



AMERICAN CHEMICAL SOCIETY
JOURNAL PUBLISHING AGREEMENT

Form A: Authors Who Hold Copyright and Works-for-Hire

Manuscript ID, if Available

Control #2015-10-1

Received Date (Office Use Only)

SECTION I: Copyright

1. Submitted Work: The Corresponding Author or designee below, with the consent of all co-authors, hereby transfers to the ACS the copyright ownership in the referenced Submitted Work, including all versions in any format now known or hereafter developed. If the manuscript is not accepted by ACS or withdrawn prior to acceptance by ACS, this transfer will be null and void.

2. Supporting Information: The copyright ownership transferred to ACS in any copyrightable* Supporting Information accompanying the Submitted Work is nonexclusive. The Author and the ACS agree that each has unlimited use of Supporting Information. Authors may use or authorize the use of material created by the Author in the Supporting Information associated with the Submitted or Published Work for any purpose and in any format.

*Title 17 of the United States Code defines copyrightable material as "original works of authorship fixed in any tangible medium of expression" (Chapter 1, Section 102). To learn more about copyrightable material see "Frequently Asked Questions about Copyright" on the Publications Division website, at http://pubs.acs.org/page/copyright/learning_module/module.html.

SECTION II: Permitted Uses by Author(s)

1. Reuse/Republication of the Entire Work in Theses or Collections: Authors may reuse all or part of the Submitted, Accepted or Published Work in a thesis or dissertation that the Author writes and is required to submit to satisfy the criteria of degree-granting institutions. Such reuse is permitted subject to the ACS' "Ethical Guidelines to Publication of Chemical Research"

Continued on Page 2

SIGNATURES

Signing this agreement constitutes acceptance by the Author(s) and, in the case of a Work-Made-for-Hire, the company/employer of all contents contained herein, including the attached Appendix A: Author Warranties, Obligations, Definitions, and General Provisions.

Name of Corresponding Author or designee

Signature

Date

Employer/Organization (Work-for-Hire only)

Authorized Signature(s) of Employer/Organization (Work-for-Hire only)

Date

U.S. Government Contract #, if available

INSTRUCTIONS FOR FORM A

Form A should be signed **ONLY** by Author(s) who hold Copyright or who have created Works-for-Hire.

This manuscript will be considered with the understanding you have submitted it on an exclusive basis. You will be notified of a decision as soon as possible.

1. Complete all information in the **Manuscript Details** section.
2. Sign and date the form.
3. Submit **ALL PAGES OF THIS FORM** to the Editor's Office or upload it in ACS Paragon Plus.

MANUSCRIPT DETAILS

Name of ACS Publication:

Manuscript Title:

Corresponding Author's Name and Address:

List Names of ALL Author(s):



AMERICAN CHEMICAL SOCIETY JOURNAL PUBLISHING AGREEMENT

Form A: Authors Who Hold Copyright and Works-for-Hire

Control #2015-10-1

Manuscript ID, if Available

(<http://pubs.acs.org/ethics>); the Author should secure written confirmation (via letter or email) from the respective ACS journal editor(s) to avoid potential conflicts with journal prior publication**/embargo policies. Appropriate citation of the Published Work must be made. If the thesis or dissertation to be published is in electronic format, a direct link to the Published Work must also be included using the ACS Articles on Request author-directed link (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>).

Authors also may reuse the Submitted, Accepted, or Published work in printed collections that consist solely of the Author's own writings; if such collections are to be posted online or published in an electronic format, please contact ACS at copyright@acs.org to inquire about terms for licensed electronic use.

2. Reuse of Figures, Tables, Artwork, and Text Extracts in Future Works: Authors may reuse figures, tables, artwork, illustrations, text extracts of up to 400 words, and data from the Author's Submitted, Accepted, or Published Work in which the ACS holds copyright for teaching or training purposes, in presentations at conferences and seminars, in subsequent scholarly publications of which they are an Author, and for posting on the Author's personal website, university networks, or primary employer's institutional websites, and conference websites that feature presentations by the Author(s) provided the following conditions are met:

- Appropriate citation to the Published Work is given
- Modifications to the presentation of previously published data in figures and tables are noted and distinguished from any new data not contained in the Published Work, and
- Reuse is not to illustrate news stories unrelated to the Published Work
- Web posting by the Author(s) is for non-commercial purposes.

