Journal of
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Notes for authors

1. Scientific scope

The *Journal of Synchrotron Radiation* seeks to cover all aspects of synchrotron radiation thus bringing together the full range of interests and skills of the synchrotron radiation community. Contributions are invited within the general areas of instrumentation, methods and applications. Instrumentation articles covering synchrotron radiation sources and beamlines, free-electron lasers, optics, detectors, electronics and data acquisition, and sample chambers and environment are welcomed. Methods and applications articles are invited within the categories of diffraction, spectroscopy and imaging.

2. Categories of contributions

Contributions should conform to the general editorial style of the journal. Typical articles may be viewed by going to **http://journals.iucr.org/s/sample_issue.html**.

2.1. Research Papers

Full-length *Research Papers* should not normally exceed the equivalent of about 10000 words.

2.2. Short Communications

Short Communications are intended for the presentation of topics of limited scope or for preliminary announcements of novel research findings. They are not intended for interim reports of work in progress, and must report results that are of scientific value in their own right.

Short Communications should not normally exceed two journal pages (about 1500 words). They are refereed in the normal way.

2.3. Lead Articles

Lead Articles are authoritative, comprehensive and forward-looking reviews of major areas of research interest. Suggestions for suitable topics and of potential author(s) are welcomed by the Editors.

The Editors will discuss the treatment of the topic, the length of the *Article* and the delivery date of the article with invited author(s).

2.4. Feature Articles

Feature Articles are focused surveys covering recent advances in an area of current research. A brief introduction should provide historical perspective and a brief conclusion should indicate likely future directions. Inclusion of relevant new results is appropriate.

Feature Articles will be about ten journal pages (10000 words). Shorter articles on rapidly evolving areas are also actively encouraged.

2.5. Beamlines

Beamline papers are short descriptive papers providing details of beamlines available to users at synchrotron and free-electron laser facilities around the world. Beamline papers should normally be about three journal pages (about 3000 words) in length. They are refereed in the normal way. For more details of the requirements for Beamline papers, see **http://journals.iucr.org/s/services/beamlines.html**.

2.6. Computer Programs

A brief description of the purpose, strategy, computer language, machine requirements, input requirements and the type of results obtained should be included. It is also ordinarily required that the adequacy of the documentation shall have been proved by the successful use of the program by two different teams outside the author's institution. Authors would usually be expected to be those who developed the program. *Computer Programs* will generally be about five journal pages (5000 words). Shorter articles on both new programs or systems and significant updates to existing ones will also be considered.

2.7. Laboratory Notes

These are very brief descriptions of special devices, equipment modifications, techniques for accomplishing certain tasks *etc.* A simple schematic drawing may often be preferable to an actual photograph of the apparatus. These articles should not normally exceed 500 words and may be refereed.

2.8. Teaching and Education

Articles in this category cover all aspects of an educational nature related to the general field of synchrotron radiation. All contributions should be submitted to one of the Editors.

2.9. Letters to the Editor

These may deal with non-technical aspects of synchrotron radiation, its role, its propagation, the proper functions of its Societies *etc.* or may make a technical observation or scientific comment that would usefully be brought to a wider audience. Letters should be submitted to one of the Editors.

2.10. New Commercial Products

Announcements of new commercial products are published free of charge. The descriptions, up to 300 words or the equivalent if a figure is included, should give the manufacturer's full address.

2.11. Meeting Reports

These are normally invited. Prospective authors interested in writing such items should first contact one of the Editors.

2.12. Synchrotron Radiation Meetings and Short Courses

This section contains details of meetings of scientific societies, congresses, summer schools *etc.* that are of interest. Contributions should be sent to the Editorial Office in Chester.

2.13. Obituaries

These will be commissioned by one of the Editors.

3. Submission and handling of articles

3.1. Submission

Articles should be submitted at **http://journals.iucr.org/s/services/submit.html**. Full instructions for submitting an article and details of the files required are given at **http://journals.iucr.org/s/services/submitinstructions.html**. Authors are encouraged to use the templates available from **http://journals.iucr.org/s/services/helpsubmit.html**.

The contact author must provide an e-mail address for all editorial communications and despatch of proofs and electronic reprints.

3.2. File format

The source files required for an article are: a single file in WORD, OpenOffice or LaTeX format of the text, tables and figure captions of the article; a high-resolution graphics file (minimum 600 d.p.i.) in TIFF, PostScript, encapsulated PostScript or PNG format for each figure and scheme; and files of any supporting information. These should be uploaded as described in the **online submission instructions**.

3.3. Handling of articles

Each article is handled by an editor chosen by the author from a list of those available at the time of submission. Authors should choose an editor whose area of expertise most closely matches the subject of the article. Details of the current Editorial Board can be found at **http://journals.iucr.org/s/services/editors.html**.

