

Formatting guide: manuscript preparation and submission

Information Sheets for Downloading

- [Manuscript preparation and submission \(doc 77KB\)](#) (Manuscript_formatting.doc)
- [Section summaries \(doc 40KB\)](#) (Section_summaries.doc)
- [Brief Communications and Communications Arising \(doc 53KB\)](#) (Brief_comms.doc)
- [Annotated example: summary paragraph for Letters \(doc 40KB\)](#) (Letter_bold_para.doc)
- [Annotated example: end notes \(doc 225KB\)](#) (End_notes.doc)
- [Statistical checklist \(doc 44KB\)](#) (Statistical_checklist.doc)
- [Characterization of chemical materials \(doc 52KB\)](#) (chemistry_guidelines.doc)

See the [full list of information sheets \(/nature/authors/infosheets.html\)](/nature/authors/infosheets.html).

This guide describes how to prepare contributions for submission. A short version is available above (Manuscript preparation and submission). We recommend you read the full version below if you have not previously submitted a contribution to Nature.

We strongly recommend that, before submission, you familiarize yourself with Nature's style and content by reading the journal, either in print or [online \(/nature/\)](/nature/), particularly if you have not submitted to the journal recently.

Failure to adhere to these guidelines can seriously delay the handling of your contribution.

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1. Formats for Nature contributions

Nature's main formats for original research are Articles and Letters. The journal also publishes a very few [Brief Communications \(briefcomms.html\)](#). In addition, Nature also publishes other submitted material as detailed below (Section 1.4). Mission statements and short [summaries of the content published in each of these sections is available for downloading \(doc 40KB\)](#) (Section [summaries.doc](#)).

1.1 Articles

are original reports whose conclusions represent a substantial advance in understanding of an important problem and have immediate, far-reaching implications. They do not normally exceed **5 pages** of Nature and have **no more than 50 references**. (One page of undiluted text is about 1,300 words.)

Articles have a summary, separate from the main text, of up to 150 words, which does **not** have references, and does not contain numbers, abbreviations, acronyms or measurements unless essential. It is aimed at readers outside the discipline. This summary contains a paragraph (2-3 sentences) of basic-level introduction to the field; a brief account of the background and rationale of the work; a statement of the main conclusions (introduced by the phrase 'Here we show' or its equivalent); and finally, 2-3 sentences putting the main findings into general context so it is clear how the results described in the paper have moved the field forwards.

Authors are encouraged to include a link to a simple schematic, included as Figure 1 of their [Supplementary Information \(./submissions/final/suppinfo.html\)](#), that summarises the main finding of the paper, where appropriate (for example to assist understanding of complex details in cell, structural and molecular biology disciplines).

Articles are typically 3,000 words of text, beginning with up to 500 words of referenced text expanding on the background to the work (some overlap with the summary is acceptable), before proceeding to a concise, focused account of the findings, ending with one or two short paragraphs of discussion.

The text may contain a few short subheadings (not more than six in total) of no more than 40 characters each (less than one line of text in length).

Articles typically have 5 or 6 display items (figures or tables).

1.2 Letters

are short reports of original research focused on an outstanding finding whose importance means that it will be of interest to scientists in other fields.

They do not normally exceed **4 pages** of Nature, and have **no more than 30 references**. They begin with a **fully referenced paragraph**, ideally of about 200 words, but certainly no more than 300 words, aimed at readers in other disciplines. This paragraph starts with a 2-3 sentence basic introduction to the field; followed by a one-sentence statement of the main conclusions starting 'Here we show' or equivalent phrase; and finally, 2-3 sentences putting the main findings into general context so it is clear how the results described in the paper have moved the field forwards.

Please refer to our [annotated example \(doc 40KB\)](#) (Letter [bold para.doc](#)) to see how the summary paragraph for a Letter should be constructed.

