

Guide for Authors

Advanced Science (<http://www.advancedscience.com>) is an interdisciplinary premium open access journal covering fundamental and applied research in materials science, physics and chemistry, medical and life sciences, as well as engineering. Categories of contribution for the journal are Communications, Full Papers, Review Articles, Progress Reports, Research News, Essays, and Correspondences. Communications and Full Papers should represent novel research and significant advances in their field.

Only manuscripts in English are accepted. Contributors should bear in mind the interdisciplinary nature of the readership, always emphasizing the importance of the topic to the materials science research community on the whole.

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Manuscript Submission

The manuscript should be submitted online via the online submission service *Editorial Manager* (<https://www.editorialmanager.com/advancedscience/>). Each submission step is outlined in 'How to submit a manuscript' on the left hand side of the *Editorial Manager* Login page.

- Once an author has logged into the system, the Author Main Menu will be displayed.
- Click on the on the 'Submit New Manuscript' link. This will display the Submit New Manuscript menu. Authors will be asked to enter data that is associated with the manuscript – this can include text, images and descriptions. Some of this information will be mandatory; other items will be optional.

To submit your manuscript, please follow the instructions given on the website. In order to submit a manuscript you will need a single Microsoft Word, PDF, or PostScript file that contains the text, all figures and tables, and any Supporting Information associated with the manuscript. MS Word templates (Win/Mac compatible) for Reviews, Progress Reports, Research News, and Communications are available on the homepage in the section "Author Guidelines". Please use these templates for submission of your contribution.

In addition, authors should reveal all sources of funding for the work presented in the manuscript and should declare any conflict of interest.

The author must inform the editor of manuscripts submitted, soon to be submitted, or in press at other journals that have a bearing on the manuscript being submitted to *Advanced Science*. The *Ethical Guidelines for Publication in Journals and Reviews* issued by the *European Association for Chemical and Molecular Sciences* are followed and applied by the editors of *Advanced Science*. In particular, authors

should reveal all sources of funding for the work presented in the manuscript and should declare any conflict of interest.

If the manuscript is, in fact, a revised/extended version of a manuscript previously rejected by *Advanced Science*, the author must inform the editor about the previous submission in the cover letter and explain in detail which changes have been made.

To ensure continuity of contact details, the corresponding author of a manuscript should hold at minimum a postdoctoral research position or be a permanently contracted staff member in industry. Exceptions may be made at the discretion of the Editorial Office.

The journal also participates in the CrossRef service CrossCheck (<http://www.crossref.org/crosscheck.html>), a plagiarism screening tool that allows the comparison of authored work against the content in the internet database of published work to highlight matching or similar text sections. Please be aware that all manuscripts prior to acceptance will be subject to testing using the CrossCheck software.

Peer Review Policy

All manuscripts are subject to assessment by the Editors and/or peer review. The first evaluation of a manuscript rarely results in acceptance, but it can be possible in exceptional cases. Manuscripts are rejected by the Editors at this stage if they are insufficiently original, have serious scientific flaws, need extensive improvement in the language, or do not fall within the aims and scope of the journal.

All other manuscripts of potential interest to our readership are sent for formal review, typically to at least two reviewers. Furthermore, Editors have the option of seeking additional reviews when needed. The Editor then decides whether to accept, reject, or request revisions based on the reviews and comments received.

The peer-review process is single-blind. Potential reviewers are selected based on many factors, including expertise, reputation, specific recommendations and our own previous experience of a reviewer's characteristics. Reviewers recommended by authors will only be considered when others cannot be found. Referees' identities are not released to authors or to other reviewers unless a referee voluntarily signs their comments to the authors. Our preference is for referees to remain anonymous throughout the review process and beyond.

Confirmation of Receipt/Assessment

Authors of all articles will receive acknowledgement of receipt of their manuscript. All contributions are subject to assessment by the editors and/or refereeing. Contributions to all sections except Communications are usually written on invitation; however, authors are welcome to submit unsolicited articles.