All contributions will be seen by referees (normally two) before they can be accepted for publication. The editor to whom the article is assigned is responsible for choosing referees and for accepting or rejecting the article. This responsibility includes decisions on the final form of the article and interpretation of these Notes when necessary. Further information on the peer review process can be found at **http://journals.iucr.org/s/services/peerreview.html**.

Changes to an article requested by the Editors, Co-editor or the editorial staff should be received within **two months** of transmittal to the author, otherwise the submission will be considered as withdrawn. If an article is not acceptable after two revisions it will not be considered further. Any subsequent communication of the material will be treated as a new submission in the editorial process. An article that has been rejected must not be resubmitted to any IUCr journal unless the reasons given for the rejection have been fully addressed in the revised version.

After initial submission, any revised or new files should be uploaded **only** in response to a specific request from an editor.

For accepted articles, it is the responsibility of the Managing Editor to prepare the article for publication. This may involve correspondence with the authors and/or the responsible editor in order to resolve ambiguities or to obtain satisfactory figures or tables. The date of acceptance that will appear on the published article is the date on which the Managing Editor receives the last item required. Contact details for the Managing Editor of *Journal of Synchrotron Radiation* can be found at **http://journals.iucr.org/services/contactus.html**.

On rare occasions, an editor may consider that an article is better suited to another IUCr journal. Any change to the section or journal of publication will only be made after full discussion with the contact author.

Articles will be checked for plagiarism using the CrossCheck service.

3.4. Author's warranty

The submission of an article is taken as an implicit guarantee that the work is original, that it is the author(s) own work, that all authors are aware of and concur with the submission, that all workers involved in the study are listed as authors or given proper credit in the acknowledgements, that the article has not already been published (in any language or medium), and that it is not being considered and will not be offered elsewhere while under consideration for an IUCr journal. The inclusion of material in an informal publication, *e.g.* a preprint server or a newsletter, does not preclude publication in an IUCr journal.

The co-authors of an article should be all those persons who have made significant scientific contributions to the work reported, including the ideas and their execution, and who share responsibility and accountability for the results. Other contributions should be indicated in the acknowledgements. Changes to the list of authors will normally require the agreement of the editor and all authors.

The IUCr is a member of COPE (Committee on Publication Ethics) and endorses its recommendations, including the Code of Conduct for Editors, which are available at http://www.publicationethics.org/. Important considerations related to publication have been given in the ethical guidelines published in *Acc. Chem. Res.* (2002), **35**, 74–76 and Graf *et al.* [*Int. J. Clin. Pract.* (2007), **61**(Suppl. 152), 1–26]. Authors are expected to comply with these guidelines.

3.5. Author grievance procedure

An author who believes that an article has been unjustifiably treated by the Co-editor may appeal initially to one of the Editors for a new review and, finally, to the Editor-in-chief of IUCr Journals if the author is still aggrieved by the decision. The initial appeal must be made within three months of rejection of the article. The decision of the Editor-in-chief is final.

3.6. Copyright

Except as required otherwise by national laws, an author will be required to agree to the transfer of copyright before an article can be accepted. Authors selecting open access do not need to transfer copyright. Details of author rights can be found at **http://journals.iucr.org/services/authorrights.html**.

3.7. Open access

Authors are given the opportunity to make their articles 'open access' on **Crystallography Journals Online**. Authors of open-access articles will not be asked to transfer copyright to the IUCr, but will instead be asked to agree to an open-access licence. This licence is identical to the Creative Commons Attribution (CC-BY) Licence. Further details can be found at **http://journals.iucr.org/services/openaccess.html**.

3.8. Publication fees

There are no fees for colour figures or electronic reprints. If authors require open access or printed reprints there is a charge and details will be given at the proof stage.

4. Article preparation

4.1. General information

Before preparing articles, authors should consult a current issue of the journal to make themselves familiar with the general format, such as the use of headings, layout of tables and citation of references.

A sample issue is available at **http://journals.iucr.org/s/sample_issue.html**.

All contributions must be accompanied by an English language Abstract and a one or two sentence Synopsis of the main findings of the article for inclusion in the Table of Contents. Authors should also supply at least five keywords.

The Abstract should state as specifically and as quantitatively as possible the principal results obtained and their significance. For Research Papers, Lead Articles or Feature Articles the Abstract should be around 250 words. For shorter contributions 150 words should suffice. The Abstract should be suitable for reproduction by abstracting services without a change in wording and should not repeat information given in the title. It should make no reference to tables, diagrams, atom numbers or formulae contained in the article. It should not contain footnotes and should not include the use of 'we' or 'I'.