Authors are encouraged to include a link to a simple schematic, included as Figure 1 of their **Supplementary Information** ([../submissions/final/suppinfo.html](http://www.nature.com/nature/authors/gta/index.html)), that summarises the main finding of the paper, where appropriate (for example to assist understanding of complex detail in cell, structural and molecular biology disciplines).

The rest of the text is typically about 1,500 words long. Any discussion at the end of the text should be as succinct as possible, not repeating previous summary/introduction material, to briefly convey the general relevance of the work.

Letters typically have 3 or 4 small display items (figures or tables).

Word counts refer to the text of the paper. References, title, author list and acknowledgements do **not** have to be included in total word counts.

1.3 Brief Communications, Communications Arising and Corrections

Brief Communications is a peer-reviewed section of Nature which is less formal than Articles and Letters, aimed at the broadest possible readership.

Communications Arising are exceptionally interesting or important comments and clarifications on original research papers or other peer-reviewed material published in Nature, which are published online only.

Corrections to peer-reviewed material published in Nature.

For details of these sections, and instructions for submission please access the **Brief Communications pages** ([briefcomms.html](http://www.nature.com/nature/authors/gta/index.html)).

1.4 Other contributions to Nature

Please access the **other submitted material pages** ([others.html](http://www.nature.com/nature/authors/gta/index.html)) for further details on any of the contribution types below.

- **Correspondence** ([others.html#correspondence](http://www.nature.com/nature/authors/gta/index.html))
- **Commentary** ([others.html#commentary](http://www.nature.com/nature/authors/gta/index.html))
- **Books and Arts** ([others.html#book](http://www.nature.com/nature/authors/gta/index.html))
- **Essays** ([others.html#essays](http://www.nature.com/nature/authors/gta/index.html))
- **News and Views** ([others.html#newsandviews](http://www.nature.com/nature/authors/gta/index.html))
- **Reviews and Progress** ([others.html#reviews](http://www.nature.com/nature/authors/gta/index.html))
- **Insights** ([others.html#insights](http://www.nature.com/nature/authors/gta/index.html))
- **Analysis, Hypothesis** ([others.html#occasional](http://www.nature.com/nature/authors/gta/index.html))
- **Nature Jobs editorial articles** ([others.html#jobs](http://www.nature.com/nature/authors/gta/index.html))
- **Technology features** ([others.html#technology](http://www.nature.com/nature/authors/gta/index.html))

2. The editorial process

See **getting published in Nature** ([../get_published/](http://www.nature.com/nature/authors/gta/index.html)) for an explanation of Nature's editorial criteria for publication, refereeing policy and how editors handle papers after submission.

3. Presubmission enquiries

If you wish to enquire whether your Article or Letter might be suitable for consideration by Nature, please use our online **presubmission enquiry service**. ([../submissions/presubs/](http://www.nature.com/nature/authors/gta/index.html)) All presubmission enquiries must include a cover paragraph to the editor stating the interest to a

broad scientific readership, a fully referenced summary paragraph in the style for Letters to Nature, and a reference list. Note that presubmission enquiries are **NOT** considered for Brief Communications.

4. Readability

Nature is an international journal covering all the sciences. Contributions should therefore be written clearly and simply so that they are accessible to readers in other disciplines and to readers for whom English is not their first language.

Essential but specialized terms should be explained concisely but not didactically.

For **gene, protein and other specialized names** authors can use their preferred terminology so long as it is in current use by the community, but they **must give all known names** for the entity at first use in the paper. Authors in doubt about terminology are advised to use internationally agreed nomenclature for **genes** (<http://www.gene.ucl.ac.uk/nomenclature/>) and for **mouse strains** (<http://www.informatics.jax.org/mgihome/nomen/>).

Taxonomy. Authors of papers that contain taxonomy (that is, the formal nomenclature and description of new species) must send a copy of the published paper by mail (not email) as soon as possible after publication, or send otherwise notification of the new name with a full reference and date, to the Executive Secretary, the Linnean Society of London, Burlington House, Piccadilly, London W1J 0BF, UK, **as detailed in Nature** (<http://www.nature.com/uidfinder/10.1038/417573a>).

