations, these should include some history and possible future developments of the considered topic area.

Authors considering the preparation of a review article should consult with the Editor or an Associate Editor prior to initiating the project.

Perspectives

Perspectives should provide either a personal view or philosophical look at a topic within the scope of the journal. These articles, which represent the opinions of the author, may contain topical, historical, or biographical information on relevant research, technologies, tools, future needs, or even experts.

Comments

Comments are brief responses to articles published in *Crystal Growth & Design*. A Comment could be a respectful presentation of an alternative points of view to one that has appeared in a recent issue of the journal. The authors of the original Article will be offered the opportunity to submit a response to the Comment, but the thread will be terminated at that point. Both Comments and responses to Comments are subject to critical review, and the author(s) of the original Article will be invited to review the Comment and the author of the Comment will be invited to review the response.

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

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.

- [Microsoft Word 2011 Template](#) for Macintosh
- [Microsoft Word 2010 Template](#) for Windows | [README file](#) [PDF]

All characters must be correctly represented throughout the manuscript: for example, 1 (one) and l (ell), 0 (zero) and O (oh), x (ex) and × (times sign). The symbol font for all Greek letters and math symbols should be used. The conversion program used in the Journal Production office will faithfully translate any errors present in a file; therefore, the final version must be checked carefully for consistent notation and correct spelling.

Naming and Nomenclature

Registered trademark names should be capitalized whenever used. Trade and trivial names should not be capitalized. Usually the chemical name or composition should be given in parentheses at the first occurrence of such a name.

Authors should write in clear, concise English and should follow the style and layout recommended in [The ACS Style Guide](#). All nomenclature must be consistent, clear, and unambiguous and should conform to current American usage. Insofar as possible, authors should use systematic names similar to those used by Chemical Abstracts Service and the International Union of Pure and Applied Chemistry.

Special Instructions for Communications

A Communication should not contain section headings (e.g., Introduction, Results and Discussion, Experimental Section, etc.); however, a TOC graphic is required. An Abstract of 200 words or less for review and indexing purposes should be submitted separately along with the text of the Communication. Any X-ray crystallographic information, experimental details, and characterization data for key compounds should be submitted as Supporting Information, and full documentation of each XRD study should accompany the Communication. A citation to a reference at the end of the manuscript should include a brief summary of the crystal structure determination, chemical formula and formula weight, unit cell dimensions with esds, temperature, crystal system and space group, number of formula units in the unit cell, linear absorption coefficient, number of measured/independent/observed reflections (with criterion), and final *R* values.

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

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.

Authors are required to provide the names and addresses of five recommended reviewers. The cover letter should address the criteria of significance and rapid disclosure for Communications and Reviews. For Articles and Perspectives, the cover letter should address how the work falls within the scope of the Journal, particularly for those papers that emphasize materials uses.

Manuscript Text Components

Authors are encouraged to submit Web enhancements as part of their manuscripts. Such enhancements may include rotatable 3D renderings, animations, video, or sound. See the section on Web Enhanced Objects for instructions on submitting these files.

Title

Titles should clearly and concisely reflect the emphasis and content of the paper. Titles are of great importance for current awareness and information retrieval and should be carefully constructed for these purposes. Succinct titles are encouraged.

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., John R. Smith) or first initials, second names, and surnames (e.g., J. Robert Smith). At least one author must be designated with an asterisk as the author to whom correspondence should be addressed. The corresponding author's e-mail address should follow the address information.

The author who submits the manuscript for publication accepts the responsibility of notifying all co-authors that the manuscript is being submitted. Addition or deletion of an author after the manuscript has been submitted requires a confirming letter to the Editor-in-Chief from the author whose name is being added or deleted. For more information on ethical responsibilities of authors, see the [Ethical Guidelines to Publication of Chemical Research](#).

Institutional Identification

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

The Abstract should immediately follow the author affiliations. All manuscripts must contain an Abstract, not exceeding 200 words, which should provide a succinct, informative summation of the most important results and conclusions. The opening lines of the Abstract should present the principal results and conclusions.

Introduction

The Introduction should provide a statement outlining the motivation for the research and should accurately place the investigations in context with previous or current work in the field.

Experimental Section

The Experimental Section should provide a clear, unambiguous description of materials, methods, and equipment in sufficient detail to permit repetition of the work elsewhere. Repetitive descriptions of a general procedure should be avoided.

Results and Discussion

These sections should present the results, and their interpretation, in context with existing knowledge in a clear and concise manner.

Conclusion

A Conclusion section should be provided in instances where the key elements of the results and discussion may require amplification or clarification. This section should not simply restate the Abstract.

