Information for Authors

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

ACS Nano is an international forum for the rapid publication of peer-reviewed research that embraces the interfaces between chemistry, physics, materials science, biology, and engineering. The mission of the journal is to facilitate communication among scientists from these fields that will translate into new research opportunities and discoveries. *ACS Nano* includes definitive and comprehensive articles on the following topics:

- Synthesis, assembly, characterization, dynamics, measurement, theory, and simulation of
  - nanostructures
  - nanomaterials and nanoassemblies
  - nanodevices
  - self-assembled structures
- Nanobiotechnology, nanomedicine, and nanobiophysics
- Single-molecule methods and measurements
- Toxicity of nanomaterials
- Nanofabrication and novel lithographic methods
- Methods and tools for nanoscience and nanotechnology
- Self-assembly and directed assembly

It is understood that submitted work is based upon original results and has not been published previously.

In addition, invited perspectives, commentaries, and reviews written by leading researchers in the field and conversations with founders, thought leaders, and public officials provide distinctive views about the future of nanoscience and nanotechnology.

TYPES OF CONTENT

Articles

Concise, yet comprehensive reports of original research presenting an advance of immediate, broad, and lasting impact. Articles are not intended to be follow-up papers, unless they contain new and extensive information that will advance the understanding of the field. Articles contain an abstract of ~250 words, providing a succinct, informative summation of the most important results and conclusions; no references may be cited in the abstract, and abbreviations and acronyms should not be introduced unless essential. An unheaded introduction of ≤1000 words should expand on the background of the work, with relevant references but not a complete survey of the literature. The introduction should be followed by Results and Discussion; a detailed Methods section should be presented at the end of the text. Typically, Articles include several graphics (color images are encouraged) and 30 or more references. Supporting Information and Web-Enhanced Objects may be included. Articles include 5–7 lowercase keywords and a graphical Table of Contents entry. Articles should not contain claims of novelty, as all manuscripts submitted to *ACS Nano* are expected to contain novel components.

Reviews

Topical, forward looking, and of general interest to the readership. Length is flexible (6–20 or more pages). 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 available to those not expert in the area through clear text and figures. Reviews should lay out the challenges and opportunities that lie ahead. Reviews should contain an abstract and appropriate references. The use of graphics to illustrate key concepts is strongly encouraged. Reviews include a graphical Table of Contents entry. Reviews also include ~8–10 keywords and a vocabulary section in which 5–7 terms extracted from the text are defined in one or two sentences. Reviews are generally submitted by invitation only. Review suggestions may be directed to the Editor. Reviews should not contain claims of novelty, as all manuscripts submitted to ACS Nano are expected to contain novel components.

Perspectives

Brief reports (3–5 journal pages) summarizing a research or finding of particular interest to nanoscientists and nanotechnologists. Perspectives can also elaborate on important unanswered questions and approaches being taken to address them. These reports are not intended to be comprehensive looks at the field, but rather to place a particular research finding into broader context. Perspectives must contain a brief abstract of ~120 words and ~20 references. Perspectives include a graphical Table of Contents entry. These papers are written exclusively at the invitation of the Editor. Perspectives should not contain claims of novelty, as all manuscripts submitted to ACS Nano are expected to contain novel components.

Conversations

Profiles of people who help advance nanoscience and nanotechnology. These pieces are written by *ACS Nano* Editors. If you know a person who you think should be profiled, please contact the Editor.

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These pieces may focus on meetings, policy, or education. Nano Focus articles alert the readership to interesting developments that may impact the field. Nano Focus pieces must contain a brief abstract of ~120 words and a graphical Table of Contents entry. Nano Focus pieces are written by invitation only. If you have a topic that you think should be covered, please contact the Editor.

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Additions and Corrections may be used to address important issues or correct errors and omissions of consequence that arise after publication of an article. Additions and Corrections

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Retractions

Articles may be retracted for scientific or ethical reasons. 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. Retractions may be requested by the article author(s) or by the journal Editor(s) but are ultimately published at the discretion of the Editor. When an article is retracted, a notice of Retraction will be published containing information about the original article title, author list, and the reason for the Retraction. Retracted articles will be accompanied by the related Retraction notice and will be marked as "Retracted". The originally published article will remain on the Web except in extraordinary circumstances (*e.g.*, where deemed legally necessary, or if the availability of the published content poses public health risks). The American Chemical Society follows guidance from the Committee on Publication Ethics (COPE) when considering retractions; for more information, see http://publicationethics.org/.

