Scope of the Journal

The journal *Organic Process Research & Development* (*OPR&D*) serves as a communication tool between industrial chemists and chemists working in universities and research institutes. As such, it reports original work from the broad field of industrial process chemistry but also presents academic results that are relevant, or potentially relevant, to industrial applications. Process chemistry is the science that enables the safe, environmentally benign, and ultimately economical manufacturing of organic compounds that are required in larger amounts to help address the needs of society. Consequently, it encompasses every aspect of organic chemistry, including all aspects of catalysis, synthetic methodology development, and synthetic strategy exploration, but also includes aspects from analytical and solid-state chemistry and chemical engineering, such as workup tools or flow chemistry. The goal of development and optimization of chemical reactions and processes is their transfer to a larger scale; original work describing such studies and the actual implementation on scale is highly relevant to this journal. However, studies on new developments from either industry, research institutes, or academia that have not yet been demonstrated on scale, but where industrial utility can be expected and where the study has addressed important prerequisites for a scale-up, also serve the mission of *OPR&D* as a communication tool between the different contributors to the field.

*OPR&D* aims to cover research & development (R&D) from and for the fine organic chemicals and specialty chemicals industries, including pharmaceuticals, agrochemicals, electronic chemicals, flavors and fragrances, intermediates, food additives, and specialty polymers, with work from commodity chemicals, petrochemicals, and polymers being appropriate as well.

In summary, *OPR&D* serves the community interested in the practical application of organic chemistry, in both industry and academia, by publishing original scientific work, reviews on relevant topics, and opinion articles.

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**Manuscript Types**

Several types of manuscripts are admissible:

**Editorials**

*Editorials* provide a discussion forum for topics of interest to the industrial readership.

**Highlights**

Brief reviews of publications (“*Highlights*”) are an essential part of the mission of the journal. Given the industrial relevance, topics dealing with the legal environment of the industry, such as
regulatory requirements and environmental regulations, are especially suitable.

**Perspectives**

**Perspectives** are personal reviews of a field or area, and they are focused rather than comprehensive. They should touch base with the current literature, including key contributors and references, but will primarily serve to inspire and help direct future research efforts. Authors interested in submitting a Perspective may contact the Editor prior to manuscript preparation and submission to seek conditional approval of the proposed topic.

**Reviews**

The journal welcomes **Reviews** that cover a topic of general importance for the field of process research. **Reviews** may be limited to the work of the author, or they may be more comprehensive of the field or provide the scientific framework for developments in the industries covered by the journal.

**Articles**

**Articles** describe original work that has not been previously published and that is not for consideration for publication elsewhere. Novelty of the submitted manuscript is an absolute requirement. Manuscript topics for which an industrial patent application has been published by the authors are an exception to this rule, as it is understood that relevant industrial research is usually patented. The Experimental Section of an Article, describing the work performed on a preparative scale, is a valuable asset of the journal. Requirements for the Experimental Section are described below.

**ACS Publishing Center**

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

- **Mastering the Art of Scientific Publication**, which shares editor tips about a variety of topics including making your paper scientifically effective, preparing excellent graphics, and writing cover letters.
- Resources on [how to prepare and submit a manuscript](#) to ACS Paragon Plus, ACS Publications’ manuscript submission and peer review environment, including details on selecting the applicable Journal Publishing Agreement.
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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 serve authors and reviewers [here](#).

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

Document Templates and Format

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

Abbreviations

Authors are encouraged to make use of abbreviations and acronyms if it will result in a significant saving of space. If non-standard abbreviations or acronyms are employed, they must be defined the first time they are used. Beware of using multiple acronyms or trivial names for the same item, such as both ACN and MeCN for acetonitrile. Refer to the list of standard abbreviations and acronyms in *The ACS Style Guide*.