4.2. Quality of writing

Articles should be clearly written and grammatically correct. If the Co-editor concludes that language problems would place an undue burden on the referees, the article may be returned to the authors without review. Details of language-editing services can be found at **http://journals.iucr.org/services/languageservices.html**.

4.3. Diagrams and photographs ('figures')

A set of guidelines for preparing figures is available from **http://journals.iucr.org/s/services/help/artwork/guide.html**. Figures should be prepared using one of the file formats listed in §3.2.

The choice of figures should be optimized to produce the shortest article consistent with clarity. Duplicate presentation of the same information in both figures and tables is to be avoided, as is redundancy with the text. Supplementary figures may be deposited (see §5.2).

4.3.1. Quality. Electronic files in the formats listed in §3.2 are essential for high-quality reproduction. The resolution of bitmap graphics should be a minimum of 600 d.p.i.

4.3.2. Size. Diagrams should be as small as possible consistent with legibility. They will normally be sized so that the greatest width including lettering is less than the width of a column in the journal (8.8 cm).

4.3.3. Lettering and symbols. Fine-scale details and lettering must be large enough to be clearly legible (ideally 1.5–3 mm in height) after the whole diagram has been reduced to one column width.

Lettering should be kept to a minimum; grids and shadings should be avoided where they are not required to improve clarity. Descriptive matter should be placed in the caption.

4.3.4. Numbering and captions. Diagrams should be numbered in a single series in the order in which they are referred to in the text. A list of figure captions should be included in the article.

4.3.5. Colour figures. Figures in colour are accepted at **no cost to the author**. Authors preparing colour figures should consider how the figure would look in greyscale and to readers who are colour-blind. It is very important that poor contrast (*e.g.* pale colours with a white background) be avoided.

4.3.6. Enhanced figures. An online tool for authors to prepare standard and corresponding three-dimensional interactive structural diagrams is available from **http://submission.iucr.org/jtkt**.

4.4. Tables

Authors submitting in Word should use the Word table editor to prepare tables.

4.4.1. Use of tables. Extensive numerical information is generally most economically presented in tables. Text and diagrams should not be redundant with the tables.

4.4.2. Design, numbering and size. Tables should be numbered in a single series of arabic numerals in the order in which they are referred to in the text. They should be provided with a caption.

Tables should be carefully designed to occupy a minimum of space consistent with clarity.

4.5. Video and multimedia content

Multimedia content (*e.g.* time-lapse sequences, three-dimensional structures) is welcomed. For details of how to prepare enhanced three-dimensional figures, see §6.1. The preferred file formats for multimedia are given at **http://journals.iucr.org/services/filetypes.html**.

4.6. Mathematics and letter symbols

Authors submitting in Word should use the Word equation editor to prepare displayed mathematical equations.

The use of the stop (period) to denote multiplication should be avoided except in scalar products. Generally no sign is required but, when one is, a multiplication sign ($\times$) should be used.

Scalar variables and non-standard functions should appear in italic type.

Vectors should be in bold type and tensors should be in bold-italic type.

Greek letters should not be spelled out.

Care should be taken not to cause confusion by using the same letter symbol in two different meanings.

Gothic, script or other unusual lettering should be avoided. Another typeface may be substituted if that used by the author is not readily available.

All displayed equations, including those in published Appendices, should be numbered in a single series.

4.7. Nomenclature

4.7.1. Units. The International System of Units (SI) is used except that the ångström (symbol Å, defined as 10^{-10} m) is generally preferred to the nanometre (nm) or picometre (pm) as the appropriate unit of length. Recommended prefixes of decimal multiples should be used rather than '$\times 10^n$'.

4.7.2. Crystallographic nomenclature. Authors should follow the general recommendations produced by the IUCr Commission on Crystallographic Nomenclature (see reports at **http://www.iucr.org/iucr/commissions/cnom.html**).

Atoms of the same chemical species within an asymmetric unit should be distinguished by an appended arabic numeral. **Chemical and crystallographic numbering should be in agreement wherever possible.** When it is necessary to distinguish crystallographically equivalent atoms in different asymmetric units the distinction should be made by lower-case roman numeral superscripts (*i.e.* i, ii, iii *etc.*) to the original atom labels.

4.7.3. Nomenclature of chemical compounds *etc*. Chemical formulae and nomenclature should conform to the rules of nomenclature established by the International Union of Pure and Applied Chemistry (IUPAC), the International Mineralogical Association (IMA) and other appropriate bodies. As far as possible the crystallographic nomenclature should correspond to the systematic name.

Any accepted trivial or non-systematic name may be retained, but the corresponding systematic (IUPAC) name should also be given.