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Authors are required to submit papers online *via* the ACS Paragon Plus Environment at http://acsparagonplus.acs.org. Complete instructions and an overview of the electronic online (Web) submission process are available through the secure ACS Paragon Plus Web site. Authors must also submit all revisions of manuscripts *via* the ACS Paragon Plus Environment. The Web submission site employs state-of-the-art security mechanisms to ensure that all electronically submitted papers are secure. These same security mechanisms are also utilized throughout the peer-review process, permitting access only to editors and reviewers who are assigned to a particular paper.

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Authors are urged to suggest in the cover letter accompanying the submitted manuscript a minimum of six to eight persons competent to review the manuscript. Suggested referees may not be at the same institution as any of the manuscript authors. An author may request that a certain person not be used as a reviewer. The request will generally be honored by the Editor, unless the Editor feels this individual's opinion, in conjunction with the opinions of other reviewers, is vital in the evaluation of the particular manuscript.

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- the name(s) of any other author(s);
- a statement of why the paper is appropriate for *ACS Nano*; and
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MANUSCRIPT PREPARATION

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Tables. Tables may be created using a word-processor’s text mode or table format feature; the table format feature is preferred. Ensure that each data entry is in its own table cell. If the text mode is used, separate columns with a single tab and use a line feed (return) at the end of each row.

Tables must be numbered consecutively with Arabic numerals, and each table must be placed in the text following the paragraph in which it is first mentioned. 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 as 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. Place crystallographic and NMR data tables last in a series of tables in a manuscript because they are generally placed in the Methods section.

Define nonstandard abbreviations in footnotes. Footnotes in tables should be given letter designations and be cited in the table by italic superscript letters. The sequence of letters should proceed by line rather than by column. If a reference is cited both in the text and in a table, a lettered footnote that refers to the numbered reference in the text should be placed in the table.

Acknowledgment. Include financial support, technical assistance, advice from colleagues, gifts, *etc*. Dedications may appear only in the Acknowledgment section and are subject to approval by the Editor.

References. References to the literature are cited by superscript number at appropriate locations in the text. All literature citations are compiled in a numbered References list at the end of the manuscript text, in the order of their first citation in the text. Each numbered reference may contain only one literature citation. In the published version of the paper on the Web, many of them will be linked to other Web resources, such as the corresponding abstracts in Chemical Abstracts and the full text on publisher Web sites. Because of this electronic linking, and because the references are not checked in detail by editors or reviewers, it is crucial that authors verify their accuracy.

Unnecessarily long lists of references are to be avoided; however, authors must reference all previous publications in which portions of the present work have appeared. Additional data and peripheral discussion should be placed in the Supporting Information rather than in references. Supplementary references may be placed in Supporting Information. Please use the following reference styles.

For journals (include article titles):

> 1. Williams, G.; Seger, B.; Kamat, P. V. TiO_2-Graphene Nanocomposites. UV-Assisted Photocatalytic Reduction of Graphene Oxide. *ACS Nano* **2008**, *2*, 1487–1491.

For books:

> 2. Craighead, H. G. Nanostructures in Electronics. In *Nanomaterials: Synthesis, Properties and Applications*; Edelstein, A., Cammatata, R., Eds.; Taylor and Francis: New York, 1998; pp 565–566.

References with more than 20 authors must list the first 20 authors, followed by "*et al.*" Titles of journals are abbreviated according to Chemical Abstracts Service Source Index (CASSI, http://cassi.cas.org). Papers accepted for publication are cited as "in press"; the DOI should be given if the paper is published online. Cite papers that are in preparation or have been submitted but not yet accepted in the text, not in the References list, as unpublished experiments or personal communications.

Graphics. Major graphics may take three forms, as described below. Each type of graphics should be numbered consecutively and independently. Each graphic should be placed in the manuscript following the paragraph in which it is first mentioned. On submission, indicate those graphics that require special attention during production.

Figures. All figures must be mentioned in the text in consecutive order and must be numbered with Arabic numerals. 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. Figures can be embedded in the manuscript file.

Schemes. Sequences of reactions are called schemes and must be numbered consecutively with Arabic numerals. Schemes may have brief titles describing their contents.