Nature's editors provide detailed advice about format before contributions are formally accepted for publication. Nature's editors often suggest revised titles and rewrite the summaries of Articles and first paragraphs of Letters so the conclusions are clear to a broad readership.

After acceptance, Nature's subeditors (copyeditors) ensure that the text and figures are readable and clear to those outside the field, and edit papers into Nature's house style. They pay particular attention to summary paragraphs, overall clarity, figures, figure legends and titles.

Proofs are sent before publication; authors are welcome to discuss proposed changes with Nature's subeditors, but Nature reserves the right to make the final decision about matters of style and the size of figures.

A useful set of articles providing general advice about writing and submitting scientific papers can be found in **SciDev.Net** (<http://www.scidev.net/ms/howdoi/>)'s "How do I?" section.

5. Format of Articles and Letters.

Contributions should be double-spaced and written in English (spellings as in the **Oxford English Dictionary** (<http://www.oed.com/>))

Contributions should be organized in the sequence: title, text, methods, references, Supplementary Information line (if any), acknowledgements, author contributions (optional), author information (containing data deposition statement, interest declaration and corresponding author line), tables, figure legends.

5.1 Titles

do not exceed two lines in print. This equates to 90 characters (including spaces) for Letters, or 75 characters (including spaces) for Articles. Titles do not normally include numbers, acronyms,

abbreviations or punctuation. They should include sufficient detail for indexing purposes but be general enough for readers outside the field to appreciate what the paper is about.

5.2 Text

Articles should fill no more than 5 pages, and Letters no more than 4 pages, of Nature. An uninterrupted page of text contains about 1,300 words. A typical Article contains about 3,000 words of text and, additionally, five small display items (figures and/or tables) with brief legends, reference list and methods section if applicable. A typical Letter to Nature contains about 1,500 words of text (excluding the first paragraph of Letters, figure legends, reference list and the methods section if applicable) and four small display items (figures and/or tables) with brief legends (see [5.9 \(#a5.9\)](#) for instructions on sizing figures).

When submitting new or revised manuscripts, authors should state in a cover letter to the editor their rough estimate of the length of their paper in terms of number of pages of Nature.

Authors of contributions that significantly exceed the limits stated here or specified by the editor will have to shorten their papers before acceptance, inevitably delaying publication.

Nature prefers authors to be listed without details of relative status, but instead to **specify the contribution** (/nature/journal/v399/n6735/full/399393bo_fs.html) made by their co-authors in the **end notes** ([#a5.5](#)) of the paper. **Nature strongly encourages coauthors to specify their contributions in this way.**

If authors regard it as essential to indicate that two or more co-authors are equal in status, they may be identified by an asterisk symbol with the caption 'These authors contributed equally to this work' immediately under the address list. If more than three co-authors are equal in status, this should be indicated in the author contributions statement.

Present addresses appear immediately below the author list (below the footnote rule at the bottom of the first page) and may be identified by a dagger symbol; all other essential author-related explanation is in the acknowledgements.

We prefer authors to format Articles or Letters using Nature's **Word template** ([./submissions/template/](http://www.nature.com/submissions/template/)).

5.3 Methods.

If brief (less than 200 words in total), they can be included in the text at an appropriate place.

Otherwise, they should be described at the end of the text in a 'Methods' section, subdivided by short, bold headings referring to methods used.

Descriptions of methods already published should be avoided; a reference number can be provided to save space, with the new addition or variation briefly stated.

This whole section should not exceed 800 words and should ideally be shorter. If more space is required for Methods, the author is advised to submit the extra material as online-only **Supplementary Information** ([./submissions/final/suppinfo.html](http://www.nature.com/submissions/final/suppinfo.html)), which is also peer-reviewed, and which accompanies the published paper on Nature's website.