Nomenclature

Nomenclature should conform to American usage. Insofar as is practical, authors should use a systematic name, from either Chemical Abstracts or IUPAC, for each title compound in the Experimental Section. Unless the manuscript contains very few structures or the structures are very well known (e.g., benzene), it is generally good practice to identify all structures with a bold-faced Arabic numeral, unless the structure is not discussed in the text or listed in the Experimental Section. If a compound is given a number, it is expected that it also appears in a scheme or figure. It is also acceptable to use “semi- systematic names” for certain specialized classes of compounds, such as steroids, peptides, carbohydrates, and cyclophanes. In such a case, the name should conform to the generally accepted nomenclature conventions for the compound class. If the structures of the compounds in a manuscript are sufficiently complex that determination of their systematic names is impractical or the names are unduly long, compounds should be referred to in some unambiguous manner, such as “ketone 23” or “amino acid 14a”. The latter usage is also particularly convenient in the narrative. Avoid the use of alternative nomenclature systems such as letters or non-Arabic numerals to identify compounds or unfamiliar acronyms to refer to intermediates or products. If the manuscript contains a large number of structures, be careful to avoid inadvertently assigning multiple numerals to the same structure or...
multiple structures to the same numeral. Letter suffixes (e.g., 7a, 7b, 7c) may be used to identify series of compounds that differ in only one moiety; however, avoid suffixes if clarity is compromised.

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.

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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.

Manuscript Text Components

Title and Abstract

The title, abstract, and keywords are essential to allow your work to be discovered and recognized. They need to be picked with great care with a focus on highlighting the most important scientific aspects of the work and avoiding terminology relevant only to your institution or a small group of specialists. A well-written title and abstract can attract the attention of potential readers and increase the likelihood that other researchers will cite the published paper. The title should be descriptive of the topic of the article and as short as possible, using easily searchable keywords and avoiding abbreviations and acronyms unless they are more commonly used than spelled out words. In addition, titles should avoid complex compound names as much as possible in the title by using generic names, and spell out elements rather than using symbols unless part of a compound name. For additional guidance, please view resources such as ACS’s guide for how to make your chemistry research paper discoverable as well as Chapter 2.3 of the ACS Guide to Scholarly Communication.

All manuscripts must be accompanied by an abstract, which should state concisely the purpose of the research, the principal results, and major conclusions. Reference to structural formulas or tables in the text, by number, may not be made in the abstract. Additionally, citations of reference by number may not be made in the abstract. If a reference must appear in the abstract, the citation information must appear, not a superscript pointing to the reference list.

Four to six keywords may be provided following the abstract.

Main Text

The main text includes the Introduction, Experimental Section, Results, Discussion, and Conclusion (the Discussion and the Experimental Section are discussed in more detail below).

Given the scope of the journal, particular attention has to be given to the relevance of the described chemistry to be performed reliably on scale. In this context, attention to safety, including...
choice of acceptable solvents, workup, and isolation procedures is critically important to give the reader the trust that the chemistry is reliable and likely to be scalable. The scientific rationale for the choice of the optimal reaction conditions must be explained.

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*For this journal, vital experimental procedures must not be placed into Supporting Information but instead should be kept in the manuscript itself.*

The Experimental Section should be clearly distinguished from the rest of the text. Tabulation of experimental results is encouraged whenever it leads to a more effective presentation or economical use of space. Authors should use a general Experimental Section to identifies sources of commercial and known compounds to provide comprehensive and traceable access to the key starting materials used in the experimental part. Key chromatographic method parameters need to be given. It should be clear whether the purity listed is determined by area % (whether absolute area % or relative area %) or weight %.

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The Discussion section should be clearly distinguished from the rest of the text. Avoid the presentation of irrelevant data or lengthy discussion of unproductive pathways. All parts of the narrative should function to advance the central story. The presentation of experimental details in the text of the Discussion section should be kept to a minimum. Avoid the reiteration of information that is made obvious in a table or scheme.

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Supporting Information is a good compromise for the location of data and information that appears to be superfluous for the Discussion yet would still be useful to a reader desiring further information or to provide the experimental basis for observations or conclusions stated in the Discussion. Examples may include copies of spectra, safety related data, pictures or schemes of
experimental equipment that is not widely understood, details of design of experiments, or any other data-intense document.

Acknowledgments

The Acknowledgments should recognize technical assistance, advice from colleagues, gifts, etc. Permission should be sought from persons whose contributions to the work are acknowledged in the manuscript, but confirmation from the Editor is not needed.

References

Avoid unnecessarily long reference lists by selecting citations judiciously and citing reviews when possible. Literature citations and explanatory notes must be numbered in one consecutive series by order of mention in the text. In literature references, journal abbreviations should be those used by Chemical Abstracts Service Source Index (CASSI).

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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: $^1$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.