To reuse figures, tables, artwork, illustrations, and text from ACS Published Works in general, ACS requests that interested parties use the Copyright Clearance Center Rightslink service. For information see <http://pubs.acs.org/page/copyright/rightslink.html>

General ACS permission information can be found at <http://pubs.acs.org/page/copyright/permissions.html>.

3. Reuse in Teaching or In-House Training: In order to preserve the integrity of the scientific record, the Author(s) are encouraged to link to the Published Work using the ACS Articles on Request author-directed link as applicable for teaching and in-house training and this use is subject to the conditions identified below (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>). Regardless, the Author(s) may reproduce their Submitted, Accepted, or Published Work for instructional use in courses as a stand-alone handout, as part of a packet, or electronically for use by students enrolled in the course the Author is teaching as long as the following conditions are met:

- Proper credit must be given to the Published Work and a link to the Published Work must be included using the ACS Articles on Request author-directed link (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>). The following notice should either be posted with or printed on all uses of the Accepted Work described in this clause:
"This material is excerpted from a work that was [accepted for publication/published] in [JournalTitle], copyright © American Chemical Society after peer review. To access the final edited and published work see [insert ACS Articles on Request author-directed link to Published Work, see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>]."
- Electronic access must be provided via a password-protected website only to students enrolled in the course (i.e. not the general public). Availability to students should terminate when the course is completed.
- If a fee for distributed materials is charged for the use of Published Work in connection with the instructional use, prior written permission from the ACS must be obtained.

4. Presentation at Conferences: Subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/ethics>) and written confirmation (via letter or email) from the appropriate ACS journal editor to resolve potential conflicts with journal prior publication**/embargo policies, Authors may present orally or otherwise display all or part of the Submitted, Accepted, or Published Work in presentations at meetings or conferences. Authors may provide copies of the Submitted and Accepted Work either in print or electronic form to the audience.

**Prior publication policies of ACS journals are posted on the ACS website at <http://pubs.acs.org/page/policy/prior/index.html>



AMERICAN CHEMICAL SOCIETY JOURNAL PUBLISHING AGREEMENT

Form A: Authors Who Hold Copyright and Works-for-Hire

Manuscript ID, if Available

Control #2015-10-1

Sharing of the Published Work with conference attendees is permitted if it is done either via the ACS Articles on Request author-directed link (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>) or in print. Audience recipients should be informed that further distribution or reproduction of any version of the Work is not allowed.

5. Share with Colleagues: Subject to the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/ethics>), Authors may send or otherwise transmit electronic files of the Submitted or Accepted Work to interested colleagues prior to, or after, publication. Sharing of the Published Work with colleagues is permitted if it is done via the ACS Articles on Request author-directed link (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>). The sharing of any version of the Work with colleagues is only permitted if it is done for non-commercial purposes; that no fee is charged; and that it is not done on a systematic basis, e.g. mass emailings, posting on a listserv, etc. Recipients should be informed that further redistribution of any version of the Work is not allowed.

Authorized users of the ACS Publications website (<http://pubs.acs.org/>) may also email a link to the Author's article directly to colleagues as well as recommend and share a link to the Author's article with known colleagues through popular social networking services such as Facebook, Twitter, or CiteULike (see <http://pubs.acs.org/sda/63224/index.html> for more information).

6. Posting Submitted Works on Websites and Repositories: A digital file of the unedited manuscript version of a Submitted Work may be made publicly available on websites or repositories (e.g. the Author's personal website, preprint servers, university networks or primary employer's institutional websites, third party institutional or subject-based repositories, and conference websites that feature presentations by the Author(s) based on the Submitted Work) under the following conditions:

- The posting must be for non-commercial purposes and not violate the ACS' "Ethical Guidelines to Publication of Chemical Research" (see <http://pubs.acs.org/ethics>).
- If the Submitted Work is accepted for publication in an ACS journal, then the following notice should be included at the time of posting, or the posting amended as appropriate:
"This document is the unedited Author's version of a Submitted Work that was subsequently accepted for publication in [JournalTitle], copyright © American Chemical Society after peer review. To access the final edited and published work see [insert ACS Articles on Request author-directed link to Published Work, see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>]."

Note: It is the responsibility of the Author(s) to confirm with the appropriate ACS journal editor that the timing of the posting of the Submitted Work does not conflict with journal prior publication/embargo policies (see <http://pubs.acs.org/page/policy/prior/index.html>)

If any prospective posting of the Submitted Work, whether voluntary or mandated by the Author(s)' funding agency, primary employer, or, in the case of Author(s) employed in academia, university administration, would violate any of the above conditions, the Submitted Work may not be posted. In these cases, Author(s) may either sponsor the immediate public availability of the final Published Work through participation in the fee-based ACS AuthorChoice program (for information about this program see <http://pubs.acs.org/page/policy/authorchoice/index.html>) or, if applicable, seek a waiver from the relevant institutional policy.