Charts. Groups of structures that do not show reactions are called charts and must be numbered consecutively with Arabic numerals. Charts may have brief titles describing their contents.

Characterization and Database Deposition

Within research papers, authors are expected to provide firm evidence to establish both the identity and the purity of new substances. *ACS Nano* adheres to the Guidelines for Characterization of Organic Compounds set forth by *Journal of the American Chemical Society* and *Journal of Organic Chemistry*. Include the completed *J. Org. Chem.* Excel spreadsheet with the submitted manuscript. The criteria for other substances vary, but may include spectroscopic, crystallographic, chromatographic, electrophoretic, or other analytical methods. Supply sequencing or functional data for all biological constructs, such as fusion proteins, plasmids, *etc.*

Crystal and NMR Structures. Small molecular crystallographic data should be submitted, prior to publication in *ACS Nano*, to the Cambridge Structural Database (www.ccdc.cam.ac.uk). For papers reporting macromolecular NMR or crystal structures, the atomic coordinates must be deposited in the Protein Data Bank (PDB) (www.rcsb.org/pdb) or the Nucleic Acid Database (http://ndbserver.rutgers.edu). In all cases, the accession code(s) must be listed in the published paper. These coordinates must be designated "for immediate release upon publication". Authors of papers reporting X-ray crystal structures are encouraged to deposit the structure factor files in the PDB. No formal requirement exists for deposition of NMR assignments and constraints (see Biological Magnetic Resonance Data Bank at www.bmrb.wisc.edu).

Electron Microscopy Data. No formal requirement exists for deposition of molecular envelope reconstruction from electron microscopy data, but authors are encouraged to deposit relevant information in appropriate databases. Approved databases for deposition of electron miscroscopy data are the Worldwide Protein Data Bank (www.wwpdb.org), the Protein Data Bank Japan (www.pdbj.org), or the Protein Data Bank in Europe (http://www.ebi.ac.uk/pdbe).

Single-Crystal Diffraction Data. Manuscripts reporting the determination of one or more structures by X-ray diffraction must adhere to the following requirements:

Abstract. The abstract may summarize geometric features of unusual interest but should not contain unit cell parameters.

Main Body of Manuscript. Tables of essential interatomic distances and angles are *not required* but may be submitted (metric information for standard structural components should not be included).

For structures with anisotropically refined atoms, a figure displaying the thermal ellipsoids should ordinarily be presented; a spherical-atom representation may be substituted if necessary for clarity. If a spherical-atom view is chosen for the manuscript, a thermal ellipsoid figure should be included in the Supporting Information. In cases where intermolecular interactions are relevant to the discussion, a view of the unit cell may be included.

An Article should list for each structure the formula, formula weight, crystal system, space group, color of crystal, unit-cell parameters, temperature of data collection, and values of *Z*, *R*, and GOF; a brief description of data collection, and solution and refinement of the structure, should be placed in the Methods section. Tables of atom coordinates and thermal parameters will not be printed.

Supporting Information. Complete detailed data for each structure must be submitted in the electronic Crystallographic Information File (CIF) format. Deposition of CIF files in the Cambridge Crystallographic Data Centre (CCDC) does not eliminate the *ACS Nano* requirement to submit the CIF files as Supporting Information.

A separate CIF file for each structure should be uploaded. *ACS Nano* requires authors to run the CheckCIF program for each crystallographic structure and to correct any syntax errors in the CIF files prior to submission.

Structure factors (except for proteins and nucleic acids) should not be submitted as Supporting Information. However, one printed table of structure factors should be retained in case it is requested by the Editor for review purposes only.

Powder Diffraction Data. The presentation of X-ray powder diffraction data for new materials or for materials previously uncharacterized by this technique is encouraged. Data from X-ray powder measurements should be accompanied by details of the experimental technique: source of X-rays, the radiation, its wavelength, filters or monochromators, camera diameter, the type of X-ray recording, and the technique for measuring intensities. In cases of unindexed 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 β lines. Where resolution into α_1-α_2 doublets occurs, the identification of the *d* spacing for each line as $d\alpha_1$, $d\alpha_2$ gives a measure of the quality of the diffraction pattern. When an indexing of the data is offered, the observed and calculated $1/d^2$ values should be listed 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.