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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

Compound Characterization

For all known compounds, the source of the material or references to the utilized literature preparation method and published characterization data must be provided unless the material is a commodity available from common chemical vendors. Spectral data should be presented only if they augment or update the previously published data. Typically, $^{13}$C-NMR and $^1$H-NMR data should be included. Refer to the NMR Guidelines for ACS Journals for information on including NMR spectra and/or data in an article.

For all new compounds that appear as title compounds in the Experimental Section, adequate evidence to establish both the identity and degree of purity must be provided. Such evidence may be best presented as a combination of data/explanation located between the Discussion and Experimental Section. For instance, the Discussion may include information that a novel compound’s identification arose from well-understood chemistry from a known compound or via a single-crystal X-ray structure determination, and the Experimental Section may include the
spectral data that establish the identity and evidence of purity such as a narrow melting range, high HPLC or GC purity, etc. Alternatively, these data can be published in the Supporting Information. In general, only enough data should be presented in the actual Experimental Section to allow another worker to identify the same compound by comparison.

Full lists of infrared absorptions and mass spectral fragmentations should not be presented in the main text. List only those infrared absorptions that are diagnostic for important functional groups and only those mass spectral fragments that are diagnostic for a particular skeleton. Authors may supply high-resolution mass spectrometry (HRMS) data as an additional criterion of compound identity. Additional spectral and characterization data may be presented as Supporting Information.

Evidence of optical purity should be derived from HPLC, GC, or other appropriate analytical data and not simply optical rotation data. Optical rotation, if reported, should be in the form \[ [\text{temp}] = (\pm)\text{value (c x, solv)}, \] where \( \text{temp} \) is the wavelength of light used for the determination (often the sodium D line), \( \text{temp} \) is the temperature at which the determination was made, \( x \) is the concentration in g/100 mL, and solv is the solvent used for the measurement. Note that \( [\cdot] \) is expressed without units; the actual units, deg mL/(g dm), are implied.

Evidence of the degree of purity of each compound should be presented. Ideally this evidence will include elemental analysis, but other methods (e.g., spectroscopic, chromatographic) may be used as appropriate, provided that the results are justified by the data. Analytical methods should be given in sufficient detail to allow reproduction. Information such as detailed NMR, 2D analysis, or MS data can be included in Supporting Information. Many processes do not require a high level of purification of an intermediate prior to transformation to the subsequent intermediate. The Experimental Section should indicate the actual purity range achieved.

Spectra

Reproductions of spectra, or the relevant segments thereof, will be published only if concise numerical summaries are inadequate for the purposes of the article. Articles dealing primarily with interpretation of spectra and those in which band shape or fine structure needs to be illustrated might qualify for this exception. When presentation of spectra is deemed essential, only the pertinent sections (prepared as described for “Figures”) should be presented. If an author wishes to publish reproductions of spectra as adjuncts to the characterization of compounds, these can be included as Supporting Information.

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The ACS Publications policy on theses and dissertations can be found here.

Editorial Policies

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Once submitted, the manuscript is checked for suitability for the journal (content, manner of presentation, linguistic quality) by the Editor. If the manuscript deemed acceptable, several reviewers are chosen by the Editor to comment on the scientific content of the submitted manuscript. In line with the rules of the ACS, the reviewers are anonymous and are known to the Editor and the Journal staff only. While the ultimate decision for a manuscript is solely at the discretion of the Editor, the input from well-thought-through reviews is a very strong determinant in the decision process.

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Appendix 1: PREPARING FOR SUBMISSION

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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.

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Appendix 2: Preparing Graphics

Resolution

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

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

Size

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

**Color**

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

**Type of Graphics**

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

Consult the Guidelines for Table of Contents/Abstract Graphics for specifications. Our team of subject-matter experts and graphical designers can also help generate a compelling TOC graphic to convey your key findings. Learn more about our Graphical Abstract service.

**Figures**

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

**Charts**

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

**Tables**

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

**Schemes**

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

**Chemical Structures**

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

*OPR&D* authors are encouraged to submit images to be considered for use on the journal’s front cover or [Supplementary Covers](#) at the time of the submission of their revised manuscript. If your article is accepted for publication, your suggestion may also be selected for use on one of the journal’s covers. If your art is selected for front cover, ACS will send you information about how to request one complimentary 18” by 24” printed poster featuring your work. 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. 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 5.85 in × 5.85 in. (or 14.86 cm × 14.86 cm). Authors should submit the cover image, along with a short, clear legend explaining the image, as supplementary files to ACS Paragon Plus with their revised manuscript.

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

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