7. Posting Accepted and Published Works on Websites and Repositories: A digital file of the Accepted Work and/or the Published Work may be made publicly available on websites or repositories (e.g. the Author's personal website, preprint servers, university networks or primary employer's institutional websites, third party institutional or subject-based repositories, and conference websites that feature presentations by the Author(s) based on the Accepted and/or the Published Work) under the following conditions:

- It is mandated by the Author(s)' funding agency, primary employer, or, in the case of Author(s) employed in academia, university administration.
- If the mandated public availability of the Accepted Manuscript is sooner than 12 months after online publication of the Published Work, a waiver from the relevant institutional policy should be sought. If a waiver cannot be obtained, the Author(s) may sponsor the immediate availability of the final Published Work through participation in the ACS AuthorChoice program—for information about this program see <http://pubs.acs.org/page/policy/authorchoice/index.html>.
- If the mandated public availability of the Accepted Manuscript is not sooner than 12 months after online publication of the Published Work, the Accepted Manuscript may be posted to the mandated website or repository. The



**AMERICAN CHEMICAL SOCIETY
JOURNAL PUBLISHING AGREEMENT**
Form A: Authors Who Hold Copyright and Works-for-Hire

Control #2015-10-1

Manuscript ID, if Available

following notice should be included at the time of posting, or the posting amended as appropriate:

"This document is the Accepted Manuscript version of a Published Work that appeared in final form in [JournalTitle], copyright © American Chemical Society after peer review and technical editing by the publisher. To access the final edited and published work see [insert ACS Articles on Request author-directed link to Published Work, see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>]."

- The posting must be for non-commercial purposes and not violate the ACS' "Ethical Guidelines to Publication of Chemical Research" (see <http://pubs.acs.org/ethics>).
- Regardless of any mandated public availability date of a digital file of the final Published Work, Author(s) may make this file available only via the ACS AuthorChoice Program. For more information, see <http://pubs.acs.org/page/policy/authorchoice/index.html>.

Author(s) may post links to the Accepted Work on the appropriate ACS journal website if the journal posts such works. Author(s) may post links to the Published Work on the appropriate ACS journal website using the ACS Articles on Request author-directed link (see <http://pubs.acs.org/page/policy/articlesonrequest/index.html>).

Links to the Accepted or Published Work may be posted on the Author's personal website, university networks or primary employer's institutional websites, and conference websites that feature presentations by the Author(s). Such posting must be for non-commercial purposes.

SECTION III: Retained and Other Rights

1. Retained Rights: The Author(s) retain all proprietary rights, other than copyright, in the Submitted Work. Authors should seek expert legal advice in order to secure patent or other rights they or their employer may hold or wish to claim.

2. Moral Rights: The Author(s) right to attribution and the integrity of their work under the Berne Convention (article 6bis) is not compromised by this agreement.

3. Extension of Rights Granted to Prior Publications: The rights and obligations contained in Section II: Permitted Uses by Author(s), Section III: Retained and Other Rights, and Appendix A, Section I: Author Warranties and Obligations of this agreement are hereby extended to the Author(s)' prior published works in ACS journals.

SECTION IV: Works-for-Hire

If the Submitted Work was written by the Author(s) in the course of the Author(s)' employment as a "Work-Made-for-Hire" as defined under U.S Copyright Law, the Submitted Work is owned by the company/employer which must sign the Journal Publishing Agreement (in addition to the Author(s) signature). In such case, the company/employer hereby assigns to ACS, during the full term of copyright, all copyright in and to the Submitted Work for the full term of copyright throughout the world as specified in Section I, paragraph 1 above.

In the case of a Work-Made-for-Hire, Authors and their employer(s) have the same rights and obligations as contained in Section II: Permitted Uses by Author(s), Section III: Retained and Other Rights, and Appendix A, Section I: Author Warranties and Obligations.

Any restrictions on commercial use in this agreement do not apply to internal company use of all or part of the information in the Submitted, Accepted, or Published Work.

Upon payment of the ACS' reprint or permissions fees, the Author(s)' employers may systematically distribute (but not re-sell) print copies of the Published Work externally for promotional purposes, provided that such promotions do not imply endorsement by ACS. Although printed copies so made shall not be available for individual re-sale, they may be included by the employer as part of an information package included with software or other products the employer offers for sale or license. Posting of the final Published Work by the employer on a public access website may only be undertaken by participation in the ACS AuthorChoice option, including payment of applicable fees.