Magnetic Measurements. Fits of magnetic data [$X(T)$, $X^{-1}(T)$, $XT(T)$, $\mu(T)$, $M(H)$, *etc.*] to an analytical expression must include both the Hamiltonian from which the analytical expression is derived and the final analytical expression and fitting parameters. When the value of an exchange coupling constant, *J*, is given in the abstract, the form of the Hamiltonian must also be included. The expressions may be included in the manuscript or, if long and complex, as Supporting Information; if the latter method is used, it should be noted in the "Supporting Information Available" paragraph at the end of the manuscript. In addition, how the sample was measured (in a gelatin capsule, Teflon capsule, *etc*.) and the diamagnetic correction for the sample holder, as well as the diamagnetic correction for the material, must be provided and the manner in which it was calculated (Pascal's constants) or measured must be stated.

Computations. When computational results are an essential part of a manuscript, sufficient detail must be given, either within the paper or in the Supporting Information, to enable readers to reproduce the calculations. This includes data such as force field parameters and equations defining the model (or references to where such material is available in the open literature). Authors who report the results of electronic structure calculations are requested to provide as Supporting Information the geometries (either as Cartesian coordinates or Z matrices) of all the stationary points whose relative energies are given in the manuscript. The absolute energies in hartrees that are computed at these geometries should not be given in the manuscript but should be included in the Supporting Information. Where applicable, the number of imaginary frequencies should be reported to identify stable structures and transition states.

Large datasets for which an approved database has not yet been established must be housed as online Supporting Information at *ACS Nano.*

Supporting Information

Material that is not needed for reading the paper but which should be available to document experiments or calculations for future researchers should be put into the Supporting Information. This material may include tables, illustrations, derivations, experimental procedures, analytical and spectral characterization data, spectra, modeling coordinates and programs, and crystallographic information files. The Supporting Information may also include additional material or discussion that is primarily of interest to specialized readers.

The Supporting Information format of this journal can accommodate and make readily available almost any type of supplementary figures or data (*e.g.*, reproductions of spectra, experimental procedures, tabulated data, or expanded discussion of peripheral findings). Text

and tabular material should be double spaced; graphics should be saved at a resolution that allows clear viewing over the Web. The page size should be (U.S. Letter) 8.5 in. × 11 in. (22 cm × 28 cm), and the readable material should be aligned parallel with the 8.5 in. (22 cm) dimension wherever possible.

All pages should be numbered consecutively starting with page S1. Pages of CIF and plain text documents should not be numbered.

Supporting Information Paragraph

If the manuscript is accompanied by any supporting information files for publication, a brief description of each file is required. The paragraph and descriptions should be placed at the end of the manuscript before the list of references. The appropriate format is:

Supporting Information. Brief descriptions in nonsentence format listing the contents of the files supplied as Supporting Information.

Material deposited as Supporting Information is considered to be part of the publication and should not be submitted for republication as part of a future paper.

Submission. Supporting Information must be submitted at the same time as the manuscript. A list of acceptable electronic file types for Supporting Information is given on the online manuscript submission site (http://acsparagonplus.acs.org). All Supporting Information files of the same type should be prepared as a single file (rather than submitting a series of files containing individual images or structures). For example, all Supporting Information available as PDF files should be contained in one PDF file. Whenever possible, all text and graphics in the Supporting Information should be consolidated into a single word-processing file. Do not upload figures and tables that are to be published in the article into the Supporting Information file.

Access to Supporting Information. Supporting Information is available free of charge from the *ACS Nano* home page (http://pubs.acs.org/journal/ancac3).

Web-Enhanced Objects

The Web editions of the ACS journals allow authors to use multimedia attachments such as animations and movies. These objects should complement a reader's understanding of the research being reported. The types of objects suitable for this form of publication should be viewable with Java or with commonly available plug-ins or helper applications. With the appropriate plug-ins or helper applications, one can view and manipulate these objects within the HTML file itself or in a separate window. File size should be ≤5 MB. Complete specifications for Web-Enhanced Objects are given on the online manuscript submission site (http://acsparagonplus.acs.org).

Graphics Quality and Format

The quality of the graphics in *ACS Nano* depends on the quality of the artwork provided by the author. Figures cannot be modified or enhanced by the journal production staff.

