

Author's Guide to ACS *Earth and Space Chemistry*

(Revised February 2018)

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Review-Ready Submission

Beginning in 2018, all ACS journals have simplified their formatting requirements in favor of a streamlined and standardized review-ready format for an *initial* manuscript submission. This change allows authors to focus on the scientific content needed for efficient review rather than on formatting concerns. It will also help ensure that reviewers are able to focus on the scientific merit of a submission during the peer review process. Review-Ready Submission will also reduce the effort needed to revise formatting should a manuscript be transferred as a submission to a different ACS journal. Authors will be asked to attend to any journal-specific formatting requirements during manuscript revision.

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. Separate graphics can be supplied at revision.
- 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.
- Supporting Information should be submitted as a separate file(s).
- Author names and affiliations on the manuscript must match what is entered into ACS Paragon Plus.

Scope

The scope of *ACS Earth and Space Chemistry* includes the application of analytical, experimental, and theoretical chemistry to investigate research questions relevant to the Earth and space. The journal encompasses the highly interdisciplinary nature of research in this area while emphasizing chemistry and chemical research tools as the unifying theme. The journal publishes broadly in the domains of high- and low-temperature geochemistry, atmospheric chemistry, marine chemistry, planetary chemistry, astrochemistry, and analytical geochemistry. *ACS Earth and Space Chemistry* publishes Articles, Letters, and Reviews to provide flexible formats to readily communicate all aspects of research in these fields.

Among the areas the journal covers are:

Earth Interior

- Mineral-melt phase equilibria, partitioning, and kinetics
- Mineralogy and mineral physics
- Igneous and metamorphic petrology, petrogenesis, and geochronology

Earth Surface

- Mineral-microbe-water reactions, thermodynamics, and kinetics
- Reactive transport modeling and colloid transport
- Multiscale science and scaling of geochemical and biogeochemical reactions

Atmosphere

- Atmospheric composition and reaction pathways
- Chemistry-climate interactions
- Biogeochemical cycles

Ocean

- Chemical fluxes and marine trace element chemistry
- Effects of global change on marine chemistry and the cryosphere
- Chemistry of the paleo-environment

Space

- Chemistry of planetary atmospheres and surfaces
- Investigations of meteorites and tektites
- Properties of cometary and interstellar materials

- Spectroscopy and chemistry of stars, interstellar clouds, and planetary formation

Analytical

- Analytical methods for characterization of Earth and Space materials

Manuscript Types

ACS Earth and Space Chemistry publishes peer-reviewed manuscripts including Articles, Letters, Comments, and Reviews that highlight recent developments and that further the understanding of earth and space chemistry.

- **Articles.** (~10,000 words) Articles are original works presenting an advance of broad scientific significance. Originality is defined as new experimental data, new interpretation of existing data, or new theoretical analyses of phenomena. Significance will be judged with respect to the breadth of impact of the reported findings.
- **Letters.** (~3,000 words) Letters are a *brief* original works presenting an advance of broad scientific significance that merit faster publication time. Originality is defined as new experimental data, new interpretation of existing data, or new theoretical analyses of phenomena. Significance will be judged with respect to the breadth of impact of the reported findings. Letters should be approximately 3 formatted Journal pages or less in length, including the abstract, body text, methods, references, and figure/scheme legends.
- **Comments.** A Comment presents important comments on the work of others already published in *ACS Earth and Space Chemistry*; *ACS Earth and Space Chemistry* will not accept comments concerning research published elsewhere. The authors of the work being discussed will ordinarily be allowed a chance to reply.
- **Reviews.** (~14,000 words) Reviews are often invited but can also be initiated by authors. Suggested topics for Reviews will also be considered and any topic proposals **must** be emailed in advance to the Editor-in-Chief at eic@earthspacechem.acs.org. A good review critically evaluates existing work of multiple groups in a field or across disciplines, provides a logical organization, and makes the material more easily accessible to those who are not experts in the area through clear text and figures. Reviews should lay out challenges and future opportunities and should be broad rather than narrowly focused. Reviews should contain an abstract and appropriate references.