References and Footnotes

In the Web edition of this journal, references will be linked to various electronic sources (e.g., the corresponding abstract from Chemical Abstracts Service, full text from other American Chemical Society journals, etc.); therefore, the accuracy of the references is critical. Authors are responsible for the accuracy of the references.

References to the literature should be numbered in one consecutive series in the text. 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. Unnecessarily long reference lists should be avoided.

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:

- Scaramuzza, D.; Schneider Rauber, G.; Voinovich, D.; Hasa, D. Dehydration without Heating: Use of Polymer-Assisted Grinding for Understanding the Stability of Hydrates in the Presence of Polymeric Excipients. *Cryst. Growth Des.* **2018**, 18, 5245–5253.

Example of an in press journal reference:

- Corpinot, M. K.; Buar, D.-K. A Practical Guide to the Design of Molecular Crystals. *Cryst. Growth Des.* **2018**, DOI: 10.1021/acs.cgd.8b00972.

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.

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: ¹H 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

Crystal Structure Studies

Authors should consult the recommendations of the Commission on Crystallographic Data of the International Union of Crystallography (<http://www.iucr.org/>) before preparing manuscripts for submission. Not all data requested for review will be accepted for the published text. This applies both to reports in which the structure study is the main thrust of the work (Full Structure Report) and to those in which such a study plays only a supporting role (Abbreviated Structure Report).

Structure Reports (in Articles)

Experimental Section. Every effort should be made to minimize the quantity of tabular material appearing in the published text. The collection of data and refinement of the structure are usually routine, and a concise description can be accomplished with a brief written description and one short table. Tabulations of fractional coordinates will in general not be published within the main text; however, this information can be accessed easily from the Web page displaying the final published article, which links to the data deposited at the CCDC via the Accession Codes box. Note that a list of the Accession Codes will also be published in the PDF version of the final article.



Tabular Material. Important bond lengths and angles (with esds) may be included in tabular form for the published text when they are significant to the overall discussion. Full details of the inter- and intramolecular distances and angles should be made available in the Supporting Information.

Figures. Drawings of crystal or molecular structures should be made with the noncrystallographer in mind. For structures refined anisotropically, ellipsoid plots should be submitted for review as Supporting Information; however, ball-and-stick drawings, with appropriate use of color, may enhance the presentation of the supramolecular features of crystal structures. Authors should pay close attention to the level of detail possible in reduced figures of unit cell and packing diagrams. Stereoscopic pairs of perspective drawings may be deposited as Supporting Information. However, authors are encouraged to submit 3D rotatable images of a single packing rather than stereopairs.

Crystallographic Data. Authors of manuscripts containing single-crystal XRD studies are strongly encouraged to provide powder XRD data (see below) on the bulk sample to confirm that the crystal structure is representative of the entire sample.

Note that CIFs, structure factor tables, and CheckCIF reports must be submitted to the Cambridge Crystallographic Data Centre (CCDC) prior to manuscript submission. The CCDC deposition number(s) should be entered into the ACS Paragon Plus Environment during submission, and any explanations for A and/or B level alerts should be described in a separate document and uploaded as Supporting Information for Review Only. See [Requirements for Depositing X-Ray Crystallographic Data](#) [PDF] for complete details on submission of CIFs.

CIF Data Collection	
* Does your manuscript contain any new, unpublished crystal structures intended for publication?	
<input type="radio"/>	Yes
<input type="radio"/>	No
If yes, provide all CCDC deposition numbers in the box below, separating each number by a single space. For a accommodated by the CCDC, authors are required to upload the data on the File Upload step of submission. See Depositing X-Ray Crystallographic Data [PDF].	
<div style="border: 1px solid #ccc; height: 60px; width: 100%;"></div>	

Any subsequent revisions to the CIFs or structure factor tables should be deposited directly with the CCDC before uploading a revised manuscript to ACS Paragon Plus.

Reviewers will have access via the CCDC to an electronic copy of the CIF(s) associated with a manuscript. For many reviewers, an electronic CIF greatly simplifies the review process. Thus, the lack of availability of an electronic CIF may result in significant delays in the review process. If the manuscript is accepted and published, the CIF(s) will be made available to readers via the ACS Publications website.

CCDC will accept organic, metal-organic, and inorganic compounds, including extended molecular solids and powder data where a constrained refinement has been used. Structural data for inorganic compounds will be transferred by CCDC to the Inorganic Crystal Structure Database (ICSD) after publication. For all other crystallographic data that are not accommodated by the CCDC, authors are encouraged to deposit into one of the following databases in addition to uploading the data in ACS Paragon Plus along with the manuscript submission, as Supporting Information. Please indicate whether the other crystallographic data is intended for publication or for review only.