**AMERICAN CHEMICAL SOCIETY
JOURNAL PUBLISHING AGREEMENT**
Form A: Authors Who Hold Copyright and Works-for-Hire

Control #2015-10-1

Manuscript ID, if Available

APPENDIX A: Author Warranties, Obligations, Definitions, and General Provisions

SECTION I: Author Warranties and Obligations

1. ACS Ethical Guidelines: By signing this agreement, Author(s) acknowledge they have read and understand the ACS' "Ethical Guidelines to Publication of Chemical Research" (<http://pubs.acs.org/ethics>).

2. Author Warranties: By signing this agreement the Corresponding Author and all co-authors (and in the case of a Work-Made-for-Hire, the Author(s)' employer(s)) jointly and severally warrant and represent the following:

- The Submitted Work is original.
- The Submitted Work does not contain any statements or information that is intentionally misleading or inaccurate.
- All Authors have been informed of the full content of the Submitted Work at, or prior to, the time of submission.
- The Submitted Work has not been previously published in any form (except as permitted in Section II: Permitted Uses by Author(s)).
- The Submitted Work is not being considered for publication elsewhere in any form and will not be submitted for such consideration while under review by ACS.
- Nothing in the Submitted Work is obscene, defamatory, libelous, or otherwise unlawful, violates any right of privacy or infringes any intellectual property rights (including without limitation copyright, patent, or trademark) or any other human, personal, or other rights of any kind of any person or entity, and does not contain any material or instructions that might cause harm or injury. Any unusual hazards inherent in the chemicals, equipment, or procedures used in an investigation are clearly identified in the Submitted Work.
- Nothing in the Submitted Work infringes any duty of confidentiality which the Author(s) may owe to another party or violates any contract, express or implied, that the Author(s) may have entered into, and all of the institutions where the work, as reflected in the Submitted Work, was performed have authorized publication.
- Permission has been obtained and included with the Submitted Work for the right to use and authorize use in print and online formats, or of any format that hereafter may be developed for any portions that are owned or controlled by a third party. Payments, as appropriate, have been made for such rights, and proper credit has been given in the Submitted Work to those sources.
- Potential and/or relevant competing financial or other interests that might be affected by publication of the Submitted Work have been disclosed to the appropriate ACS journal editor.

The Author (and, in the case of a Work-Made-for-Hire, the Author(s)' employer(s)) represent and warrant that the undersigned has the full power to enter into this Agreement and to make the grants contained herein.

The Author(s) (and, in the case of a Work-Made-for-Hire, the Author(s)' employer(s)) indemnify the ACS and/or its successors and assigns for any and all claims, costs, and expenses, including attorney's fees, arising out of any breach of this warranty or other representations contained herein.

3. General Author Obligations: If the Submitted Work includes material that was published previously in a non-ACS journal, whether or not the Author(s) participated in the earlier publication, the copyright holder's permission must be obtained to republish such material in print and online with ACS. It is the Author's obligation to obtain any necessary permissions to use prior publication material in any of the ways described in Section II: Permitted Uses by Author(s). No such permission is required if the ACS is the copyright holder.

All uses of the Submitted, Accepted, or Published Work made under any of activities described in Section II: Permitted Uses by Author(s) must include appropriate citation. Appropriate citation should include, but is not limited to, the following information (if available): author, title of article, title of journal, volume number, issue number (if relevant), page range (or first page if this is the only information available), date, and Copyright © [year] American Chemical Society. Copyright notices or the display of unique Digital Object Identifiers (DOIs), ACS or journal logos, bibliographic (e.g. authors, journal, article title, volume, issue, page numbers) or other references to ACS journal titles, Web links, and any other journal-specific "branding" or notices that are included by ACS in the Accepted or Published Work or that are provided by the ACS with instructions that such should accompany its display, should not be removed or tampered with in any way.

SECTION II: Definitions

Accepted Work: The version of the Submitted Work that has been accepted for publication in an ACS journal that includes, but is not limited to, changes resulting from peer review but prior to ACS' copy editing and production.

ACS Articles on Request: A link emailed to Corresponding Authors upon publication of their article in an ACS journal that provides free e-prints of the Published Work. For more information, see: <http://pubs.acs.org/page/policy/articlesonrequest/index.html>.