Manuscript Submission

All submissions must be uploaded to ACS Paragon Plus. Revised manuscripts must also be submitted via ACS Paragon Plus. Complete instructions and an overview of the online submission process are available through the secure ACS Paragon Plus website at <http://acsparagonplus.acs.org>. You can also access this site from the Submission and Review portion of the journal website at <http://pubs.acs.org/journal/aescq>. An author must register in ACS Paragon Plus before submitting a

manuscript. This one-time registration will suffice for future Web manuscript submissions to all ACS journals—provided you use the same e-mail address. Assistance can be acquired from the ACS Publications Support Center through <http://help.acs.org>, via e-mail at support@services.acs.org, or by phone at 800-227-9919 (U.S. and Canada) or +1-202-872-4357 (outside U.S. and Canada).

Policy Summary on Prior Publication

ACS Earth and Space Chemistry considers for publication only original work that has not been previously published and is not under consideration for publication elsewhere. When submitting a manuscript, an author should inform the editor of any prior dissemination of the content in print or electronic format. *ACS Earth and Space Chemistry* authors are allowed to deposit an initial draft of their manuscript in a preprint service. Please note any use of a preprint server in the cover letter, 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 *ACS Earth and Space Chemistry*, authors are advised to add a link from the preprint to the published paper via the Digital Object Identifier (DOI). For further details, contact the [Editorial Office](#).

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.

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 wish to associate your existing ORCID iD with your ACS Paragon Plus account, you may do so by following the ORCID-related links in the Email/Name section of your [ACS Paragon Plus](#) account. Learn more at <http://www.orcid.org>.

Cover Letter. A letter must accompany the submission, and it must contain the following elements:

- Full manuscript title
- Name and complete contact information (mailing address, phone, and email) of the corresponding author
- Name(s) of any other author(s)
- A statement of why the paper is appropriate for *ACS Earth and Space Chemistry* which must include a clear statement of the objective of the study
- A description of any Supporting Information for Publication and/or for Review Only Material

Authors are required to suggest four or more potential reviewers, including email addresses. Suggested reviewers should not be at the same institution as any of the manuscript authors and will be used at the discretion of the Editors. An author may request that a certain person not be used as a reviewer, but should include justification. The request will generally be honored, unless the Editor

feels that this individual's opinion, in conjunction with the opinions of other reviewers, is vital to the evaluation of the manuscript.

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Peer Review

Submitted manuscripts should not be published or under consideration elsewhere and may be examined using software to detect duplication of previously published material (see [Professional Ethics](#)).

Reject after Editorial Review. The Editors may identify submissions that in their expert opinions would not fare well during the review process; these manuscripts may be rejected without additional external review. Multiple editors will be consulted during this initial screening. This process shortens the time to decision and ensures a manageable workload and prevents overburdening for reviewers. Examples of situations where manuscripts may not be peer reviewed include but are not limited to the following: the paper is a routine extension or minor technical improvement of research already published; the science lies outside the scope of *ACS Earth and Space Chemistry*; the science does not meet *ACS Earth and Space Chemistry*' standards; insufficient data are provided to properly substantiate the claims and conclusions made; closely related work has already been published and few, if any, new insights are provided; the work is not of general appeal to the readership of *ACS Earth and Space Chemistry*; the manuscript is a resubmission of a paper that has been previously declined without the addition of adequate new science and/or without notification in the cover letter of previous submission.

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

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

Reviewers may be asked to review subsequent versions of the manuscript, especially if new data have been added to the paper, to evaluate whether the authors have addressed the scientific concerns appropriately. In such cases, blind copies of all reviewers' comments are normally sent to the reviewers. The Editors will expedite any additional rounds of review to ensure timely publication.

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 *ACS Earth and Space Chemistry* are expected to review manuscripts submitted by other researchers from

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Professional Ethics

All parties—editors, reviewers, and authors—are expected to adhere to the standards embodied in the American Chemical Society's Ethical Guidelines to Publication of Chemical Research. Those guidelines are available on the Web submission site (<http://paragonplus.acs.org>). Authors are reminded of their obligation to obtain the consent of all co-authors before submitting a paper for publication. Deletion/addition of an author after the manuscript has been submitted requires a confirming letter to the Editor-in-Chief from the submitting author, all co-authors, and the author whose name is being deleted/added.

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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 and suggest that the authors consider transferring the submission. The Manuscript Transfer simplifies and shortens the process of submitting to another ACS 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.