4.8. References

References to published work must be indicated by giving the authors' names followed immediately by the year of publication, *e.g.* Neder & Schulz (1998) or (Neder & Schulz, 1998). Where there are three or more authors the reference in the text should be indicated in the form Smith *et al.* (1998) or (Smith *et al.*, 1998) *etc.*

The reference list should be arranged alphabetically and conform with the following style:

Andrews, M., Wright, H. & Clarke, S. A. (2014). In preparation.
Brünger, A. T. (1992*a*). *X-PLOR. Version 3.1. A System for X-ray Crystallography and NMR*. Yale University, Connecticut, USA.
Brünger, A. T. (1992*b*). *Nature (London)*, **355**, 472–474.
Crowther, R. A. (1972). *The Molecular Replacement Method*, edited by M. G. Rossmann, pp. 173–178. New York: Gordon and Breach.
International Union of Crystallography (2008). *(IUCr) Structural Biology and Crystallization Communications*, http://journals.iucr.org/f/journalhomepage.html.
Li, H., Zhu, J., Wang, Z., Chen, H., Wang, Y. & Wang, J. (2014). *J. Synchrotron Rad.* **21**, doi:10.1107/S1600577513024296.
Sheldrick, G. (2008). *Acta Cryst.* A**64**. 112–122.
Smith, J. (2014). *J. Synchrotron Rad.* **21**. In the press.
Yariv, J. (1983). Personal communication.

Note that all authors and **inclusive** page numbers must be given.

Identification of individual structures in the article by use of database reference (identification) codes should be accompanied by a full citation of the original literature in the reference list.

Citations in supporting information should appear in the main body of the article or be given in a related literature section.

5. Supporting information

5.1. Purpose and scope

Supporting information (such as experimental data, additional figures and multimedia content) that may be of use or interest to some readers but does not form part of the article itself will be made available from the IUCr archive. Arrangements have also been made for such information to be deposited, where appropriate, with other relevant databases.

5.2. IUCr archive

All material for deposition in the IUCr archive should be supplied in one of the formats described at **http://journals.iucr.org/services/filetypes.html**. Structural information (for small-molecule structures) should be supplied in CIF format.

5.3. Macromolecular structures

Authors should follow the deposition recommendations of the IUCr Commission on Biological Macromolecules [*Acta Cryst.* (2000), D**56**, 2]. For all structural studies of macromolecules, coordinates and the related experimental data (structure-factor amplitudes/intensities and/or NMR restraints) must be deposited at a member site of the Worldwide Protein Data Bank (http://www.wwpdb.org) if a total molecular structure has been reported. Authors are encouraged to deposit their data with the wwPDB in advance of submission to the journal and to provide an mmCIF and a wwPDB validation report which will be required on submission. Authors must supply the wwPDB reference codes before the article can be published and the data must be released on publication.

5.4. Powder diffraction data

Authors of powder diffraction articles should consult the notes provided at **http://journals.iucr.org/services/cif/powder.html**. For articles that present the results of powder diffraction profile fitting or refinement (Rietveld) methods, the primary diffraction data, *i.e.* the numerical intensity of each measured point on the profile as a function of scattering angle, should be deposited.

5.5. XAFS data

For articles that present XAFS data of an unknown system, the deposition of primary $\chi(k)$ data is recommended.

5.6. SAXS data

For articles that present experimental one-dimensional SAXS data, the deposition of an ASCII file representing the background-corrected scattering profile(s) with errors is recommended.

6. Author information and services

An author services page is available at **http://journals.iucr.org/s/services/authorservices.html**.

6.1. Author tools

A number of tools are available to help with the preparation of articles.

Word, OpenOffice and LaTeX templates can be downloaded from the author services page.

Table tools within the Word template may be used to prepare experimental tables from an mmCIF file.

A toolkit for preparing enhanced figures is available at **http://submission.iucr.org/jtkt**.

The web service, *publBio*, is available at **http://publbio.iucr.org** for preparing the text, experimental tables and enhanced figures for structural articles, and ensures that an article contains all the items necessary for publication.

6.2. Status information

Authors may obtain information about the current status of their articles at **http://journals.iucr.org/services/status.html**.

6.3. Proofs

Proofs will be provided in portable document format (pdf). The contact author will be notified by e-mail when the proofs are ready for downloading.

6.4. Reprints

After publication, the contact author will be able to download the electronic reprint of the published article, free of charge. Authors will also be able to order printed reprints at the proof stage.

6.5. Open-access articles

The final published version of each IUCr open-access article is deposited with PubMed Central on behalf of the authors.

6.6. Publicizing your article

There are many ways in which the IUCr promotes and raises awareness of articles published in its journals. More information on this and suggestions on how to publicize your articles can be found at **http://journals.iucr.org/s/services/articlepublicity.html**.

6.7. Crystallography Journals Online

All IUCr journals are available on the web *via* **Crystallography Journals Online** at **http://journals.iucr.org/**.