- Protein Data Bank (PDB) for polypeptides and polysaccharides with more than 24 units (<http://www.rcsb.org/pdb/>)
- Nucleic Acids Data Bank for oligonucleotides (ndbserver.rutgers.edu/)
- Metals Database (CRYSTMETR) for metals and alloys (www.tothcanada.com/)

- International Centre for Diffraction Data (ICDD) for powder diffraction data without atomic coordinates (www.icdd.com/)
- Incommensurate Structures Database (ICSDB) for incommensurate modulated and composite structures (<http://webbdcrista1.ehu.es/incstrdb/>)

If restraints or constraints on non-hydrogen atoms or adjustments to the structure factors are used in the refinement of a crystal structure, these should be described in detail in the experimental section and their application justified. Data from complementary experiments should be made available to resolve any ambiguities arising from problems with a refinement.

Abbreviated Structure Reports in Communications or Articles

In a Communication or in the case in which a structure study plays a supporting role in a full manuscript devoted to another principal objective, a good molecular or packing diagram should appear as a figure. A few significant distances and angles should be placed in the figure caption or in a short table. A footnote in the numerical list at the end of the manuscript should include a brief summary of the crystal structure determination, chemical formula and formula weight, unit cell dimensions with esds, temperature, crystal system and space group, number of formula units in the unit cell, linear absorption coefficient, number of measured/independent/observed reflections (with criterion), and final *R* values. All other information which would otherwise be included in a structure report should be in the Supporting Information. The CIF(s) should be treated as described above.

Powder Diffraction Data

Powder XRD data are highly encouraged for all new materials and for materials previously uncharacterized by this technique. Data from powder XRD measurements should be accompanied by details of the experimental technique: the radiation, its wavelength, filters or monochromators, camera diameter, the type of X-ray recording, and the technique for estimating intensities. In cases of un-indexed listing of the data, the *d* spacings of all observed lines should be listed in sequence, together with their relative intensities. In cases where filtered radiation is used, every effort should be made to identify residual lines. Where resolution into 1–2 doublets occurs, the identification of the *d* spacing for each line as *d*₁, *d*₂ gives a measure of the quality of the diffractogram. When an indexing of the PXRD data or indices calculated from single crystal data are offered, the observed and calculated $1/d^2$ values should be listed side by side along with the observed relative intensities (it is superfluous to give *d* spacings in this instance). All calculated $1/d^2$ values should be listed (exclusive of systematic absences), to the limit of the data quoted. If possible, the crystal system should be specified. Possible space groups may also be listed if the data warrant it. Relevant information about the specimen used should be included.

Data Corrections

Errors discovered in published structure reports should be communicated directly to the corresponding author of the work. The Editor should be kept informed by a copy of such correspondence. Upon verifying the error, the author or authors should submit a suitable correction to the Editor without delay, carrying an acknowledgment of the colleagues who brought the matter to their attention.

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 *Crystal Growth & Design* implies that the work reported therein has not been published, or submitted for publication, elsewhere in any medium of a public nature, including electronic journals and computer databases. However, *Crystal Growth & Design* authors are allowed to 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 *Crystal Growth & Design*. 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 *Crystal Growth & Design*, authors are advised to 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

Review of Manuscripts

All manuscripts will be evaluated by the Editors and may be sent to external experts for critical review. The following criteria have been established for consideration by reviewers: relevance of the work to the fields of crystal growth, design, and application; its overall quality and completeness; its originality and significance; the quality, clarity, and conciseness of the manuscript; the quality and appropriate use of figures, tables, etc.; whether the conclusions reached are adequately supported by the data; the use of satisfactory nomenclature; whether the potential hazards have been adequately described; whether the references given are appropriate and adequate. In the case of Communications, the completeness of the work will not be among the criteria, but the additional requirement of unusual urgency, significance, and interest to the materials chemistry community will be applied in addition to the limitation on length. **It should be recognized that the reviewers act only in an advisory capacity and that the final decision concerning a manuscript is the responsibility of the Editors.**

All manuscripts will be handled expeditiously to ensure rapid consideration for publication; however, Communications will be given special consideration in both the reviewing and publication processes to minimize the time from receipt to publication.

Revised Manuscripts

A manuscript sent back to an author for revision must be returned to the Editor within 3 months; otherwise it will be considered withdrawn. All revised manuscripts should be submitted via the [ACS Paragon Plus](#) Environment. In the event of extensive revisions, revised manuscripts may be sent back to the original reviewers, who are asked to comment on the revisions. If only minor revisions are involved, the Editors examine the revised manuscript in light of the recommendations of the reviewers without seeking further opinions. A letter from the author in which a detailed account of how the author has responded to each of the reviewers' comments should accompany each revised manuscript.