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Just Accepted Manuscripts (JAMs)

On submission, authors have the option to select the Just Accepted option which will result in the accepted version being published online as a JAM. The accepted, uncorrected draft is posted on the ACS Publications website prior to technical editing, formatting for publication, and author proofing, and usually occurs within 30 minutes to 24 hours of acceptance by the editorial office. To ensure rapid delivery of the accepted manuscript to the Web, authors must adhere carefully to all requirements in the journal's Author Guidelines. Manuscripts that appear as a JAM remain as such until the version in final form is published;

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Authors are responsible for ensuring that all patent activities and intellectual property issues are satisfactorily resolved prior to first publication (JAM, ASAP, or in issue). The actual date on which an accepted paper is published on the Web is the official publication date and is recorded on the Web version of the manuscript and on the first page of the PDF version. Acceptance and publication will not be delayed for pending or unresolved issues of this nature.

Manuscript Format

Word Processing Details

Manuscripts prepared with accepted software packages will be used for production. For a list of currently acceptable word-processing packages, please refer to the guidelines presented at <http://paragonplus.acs.org>.

ACS Math Style

Authors including math, display or in-text, in their manuscripts are encouraged to consult the [ACS Guidelines for Presenting Mathematical Information](#). This style sheet provides brief discussion of formatting related to the presentation of mathematical formulas, complete with examples of ACS style and layout. This document was developed to help authors anticipate how mathematical expressions will be formatted in the published version of the paper.

Preparing and Submitting Manuscripts Using TeX/LaTeX

Authors who submit manuscripts composed in TeX/LaTeX should submit a PDF file of the manuscript along with the native TeX/LaTeX manuscript package as a ZIP Archive. Use of the freely available **achemso style package** to help prepare your submission is strongly encouraged. The achemso package provides the official macros (achemso.cls) and BibTeX styles (achemso.bst and biochem.bst) for submission to ACS journals. The package and instructions are available from [CTAN, the Comprehensive TeX Archive Network](#). For complete information on submitting TeX/LaTeX files, see [Preparing and Submitting Manuscripts Using TeX/LaTeX](#).

Research Article Format

Title. Titles should clearly and concisely reflect the emphasis and content of the paper. Titles of manuscripts may not contain words like “First” or “Novel”. Titles are of great importance for current awareness and information retrieval and should be carefully constructed for these purposes.

Authorship. Provide **authors’ full names**, the complete mailing address of each author’s affiliation when the work was completed. Current addresses of the authors can be provided as Author Information notes and will appear in the back of the article. Indicate the corresponding author by an asterisk and

provide an email address for that person.

Abstract. Abstracts are required for all submissions (150-250 words). Abstract examples are available at http://pubs.acs.org/paragonplus/submission/ascefc/ascefc_abstractguide.pdf. The Table of Contents graphic will appear with the abstract text. The abstract serves multiple purposes and should be developed, with the graphic, to clearly and succinctly describe the objectives and outcome(s) of the study. The abstract will be the most widely read portion of the paper and will be used by abstracting services.

Keywords. All Articles, Letters, Reviews, and Perspectives should include 5-8 keywords. These keywords will appear in the PDF version of the article and will also be used as search terms in the HTML version of the article.

Text. Consult the ACS Style Guide for suggestions on the general writing style. It is not necessary to include information and details or techniques that should be common knowledge to those in the field. The use of acronyms, apart from established acronyms well known in the field, is discouraged.

Section Headings. Informative section headings and subheadings are encouraged for Articles and Reviews. Keep all information pertinent to a particular section and avoid repetition.

Introduction. The Introduction should state the purpose of the investigation and must include appropriate citations of relevant preceding work but should not include an extensive review of marginally related literature. The purpose statement should clearly outline how the work relates to the advancement of the field. If the manuscript describes a new concept, indicate why it is preferable to existing technologies and concepts in the field. If the manuscript describes an improvement in a specific area, the current state-of-the-art must be referenced and compared. Absence of appropriate literature references may be grounds for rejection of the manuscript.