After receiving referees' reports, editors may suggest that further methodological and similar essential but specialist-interest material is published as SI in the light of pressure on space in the printed issue. Hence authors are advised to make the Methods section of the main paper minimal

and to submit most of it as SI.

5.4 References

are each numbered, ordered sequentially as they appear in the text, methods, tables, figure legends.

When cited in the text, reference numbers are superscript, not in brackets unless they are likely to be confused with a superscript number.

The maximum number of references, strictly enforced, is 50 for Articles and 30 for Letters. Only one publication can be listed for each number.

Only articles that have been published or submitted to a named publication should be in the reference list; papers in preparation should be mentioned in the text with a list of authors (or initials if any of the authors are co-authors of the present contribution).

Published conference abstracts, numbered patents and preprints on recognized servers may be included in reference lists, but text, grant details and acknowledgements may not.

All authors should be included in reference lists unless there are more than five, in which case only the first author should be given, followed by '*et al.*'.

Please follow the style below in the published edition of Nature in preparing reference lists.

- Authors should be listed surname first, followed by a comma and initials of given names.
- Titles of all cited articles are required. Titles of articles cited in reference lists should be in upright, not italic text; the first word of the title is capitalized, the title written exactly as it appears in the work cited, ending with a full stop. Book titles are italic with all main words capitalized. Journal titles are italic and abbreviated according to common usage; authors can refer to Nature, [the Index Medicus \(http://www.nlm.nih.gov/tsd/serials/lji.html\)](http://www.nlm.nih.gov/tsd/serials/lji.html) or the [American Institute of Physics style manual \(http://www.aip.org/pubservs/style.html\)](http://www.aip.org/pubservs/style.html) for details.
- Volume numbers are bold. The publisher and city of publication are required for books cited. (Refer to published papers in Nature for details.)
- References to web-only journals should give authors, article title and journal name as above, followed by url in full - or doi if known - and the year of publication in parentheses.
- References to websites should give authors if known, title of cited page, url in full, and year of posting in parentheses.

5.5 End notes

are brief and follow the reference list.

Please refer to our [annotated example \(doc 225KB\) \(End_notes.doc\)](#) to see how the end notes appear in a Nature paper.

Papers containing Supplementary Information contain a statement after the reference list:

Supplementary Information is linked to the online version of the paper at www.nature.com/nature.

If authors have included a **schematic** summarising the main result of the paper as Supplementary Information, a sentence should follow along the lines of "A figure summarising the main result of this paper is also included as SI".

Acknowledgements are as brief as possible, and do not contain grant or contribution numbers, or thanks to anonymous referees and editors, or inessential words. A person can be thanked for assistance, not "excellent" assistance, or for comments, not "insightful" comments, for example.

Author Contributions: authors are encouraged to include a statement to specify the contributions of each co-author. The statement can be up to several sentences long, describing the tasks of individual authors referred to by their initials.

Author Information: Authors should include a set of statements at the end of the paper, in the following order:

- *Data deposition* statement if appropriate, with the url and relevant numbers for public database accession.
- A sentence reading "Reprints and permissions information is available at npg.nature.com/reprintsandpermissions".
- ***Competing financial interests*** ([../policy/competing.html](http://policy/competing.html)) statement.
- A sentence reading "Correspondence and requests for materials should be addressed to XX", where XX refers to one e-mail address. Nature expects this identified author to respond to readers' enquiries and requests for materials, and to coordinate the handling of any other matters arising from the published contribution, including corrections complaints. The author named as corresponding author is not necessarily the senior author, and publication of this author's name does not imply seniority. Authors may include more than one email address if essential, in which event Nature will communicate with the first-listed address for any post-publication matters arising, and expect that author to coordinate with the other coauthors.

5.6 Statistics

Authors should ensure that any statistical analysis used is sound and that it conforms to the journal's guidelines. To minimize the chance of statistical errors, authors can consult the **[statistical checklist \(doc 44KB\) \(Statistical_checklist.doc\)](#)**.