- The preferred submission procedure is to embed graphic files in a Word document. It may help to print the manuscript on a laser printer to ensure all artwork is clear and legible.

- Acceptable file formats are TIF, PDF, EPS (vector artwork), or CDX (ChemDraw file). If submitting individual graphic files in addition to them being embedded in a Word document, ensure the files are named based on graphic function (*i.e.*, Scheme 1, Figure 2, Chart 3), not the scientific name. Labeling of all figure parts should be present and the parts should be assembled into a single graphic.
- Figures containing photographic material should be in TIF format.
- Line-art figures should be submitted as EPS files.
- Images produced from continuous-tone graphics such as photographs should have high contrast.

Each graphic should be placed in the manuscript following the paragraph in which it is first mentioned in order to facilitate review and composition of page proofs. Individual graphic files, created by the author according to the following guidelines, will be used for production and should be uploaded to the ACS Paragon Plus Environment with the submitted manuscript:

- Minimum resolution requirements are as follow:

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 paper. 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 using the program used to create the graphic.
- Place panel labels in the upper left-hand corner of the panel.
- Do not place a rule around the entire graphic.
- Place legends for graphs within the main body of the graph, whenever possible.
- Graphics representing similar types of data should be of a uniform size.
- Name graphics files Figure 1, Figure 2, *etc*.
- Indicate any graphics that require special handling.

Size. Graphics must be submitted at the actual size at which they should appear in the printed edition. Lettering must be no smaller than 6 points at final printed size. Arial font should be used for lettering. Lines must be no thinner than 0.5 point at final printed size. Lettering and lines in all graphics should be of uniform density and the lines unbroken.

Color. The use of color is encouraged. Color graphics must be submitted in RGB color scheme and at 300 dpi resolution. Macromolecular structures should not be placed on any background. Choose colors that will allow all features to be clearly visible on white paper.

Chemical Structures. Structures should be produced with the use of a drawing program such as ChemDraw. Authors using the current versions of ChemDraw will find the necessary

parameters incorporated into this program ("ACS Document 1996"). Authors using older versions of ChemDraw should use the following settings:

(1) As drawing settings select:

chain angle	120°
bond spacing	18% of width
fixed length	14.4 pt (0.508 cm, 0.2 in.)
bold width	2.0 pt (0.071 cm, 0.0278 in.)
line width	0.6 pt (0.021 cm, 0.0084 in.)
margin width	1.6 pt (0.056 cm, 0.0222 in.)
hash spacing	2.5 pt (0.088 cm, 0.0347 in.)

(2) As text settings select:

font	Arial/Helvetica
size	10 pt

(3) Under the preferences choose:

units	points
tolerances	5 pixels

(4) Under page setup choose:

Paper	US Letter
Scale	100%

(5) Use the ChemDraw ruler or appropriate margin settings to create structure blocks, equations, and schemes with maximum widths of 8.25 cm (one-column format) or 17.8 cm (two-column format). If the foregoing drawing-setting lengths and widths are selected in centimeters rather than in points or inches, the ChemDraw ruler will be calibrated in cm.

(6) Save files as EPS or TIF images.

(7) Supply the native EPS or TIF image in addition to pasting the structure into the body of the manuscript.

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

Graphical Table of Contents. Each Article, Review, Perspective, and Nano Focus must include a graphic for the Table of Contents. This graphic will also be used as the abstract graphic. This graphic should capture the readers' attention and, in conjunction with the manuscript title, give readers a visual impression of the essence of the paper without providing specific results. Labels, formulas, or numbers within the graphic must be legible at publication size. Tables or spectra are not acceptable. Color graphics are highly encouraged, with text kept to a minimum. At final printed size, all text should be ≥6 points. These graphics should be ≤9 cm (240 points) in width and ≤5 cm (135 points) in height and must be ≥300 dpi in resolution at final printed size.

Covers. Authors are encouraged to submit images suitable for publication on the journal cover. Covers should be visually arresting and scientifically interesting. In general, the

editors discourage submissions of structures, graphs, and chemical schema. The editors prefer artistic renditions of structures, function, and data. Please submit electronic files and a short (~30-word), clear legend explaining the image. Cover images should be ~21.5 cm in width and ~28 cm in height and at ≥300 dpi resolution at this size (file should be ≥8 MB). TIF images in CMYK format are preferred.