Experimental Section. Authors must emphasize any unexpected, new, and/or significant hazards or risks associated with the reported work. This information should be in the experimental details section of the full article or communication. Include a clear, unambiguous description of materials, methods, and equipment in sufficient detail to permit repetition of the work elsewhere. Be consistent in voice and tense. For apparatus, list only devices of a specialized nature. List and describe preparation of special reagents only. Do not list those normally found in the laboratory or preparations described in standard handbooks and texts. Because procedures are intended as instructions to permit work to be repeated by others, give adequate details of critical steps. Describe all safety considerations, including any procedures that are hazardous, any reagents that are toxic, and any procedures requiring special precautions, in enough detail so that workers in the laboratory repeating the experiments can take appropriate safety measures. Procedures and references for the neutralization, deactivation, and ultimate disposal of unusual byproducts should be included. Published procedures should be cited but not described, except where the presentation involves substantial modifications. While an experimental section is required to be in the main article and should provide sufficient detail to understand the experiments, additional details and procedures may be presented in the Supporting Information.

Results and Discussion. The results may be supported by tables and figures; however, tables or figures are not required. The discussion should be concise and deal with the interpretation of the results. Results and discussion can appear under separate distinct section heads or as a combined section, as best fits the content.

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

References. The reference list must be numbered sequentially by order of mention in the text with each reference individually numbered (no multiple part references). Reference citations in the text must be superscripted. Use *Chemical Abstracts Service Source Index* abbreviations for journal names (<http://cassi.cas.org/search.jsp>) and provide article title, publication, year, volume, and inclusive pagination. References should include the Digital Object Identifier (DOI) unique for each citation. References are ultimately authors' responsibility; however, ACS uses a reference verification process to help ensure the accuracy and completeness of references.

Detailed information on formatting references can be found in *The ACS Style Guide* (2006).

Examples of the reference format:

(1) Cuartero, M.; Crespo, G. A.; Bakker, E. Paper-Based Thin-Layer Coulometric Sensor for Halide Determination. *Anal. Chem.* **2015**, *87*, 1981–1990.

(2) Bard, A. J.; Faulker, L. R. *Electrochemical Methods*, 2nd ed.; Wiley: New York, 2001.

(3) Francesconi, K. A.; Kuehnelt, D. In *Environmental Chemistry of Arsenic*; Frankenberger, W. T., Jr., Ed.; Marcel Dekker: New York, 2002; pp 51–94.

(4) Safaei, T. S.; Mohamadi, R. M.; Sargent, E. H.; Kelley, S. O. In Situ Electrochemical ELISA for Specific Identification of Captured Cancer Cells. *ACS Appl. Mater. Interfaces* **2015**, DOI: 10.1021/acsami.5b02404.

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If the article is dedicated to another scholar, a brief statement, such as “This article is dedicated to [name]”, may be included in the acknowledgement. Dedications do not appear as footnotes or in other sections of the work.

Graphics

Major graphics may take four forms, as described below. Each type of graphic should be numbered consecutively and independently. In order to facilitate the peer-review process, and to provide

reviewers with a more comprehensive look at the submitted article, authors are encouraged to embed each graphic into the flow of the text after first mention.

Do not use graphics that duplicate each other or material already in the text. Do not include graphics that have been published elsewhere without clear citation and copyright acknowledgement.

If any graphics have appeared previously or are adapted from other publications, please indicate this in the Cover Letter and obtain permission to reproduce the graphic

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For more information, please visit <http://pubs.acs.org/page/4authors/submission/index.html>.

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. For clarity and consistency with symbols and color, place a 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.

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 supplement, not duplicate, information presented in the text and figures. Tables should as simple and concise as possible.

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

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

Table of Contents (TOC). A TOC graphic is required for all manuscript types except Comments and Additions and Corrections. This graphic is used for multiple purposes, including the document abstract graphic and other situations where a representative graphic is required. This graphic should give the reader a quick visual representation of the essence of the paper without providing specific details. The best images for these uses are simple, relatively free of text and technical characters, and make use of color for visual impact. TOC images must be original work of the submitting author and be submitted as part of the manuscript of that author group. TOC images may not include logos, currency, or other imagery that falls outside the copyright of the paper or require unique permissions. The TOC graphic dimensions are as follows: 8.47 cm (3.33 in. or 240 points) width and 4.76 cm (1.88 in. or 135 points) height. Provide the TOC graphic as the last page of the submitted manuscript, labeled as “for TOC only”.