ACS AuthorChoice: A fee-based program that allows ACS Authors or their funding agencies to provide immediate or deferred, unrestricted online access to the Published Work from the ACS website. Under this program Authors may also post the Published



**AMERICAN CHEMICAL SOCIETY
JOURNAL PUBLISHING AGREEMENT**
Form A: Authors Who Hold Copyright and Works-for-Hire

Control #2015-10-1

Manuscript ID, if Available

Work on personal websites and institutional repositories of their choosing. For more information, see <http://pubs.acs.org/page/policy/authorchoice/index.html>.

Author: An individual who has made significant scientific contributions to the Submitted Work and who shares responsibility and accountability for the results and conclusions contained therein. For further clarification of the criteria for participation in authorship, see ACS' "Ethical Guidelines to Publication of Chemical Research" at <http://pubs.acs.org/ethics>.

Commercial Use: Use of the Submitted, Accepted, or Published Work for commercial purposes (except as provided for employers in the case of a Work-Made-for-Hire; see Section IV: Works-for-Hire) is prohibited or requires ACS' prior written permission. Examples of prohibited commercial purposes or uses that require prior permission include but are not limited to:

- Copying or downloading of the Submitted, Accepted, or Published Work, or linking to postings of the Submitted, Accepted, or Published Work, for further access, distribution, sale or licensing, for a fee;
- Copying, downloading, or posting by a site or service that incorporates advertising with such content;
- The inclusion or incorporation of the Submitted, Accepted, or Published Work in other works or services (other than as permitted in Section II: Permitted Uses by Author(s)) that are then available for sale or licensing, for a fee;
- Use of the Submitted, Accepted, or Published Work (other than normal quotations with appropriate citation) by a for-profit organization for promotional purposes, whether for a fee or otherwise;
- Systematic distribution to others via email lists or list servers (to parties other than known colleagues), whether for a fee or for free;
- Sale of translated versions of the Submitted, Accepted, or Published Work that have not been authorized by license or other permission from the ACS.

Corresponding Author: The Author designated by any co-author(s) to transmit the Submitted Work on their behalf and who receives and engages in all editorial communications regarding the status of the Submitted Work (including its reviews and revisions), and who is responsible for the dissemination of reviewers' comments and other manuscript information to co-authors (as appropriate). The Corresponding Author authorizes all revisions to the Submitted and Accepted Work prior to publication and is the primary point of contact after publication of the Version of Record. In some instances, more than one co-author may be designated as a Corresponding Author.

Published Work: The version of the Submitted Work as accepted for publication in an ACS journal that includes but is not limited to all materials in the Submitted Work and any changes resulting from peer review, editing, and production services by ACS.

Submitted Work: The version of the written manuscript or other article of intellectual property as first submitted to ACS for review and possible publication. The Submitted Work consists of the manuscript text or other contribution including but not limited to the text (including the abstract or other summary material) and all material in any medium to be published as part of the Submitted Work, including but not limited to figures, illustrations, diagrams, tables, movies, other multimedia files, and any accompanying Supporting Information.

Supporting Information: Ancillary information that accompanies the Submitted Work and is intended by the Author to provide relevant background information for evaluation of the Submitted Work during the peer review process, or that is made available as a further aid to interested readers of the Published Work, but is not considered essential for comprehension of the main body of the Submitted, Accepted, or Published Work. Supporting Information may also be material that is deemed by the Editor to be too lengthy or of too specialized and limited interest for inclusion in the main body of the Accepted or Published Work. Examples of Supporting Information include but are not limited to: computer software program code, machine-readable data files or other background datasets, supporting applications and derivations, and complex tables, illustrations, diagrams, and multimedia files (e.g. video, audio, animation, 3D graphics, or high-resolution image files).

SECTION III: General Provisions

ACS shall have the right to use any material in the Submitted, Accepted, or Published Work, including use for marketing, promotional purposes, and on publication covers, provided that the scientific meaning and integrity of the content is not compromised.

When the ACS is approached by third parties for permission to use, reprint, or republish entire articles the undersigned Author's or employer's permission may also be sought at the discretion of ACS.

The American Chemical Society or its agents will store the information supplied in connection with the Submitted Work within its electronic records. Information about ACS activities, products, and services may be sent to ACS Authors by mail, telephone, email, or fax. Authors may inform ACS if they do not wish to receive news, promotions, and special offers about our products and services. No personal information will be shared with third parties.

Headings contained in this Agreement are for reference purposes only and shall not be deemed to be an indication of the meaning of the clause to which they relate.