Providing Potential Reviewer Names

Authors are required to provide the names of five reviewers competent to referee their manuscripts in their cover letter. They may also suggest that certain individuals not be used as referees. Such requests will be honored by the Editors, unless it is believed that the specific individual's opinion is vital in the consideration of the manuscript. 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 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 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.

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.

Reprints

[Article](#), [journal](#), and [commercial](#) reprints are available to order.

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.

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.

Authorship, 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.

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. (Note that coauthors are not required to register in ACS Paragon Plus.) Author affiliation should reflect where the work was completed, even if the author has since left that institution. Authors may include a note with a current address if their institution has changed since the work was completed.

To expedite the processing of your manuscript, please format your author and affiliation information according to the guidelines in this link:

<https://pubsapp.acs.org/paragonplus/submission/author-address-information.pdf>.

Criteria for authorship can be found in Part B of the [Ethical Guidelines to Publication of Chemical Research](#). Artificial intelligence (AI) tools do not qualify for authorship. The use of AI tools for text or image generation should be disclosed in the manuscript within the Acknowledgment section with a description of when and how the tools were used. For more substantial use cases or descriptions of AI tool use, authors should provide full details within the Methods or other appropriate section of the manuscript.

If any change in authorship is necessary after a manuscript has been submitted, confirmation is required that all of the authors (including those being added or removed) have been notified and have agreed to the change. To provide this confirmation, authors are asked to complete and sign an [authorship change form](#) and provide the completed form to the appropriate editorial office.

Authors with a single name: If you, or any of your coauthors, have only one name, please follow these steps for proper submission to ACS Paragon Plus:

1. First (Given) Name Field: Enter an asterisk (*) into the "First (Given) Name" field.
2. Last (Family) Name Field: Enter your single name into the "Last (Family) Name" field.

If your paper is accepted, the asterisk (*) will be removed from the published version of the paper.

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.

Copyright and Permissions

To obtain forms and guidelines for completing the Journal Publishing Agreement or obtaining permissions from copyright owners, and to explore a Copyright Learning Module for chemists, click [here](#).

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](#).

Diversity and Inclusion Statement

During manuscript submission, ACS journal authors have the option to submit a statement sharing information related to diversity and inclusion that is relevant for their paper. If supplying a diversity and inclusion statement, the corresponding author must provide this on behalf of all authors of the manuscript during the submission process. These statements include but are not limited to analysis of citation diversity and acknowledgment of indigenous land on which research was conducted. Statements expressing political beliefs are not permitted and may be removed by the journal office. All statements are subject to final review by the Editor.

- **Citation Diversity Statement:** The citation diversity statement should appear in the Acknowledgements section of the manuscript. ACS recommends including the following: (1) the importance of citation diversity, (2) the proportion of citations by gender and race/ethnicity for the first and last authors, (3) the method used to determine those proportions and its limitations, and (4) steps taken to by the authors to improve citation diversity in the article. We recognize that one limitation of the current methods is that it cannot account for intersex, non-binary, and transgender people, or Indigenous and mixed-race authors. (Adapted from [BMES/Springer Guidelines](#))
- **Land acknowledgment:** The land acknowledgment statement should appear in the Acknowledgements section of the manuscript. The statement should link to the institutions' formal land acknowledgments on which the research took place, if possible. Further guidance for creating these statements can be found here: <https://nativegov.org/news/a-guide-to-indigenous-land-acknowledgment/>.

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.

Cover Art

Crystal Growth & Design 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 the article is accepted for publication, submitted artwork may also be selected for use on one of the journal's covers. If the image is selected for the front cover, ACS will send the corresponding author information about how to request one complimentary 18" by 24" printed poster featuring the journal cover. Images chosen for the front cover will be published at no cost to the author.

Cover image submissions should be colorful and visually engaging, with minimal text. Original, unpublished images are encouraged. The cover image should not resemble a graphical abstract or data figure, but rather should be an artistic and scientifically accurate representation of the manuscript.

Image files should be submitted as TIF, JPG, PNG or EPS files with a resolution of at least 300 dpi for pixel-based images. Images should be 7.19 in. wide x 6.88 in. high (or 18.26 cm x 17.48 cm). Authors should submit the cover image, along with a short, clear legend (less than 50 words) explaining the image, as supplementary files to ACS Paragon Plus with their revised manuscript.

To be considered only for the front cover, and not a paid supplementary cover, please respond NO accordingly to the Journal Covers question in ACS Paragon Plus. For more information on the Supplementary Covers program, please [see this webpage](#). All art submitted for consideration for a supplementary cover will also be considered for a front cover.

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](#).