Graphic Quality and Format

The quality of the graphics in *ACS Earth and Space Chemistry* depends on the quality of the artwork provided by the author. Figures are not modified or enhanced by the journal production staff.

- The preferred submission procedure is to embed graphic files in a Word document at the final production size, ensuring the artwork is clear and legible at this size.

- Acceptable file formats are TIFF, PDF, or CDX (ChemDraw file). If submitting individual graphic files in addition to embedding them in a Word document, ensure the files are named based on the graphic function (i.e., Scheme 1, Figure 2, Chart 3). Labeling of all figure parts should be present and the parts should be assembled into a single graphic. Consistently sizing letters and labels in graphics throughout the manuscript will help ensure consistent graphic presentation for publication.

Graphic should be created according to the following guidelines:

- Minimum resolution requirements are as follows:

Black and white line art	1200 dpi
Grayscale art	600 dpi
Color art	300 dpi
- The RGB and resolution requirements are essential for producing high-quality graphics within the published manuscript. Graphics submitted in CMYK or at lower resolutions may be used; however, the colors may not be consistent and graphics of poor quality may not be able to be improved.
- Most graphic programs provide an option for changing the resolution when you are saving the image. Best practice is to save the graphic file at the final resolution and size in the program used to create the graphic.

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The Journal accepts the submission of Web-enhanced objects (WEOs) for the presentation of graphical results that go beyond conventional print publication capabilities, including 3D rotatable figures, animations, spectra, video, and sound. Links to WEOs will appear in the Web HTML version of the paper. Files suitable for this form of publication should be viewable with commonly available applications. Authors should submit WEOs via the ACS Paragon Plus Website as part of their submission and clearly indicate to the Editor that the material is WEO material. Descriptions of WEOs should be noted in the appropriate places within the graphic caption or text of the paper, noting the type of file and format. Example: “A 3D rotatable image in xyz format is available.” For more information, go to <http://pubs.acs.org/page/4authors/submission/weo.html>.

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In the interest of more concise and readable articles, authors should publish related but not integral material in an appendix called Supporting Information (SI). This material can include additional examples of experimental and theoretical figures that are similar in form to figures in the article, novel algorithms, extensive tabular data, extensive figures connected with computational modeling, analytical characterization data, and extensive instrument and circuit diagrams. Detailed mathematical derivations, computational procedures, and programs should be presented in the SI. Like the primary manuscript, SI is subject to peer review. SI is also indexed and abstracted by CAS.

The first page of the SI should be a cover page (labeled page S-1) that lists the authors’ names and affiliations, the full title of the primary article, and an abstract that describes the nature of the materials

therein and/or a table of contents. Then, as needed, the SI should include any further discussion germane to the primary research article or novel SI material, such as video clips or other imagery; any expanded description of experimental procedures; any supplementary experimental or theoretical results, given as figures or tables with legends and captions that contain the same level of detail as those in the primary research manuscript and that convey the significance of the result; and supplementary references for either the primary article or SI. Page, figure, and table numbers in the SI should be preceded by “S-” (Figure S-2, Table S-1, etc.). Captions to figures and tables should appear on the same page as the figure or table and should provide full details.

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A paragraph should appear at the end of the paper indicating the nature of the material and the means by which the interested reader may obtain copies directly. Use the following format:

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Nomenclature

The use of acronyms, apart from established acronyms well known in the field, is discouraged. Whenever possible, use systematic nomenclature as recommended by IUPAC and IUBMB for chemical compounds and biomolecules, respectively. Names of organisms should comply with genetic conventions, with genus and species names written in italics and spelled out in full on first appearance. 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. For Chemical Abstracts nomenclature questions, contact answers@cas.org.

General information about ACS publications is given in [The ACS Style Guide](#) (2006), available from Oxford University Press, Order Department, 201 Evans Rd., Cary, NC 27513. Updated instructions are available at the Author & Reviewer Resource Center homepage at <http://pubs.acs.org/4authors>.

Proofs

The corresponding author of an accepted manuscript will receive email notification and complete instructions when galley proofs are available for review via a secure Web site. Authors will access the secure site through ACS ChemWorx and will need an ACS ID. To obtain an ACS ID or to reset your password, go to www.acschemworx.org.

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