Electronic Data for Production

If a manuscript is accepted, the file supplied at manuscript submission (or revision if applicable) will be used for production. **The data therefore must be the FINAL version. Costs for any additions or further changes made during correction of the page proofs may be charged to the author.** The text including references should be saved as one Microsoft Word .doc file using the templates provided. **Tables** should be included in the text files and follow the example laid out in the template. **Vector graphic images** such as plots, graphs, and line diagrams (including chemical structures) should either be imported into a Word file or saved as EPS or WMF files. The name and version of the program used to create the file should be provided. Original files of graphical items prepared using ChemDraw or Photoshop may also be included. **Bitmap graphic images** such as photographs and electron microscope images should be saved as TIFF files; each figure part must have a resolution of at least 300 dpi (1000 pixels wide when the image is printed at a single column width). More details can be found in the [Manuscript Preparation Checklist](#) and [Graphics FAQ](#).

Supporting Information in the form of additional figures, experimental details, movies, and so on may accompany a manuscript, and will be published online only. This material will **not** be edited, so should be error free. Supporting Information pages must be prepared as a single MS Word document and should be uploaded as a separate file with all figures incorporated into the text. Use the MS Word template provided on the “Author Guidelines” web page to prepare the first page.

To submit multimedia files, please consult the Editorial Office for recommended formats and file-transfer information.

Categories of Contributions

Communications are unsolicited, peer-reviewed short reports of outstanding novel findings that also have important and general implications for specialists working in other fields. The first paragraph should summarize the reasons for undertaking the work and the main conclusions which can be drawn. The final paragraph should summarize the major conclusions of the paper. The essential findings presented in a Communication should be novel and should not have been published previously. Contributions that are judged too specialized for the readership of *Advanced Science* will be returned to the authors without further external review. All other communications are assessed by independent referees. Authors should suggest referees, and ensure that their reviewer suggestions do not include any researchers with whom they have recent or on-going collaborations or other close ties. **The maximum length of a Communication is four journal pages** —approximately 3000 words (including main text, experimental section, references, and captions) and three display items (figures, tables, or schemes). Longer papers will be accepted only in exceptional cases if their quality warrants special consideration. A maximum of five keywords should be supplied.

Supporting Information in the form of additional figures, experimental details, movies, and so on may accompany a manuscript, and will be published online only. This material will **not** be edited, so should be error free. **The research reported in a Communication must stand on its own in the absence of its**

Supporting Information (for example, if Internet access is unavailable). Before acceptance, the editor may request transfer of a manuscript to one of the Full Paper sister journals of the *Advanced Journals family*, if part or all of the Supporting Information is judged to be critical to the manuscript.

Full Papers are unsolicited, peer-reviewed, in-depth reports of outstanding novel findings which also have important and general implications for specialists working in other fields. The introduction should summarize the reasons for undertaking the work and the main conclusions which can be drawn. The final section should summarize the major conclusions of the paper. The essential findings presented in a Full paper should be novel and should not have been published previously. Contributions that are judged too specialized for the readership of Advanced Science will be returned to the authors without further external review. All other Full Papers will be assessed by independent referees. Authors should suggest referees. The maximum length of a Full Paper is eight journal pages (approximately 7500 words and eight display items, including figures, schemes, and tables). Longer papers will be accepted only in exceptional cases if their quality warrants special consideration. A short abstract and maximum of five keywords should be given.

Reviews are peer-reviewed and give a general overview of a particular field, providing the reader with an appreciation of the importance of the work, a summary of recent developments, and a guide to the relevant literature. Manuscripts should be at least 19 000 words in length, divided into appropriate sections, and contain 15–20 display items. A grayscale passport-type photo and a short summary (75 words maximum) that highlights the career to-date of the corresponding author(s) and their (current) research interests should be included. Awards, number of publications, number of patents, etc. should not be included in the biography. In addition, a short abstract and a maximum of five keywords should be included.

Progress Reports provide a critically selected overview of recent progress in important research fields. It is not intended that the articles be comprehensive, but rather insightful, selective, critical, opinionated, and even visionary. Manuscripts should be at least 10 000 words in length, divided into appropriate sections, and contain 5–10 display items. A grayscale passport-type photo and a short summary (75 words maximum) that highlights the career to-date of the corresponding author(s) and their (current) research interests should be included. Awards, number of publications, number of patents, etc. should not be included in the biography. In addition, a short abstract and a maximum of five keywords should be included.