The following is a brief guide to Nature's requirements to assist authors. We expect the below to be of use mainly to authors in the biomedical sciences but the principles apply to all disciplines.

Every paper that contains statistical testing should state the name of the statistical test, the *n* for each statistical analysis, the comparisons of interest, a justification for the use of that test (including, for example, a discussion of the normality of the data when the test is appropriate only for normal data), the alpha level for all tests, whether the tests were one-tailed or two-tailed, and the actual *P* value for each test (not merely "significant" or " $P < 0.5$ "). It should be clear what statistical test was used to generate every *P* value. These details should be reported briefly at the most appropriate place in the text: either in the text of a Methods section (if one is present), or as part of a Table or Figure caption.

Data sets should be summarized with descriptive statistics, which should include the *n* for each data set, a clearly labelled measure of centre (such as the mean or the median), and a clearly labelled measure of variability (such as the standard deviation or range). Ranges are more appropriate than standard deviations or standard errors for small data sets. Graphs should include clearly labelled error bars as part of the figure legend. Authors must state whether a number that follows the \pm sign is a standard error (s.e.m.) or a standard deviation (s.d.).

If there is scope for doubt, authors must justify the use of a particular test and explain whether their data conform to the assumptions of the tests, as part of the [Supplementary Information](#) ([./submissions/final/supinfo.html](#)) accompanying their paper. Three errors are particularly common, and we ask authors of these types of study to provide appropriate verification in their manuscripts or as Supplementary Information:

- *Multiple comparisons*: When making multiple statistical comparisons on a single data set, authors should explain how they adjusted the alpha level to avoid an inflated Type I error rate, or they should select statistical tests appropriate for multiple groups (such as ANOVA rather than a series of t-tests).
- *Normal distribution*: Many statistical tests require that the data be approximately normally distributed; when using these tests, authors should explain how they tested their data for normality. If the data do not meet the assumptions of the test, then a non-parametric alternative should be used instead.
- *Small sample size*: When the sample size is small (less than about 10), authors should use tests appropriate to small samples or justify their use of large-sample tests.

Authors should be aware that all referees are asked to review any statistical analysis present and to ensure that it is sound and that it conforms to the journal's guidelines.

5.7 Tables.

Tables should each be presented on a separate page, portrait (not landscape) orientation, and upright on the page, not sideways.

Tables have a short, one-line title in bold text. Tables should be as small as possible. Bear in mind the size of a Nature page as a limiting factor when compiling a table.

Symbols and abbreviations are defined immediately below the table, followed by essential descriptive material as briefly as possible, all in double-spaced text.

5.8 Figure legends.

Figure legends should be listed one after the other, **as part of the text document, separate from the figure files**. Please do not write a legend below each figure.

Each figure legend should begin with a brief title for the whole figure and continue with a short description of each panel and the symbols used. For contributions with methods sections, legends should not contain any details of methods, or exceed 100 words (fewer than 500 words in total for the whole paper). In contributions without methods sections, legends should be fewer than 300 words (800 words or fewer in total for the whole paper).

All error bars must be defined in the figure legend, as discussed in [Section 5.6 \(#a5.6\)](#) above.

5.9 Figures

Nature requires figures in electronic format.

Figures should be as small and simple as is compatible with clarity. The goal is for figures to be comprehensible to readers in other or related disciplines, and to assist their understanding of the paper.

Unnecessary figures and parts (panels) of figures should be avoided: data presented in small tables

or histograms, for instance, can generally be stated briefly in the text instead. Avoid unnecessary complexity, colouring and excessive detail.

Figures should not contain more than one panel unless the parts are logically connected; each panel of a multipart figure should be sized so that the whole figure can be reduced by the same amount and reproduced on the printed page at the smallest size at which essential details are visible. For guidance, a Nature page is 183 mm wide and 247 mm deep.