Research News articles are intended to inform non-specialist readers of recent developments at the forefront of materials science and technology. Manuscripts should be no more than 4500 words in length and can contain up to 3 display items. A short abstract and a maximum of five keywords should be included.

Essays are a forum for news and opinion on topics of national and international interest. This can include, for example, news of funding and research organizations, societies, or points of controversy within materials science. Manuscripts should be no more than 5000 words in length plus one display

item. A grayscale passport-type photo and a short summary (75 words maximum) of the career to-date of the corresponding author(s) should be included.

Correspondences commenting on publications in *Advanced Science* are welcome if they contribute to the scientific discussion. The author of the publication to which the Correspondence refers will have the opportunity to reply.

Guidelines for the Preparation of Manuscripts

Authors are requested to take special care with the following points when preparing manuscripts for *Advanced Science*:

a) Manuscripts should be typed with double-line spacing (about 60 characters per line and about 26 lines per page; large script; Greek letters in the character font Symbol; special characters must be clearly recognizable; sub- or superscripts, italics, or boldface should be clearly distinguishable); this holds for all parts of the manuscript, including those that will be printed in smaller type, and also for the printed version of an electronic manuscript. Margins of 2 cm should be left free at the top, bottom, and left- and right-hand sides of each page. All pages, including those with the references, tables, and legends, must be numbered consecutively.

American-style English spelling should be used throughout the manuscript.

b) The **title**, which should be as succinct as possible. The first letters of all words, except coordinating conjunctions, articles, and prepositions, should be capitalized. No references should be used. Then follows the first name, other initials, and surname of each author, and an asterisk to indicate each corresponding author (further symbols to indicate the affiliation(s) of the author(s) are not required). A dedication line can also be included. Please avoid chemical formulas in the title; they may lead to difficulties when the title is integrated into electronic databases.

The names of all authors according to research group (with academic title and all first names as initials), the complete postal address, and e-mail address(es) of the corresponding author(s) appear after the author byline or, if applicable, after the dedication. For all other authors, only the address of their academic institution or company is required.

c) **References** to the literature or to footnotes in the text are typed in square brackets as superscripts after any punctuation. These are numbered consecutively and listed (with the numbers in square brackets not as superscripts) at the end of the main body of text. They should not contain comprehensive experimental details (which should be included in the Experimental Section instead) or long explanatory text. The names of all authors should be given, starting with the initials of first names followed by the surname ("et al." should not be used). The penultimate and last names should be separated by a comma (not by "and"). Where possible, composite references should be used; the individual parts should be separated by a semicolon and labeled a), b), c), and not (a), (b), (c). Please double check your references to ensure correct (online) linkage.

Mode of citation: Only a comma is required between the name of the last author and the title of the journal. Journal titles should be abbreviated in accordance with the "Chemical Abstracts Service Source Index" (CASSI; no commas appear in the journal names) and italicized. The journal title should be followed (no comma) by the year of publication (in boldface), comma, volume number (in italics), comma, first page, period (or a semicolon within a composite reference). When citing publications from *Angewandte Chemie*, please quote both German and International editions. The corresponding page numbers of the German edition of an article can be found in the index at the end of each issue and in the annual index of the International Edition. Examples:

[1] a) H. J. Ache, *Angew. Chem.* **1989**, 101, 1; *Angew. Chem. Int. Ed. Engl.* **1989**, 28, 1; b) H. Frey, *Angew. Chem.* **1998**, 110, 2313; *Angew. Chem. Int. Ed.* **1998**, 37, 2193; c) G. M. Sheldrick, SHELXS-96, Program for the Solution of Crystal Structures, University of Göttingen, Göttingen, Germany, **1996**.

[2] a) A. Kraft, *Chem. Commun.* **1996**, 77, and references therein; b) *Sci. Am.* **1984**, 250, 7; B. Krebs, H. U. Hürter, *Acta Crystallogr. Sect. A* **1981**, 37, 163; c) G. Eulenberger, *Z. Naturforsch. B* **1981**, 36, 521; d) D. Bruss, *Appl. Phys. B*, DOI 10.1007/s003409900185.

Book citations: Books without Editor: E. Wingender, *Gene Regulation in Eukaryotes*, Wiley-VCH, Weinheim, Germany **1993**, p. 215. Books with editor: T. D. Tullius, in *Comprehensive Supramolecular Chemistry*, Vol. 5 (Eds: J. L. Atwood, J. E. D. Davies, D. D. MacNicol, F. Vögtle, K. S. Suslick), Pergamon, Oxford, UK **1996**, pp. 317–343.

See the provided manuscript templates for further examples.

d) **Tables** should be provided with a brief legend (use the word "Table" throughout the text unabbreviated) and should only be subdivided by three horizontal lines (head rule, neck rule, foot rule). Tables with only one or two columns and columns with only one or two entries are to be avoided. For footnotes in Tables, Roman lowercase letters followed by a closing parenthesis are to be used. All tables are to be numbered (Arabic numerals) in the sequence in which they are referred to in the text. Physical data for several compounds should be summarized in a Table; otherwise, a footnote is sufficient.

e) Each **figure and scheme** should have a caption, and these should be listed together in numerical order after the references. All figures and schemes should be mentioned in the text in numerical order. For peer-review, it is preferred to have the figures and schemes appear as they are mentioned in the text. Different types of atoms in structural chemistry figures should be clearly distinguishable (by different graphical shading). Use the full word "Figure" in all parts of the manuscript.

Symbols of physical quantities, but not their units (e.g., *T* (for temperature, in contrast to *T* for the unit Tesla), but *K* as unit; *J*, but *Hz*; *α*, but *nm*), stereochemical information (*cis*, *E*, *R*, etc.; *D*), locants (*N*-methyl), symmetry groups and space groups (*C_{2v}*), and prefixes in formulae or compound names such as *t*Bu and *tert*-butyl must be in italics (but not Latin phrases such as "in situ"), and formula numbers

in boldface (Arabic numerals and, if necessary, Roman lowercase letters). Labels of axes are to be separated from their units by a slash: e.g., T/K ; the ordinate should be labeled parallel to the axis.

f) **Equations** should be labeled with consecutive number and mentioned by label in the text, for example, "Equation (1)."

g) **Physical data** should be quoted with decimal points and negative exponents (e.g., $25.8 \text{ J K}^{-1} \text{ mol}^{-1}$), and arranged as follows where possible — but in any event in the same order within the manuscript (when measurement conditions remain unchanged, they need only be mentioned once, for instance in the column headings): m.p./b.p. 20°C ; $[\alpha]_{\text{D}}^{20} = -13.5$ ($c = 0.2$ in acetone) (a unit has to be given if it is different from $\text{deg cm}^3 \text{ g}^{-1} \text{ dm}^{-1}$ for $[\alpha]$ and from g cm^{-3} for c); ^1H NMR (200 MHz, $[\text{D}_8]\text{THF}$, 25°C , TMS): $\delta = 1.3$ (q, $^3J(\text{H,H}) = 8 \text{ Hz}$, 2 H; CH_2), 0.9 ppm (t, $^3J(\text{H,H}) = 8 \text{ Hz}$, 3 H; CH_3); IR(Nujol): $\nu = 1790 \text{ cm}^{-1}$ (C=O); UV-vis (n -hexane): $\lambda_{\text{max}}(\epsilon) = 320$ (5000), 270 nm (12000); MS (70 eV): m/z (%): 108 (20) $[\text{M}^+]$, 107 (60) $[\text{M}^+ - \text{H}]$, 91 (100) $[\text{C}_7\text{H}_7^+]$. Plane angles in products of units can have either $^\circ$ or deg as the unit.

h) **Nomenclature, symbols, and units:** The rules and recommendations of the International Union of Pure and Applied Chemistry (IUPAC), the International Union of Biochemistry (IUB), and the International Union of Pure and Applied Physics (IUPAP) should be adhered to. The Latin names of biological species and genera should be written in italics, with the full name always used when it appears for the first time in the text (e.g., *Homo sapiens*); the abbreviated form (e.g., *H. sapiens*) may be used thereafter.