Amino-acid sequences should be printed in Courier (or other monospaced) font using the one-letter code in lines of 50 or 100 characters.

Some brief guidance for figure preparation:

Lettering in figures (labelling of axes and so on) should be in lower-case type, with the first letter capitalized and no full stop.

Units should have a single space between the number and the unit, and follow SI nomenclature or the nomenclature common to a particular field. Thousands should be separated by commas (1,000). Unusual units or abbreviations are defined in the legend.

Scale bars should be used rather than magnification factors.

Layering type directly over shaded or textured areas and using reversed type (white lettering on a coloured background) should be avoided where possible.

Where possible, text, including keys to symbols, should be provided in the legend rather than on the figure itself.

At submission, figures should be at good enough quality to be assessed by referees, ideally as JPEGs. Authors are advised to follow the [online \(or postal\) submission guidelines](http://www.nature.com/nature/authors/gta/submissions/subs/index.html) ([./submissions/subs/index.html](http://www.nature.com/nature/authors/gta/submissions/subs/index.html)) with respect to sizing, resolution and labelling.

Costs:

A contribution towards the total cost of reproduction of colour figures is requested. We currently charge £700 for the first colour figure and £250 for each additional figure. Inability to pay this charge will not prevent publication of colour figures judged essential by the editors

5.10 Production-quality figures.

When a manuscript is accepted in principle for publication, the editor will ask for high-resolution figures. Do not submit publication-quality figures until asked to do so by an editor. At that stage, please prepare figures according to [these guidelines](http://www.nature.com/nature/authors/gta/submissions/final/) ([./submissions/final/](http://www.nature.com/nature/authors/gta/submissions/final/)).

Please note that print-publication quality figures are large and it is not helpful to upload them at the submission stage. Even if they will upload onto the Nature submissions site, many referees' institutions have email systems that will not accept large attachments. Authors will be asked for high-quality figures at the time of acceptance of their article for publication, so it is not necessary to send them at the submission stage.

5.11 [Supplementary Information](http://www.nature.com/nature/authors/gta/submissions/final/suppinfo.html) ([./submissions/final/suppinfo.html](http://www.nature.com/nature/authors/gta/submissions/final/suppinfo.html))

This is online-only, peer-reviewed material that is essential background to the Article or Letter (for example, large data sets, methods, calculations), but which is too large or impractical, or of interest only to a few specialists, to justify inclusion in the printed version of the paper. See the

[Supplementary Information](#) ([../submissions/final/suppinfo.html](#)) page for further details.

Nature strongly encourages authors to include a simple schematic as Figure 1 of their SI that summarises the main finding of the paper, where appropriate (for example, to assist understanding of complex detail in cell, structural and molecular biology disciplines).

5.12 [Characterization of chemical materials](#) ([chemistry_guidelines.doc](#))

For guidelines describing Nature's standards for experimental methods and the characterization of new compounds, please see the information sheet on the [characterization of chemical materials](#) ([chemistry_guidelines.doc](#)).

6. Submission

When possible, Articles and Letters should be submitted **online** ([../submissions/subs/](#)). If online submission is not possible, contributions should be **posted** ([../submissions/subs/index.html#a1](#)). **E-mailed submissions will not be considered.**

Please be sure to read the information on what to include in your [cover letter](#) ([../submissions/subs/index.html#a6](#)) as well as several important [content-related issues](#) ([../submissions/subs/index.html#a3](#)) when putting a submission together.

Before submitting, all contributors must agree to *all* of Nature's [publication policies](#) ([../policy/index.html](#)). All material considered for publication in Nature is on condition that all authors agree to these conditions.

7. Other Nature and NPG journals

Please see [Publications and services](#) (http://npg.nature.com/npg/forms/04_cat.jsp) for details of the other journals published by the Nature Publishing Group.

An account of the relationship between all the Nature journals is provided at the [Nature family page](#) ([/nature/about/family/index.html](#)).

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