Abbreviations and acronyms should be used sparingly and consistently. Where they first appear in the text, the complete term — apart from the most common acronyms such as NMR, IR, and *tBu* — should also be given. In Reviews, where a number of abbreviations and acronyms occur, these can be explained in a glossary, located in an Appendix at the end of the text.

i) **X-ray crystal structure analysis** data should be deposited with the CCDC for organic and organometallic compounds and at the FIZ for inorganic compounds prior to manuscript submission. For further details refer to the guidelines for [deposition of X-ray data](#).

j) **Supporting Information and Acknowledgements:** A Supporting Information notice and the Acknowledgements can be inserted after the main text and experimental section of the manuscript. See provided templates.

Succinct text and the necessary graphics for the Supporting Information must be submitted with the revised version of the manuscript as a separate, single Microsoft Word (PC or Macintosh) file. The file should include the title and names of all the authors; use the supporting information page in the provided templates to begin the file. Any graphics should be imported into the file and not be present as a separate graphics file. The author must keep a copy to make available to readers who do not have access to the internet. We also encourage authors to send multimedia files as Supporting Information; these files should be provided in a zip file containing the MS Word file.

k) Manuscripts containing **animal experiments** must include a statement in the Experimental Section to state that permission was obtained from the relevant national or local authorities. The institutional committees that have approved the experiments must be identified and the accreditation number of the laboratory or of the investigator given where applicable. If no such rules or permission are stipulated in the particular country, this must also be mentioned in the manuscript. For detailed reporting of animal experimentation, the ARRIVE guidelines (hosted on the NC3Rs website at <http://www.nc3rs.org.uk/ARRIVEpdf>) should be followed.

l) For manuscripts containing experiments with **human subjects** (including sensor/wearable technologies) or **tissue samples from human subjects**, a statement regarding appropriate Ethical Committee approval and that the informed consent of all participating subjects was obtained must be included. When reporting phase II and III clinical trials, reporting on tumor marker studies, or describing human biospecimens, authors should refer, respectively, to the relevant [CONSORT statement](#), [REMARK](#), or [BRISQ](#) guidelines [as appropriate].

m) The **structure and compositions** of all materials central to the manuscript must be disclosed in the main text or in Supporting Information, including commercial and proprietary products, pure materials, and mixtures. Manuscripts reporting results using undisclosed material compositions may not be considered for publication and may be returned without external review.

Instructions for Preparing ACCEPTED Manuscripts

Production data should be submitted using the appropriate MS Word template (there is no need to adjust the font size or spacing given in the templates). The guidelines provided in the previous section apply to production data as well, but figures, schemes, tables, and other display items should be provided in separate files with appropriate filenames for faster processing. For further details, please see the [Manuscript Preparation Checklist](#). All production data should include a short (50–60 words) summary and figure (preferably color) for the table of contents.

Detailed instructions for preparation of manuscripts for production (e.g., figure formatting, physical data reporting, setting of equations, X-ray data archiving) are given in the Author Guidelines section on the journal homepage. If you have any questions, please contact the Editorial Office directly.

Image Processing

While a certain degree of image processing is acceptable, and sometimes unavoidable, images submitted for publication should be minimally modified, and any modification to original raw data should be clearly and fully disclosed. Images submitted must accurately represent the original data, and authors must provide, if requested by the editors, unprocessed and raw data to aid in the reviewing process.

Image-processing details should be disclosed in full, either in the figure legends, the Experimental Section, or in the Supporting Information. This should include the software used and the settings and methods applied in manipulations. Processing should be applied equally to the entire image and also

to controls. Processing that obscures data or emphasizes certain regions at the expense of others should not be employed. When used, false-color and nonlinear adjustments, such as gamma correction, deconvolution, filtering, thresholding, and projection, should be clearly indicated in the manuscript.

In the case of gels and blots, cropped images may be used when necessary for clarity and conciseness. As previously mentioned, these modifications must be clearly mentioned, and the full gels and blots should be provided as Supporting Information. A clear line should mark the boundary between different gels where these were cropped, and all important bands should be maintained in the image.

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One of the corresponding authors will receive the galley proofs for review before an article is published. As a corresponding author, the contacted author is responsible for ensuring that all necessary authors are aware the proofs are ready for review. Corrections should be returned to the editor within three days.

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