DESCRIPTION

The *Journal of Structural Biology* has an open access mirror journal, the *Journal of Structural Biology: X*, sharing the same aims and scope, editorial team, submission system and rigorous peer review.

The *Journal of Structural Biology* publishes papers dealing with the **structural** analysis of living material at every level of organization by all methods that lead to an understanding of **biological** function in terms of **molecular** and **supramolecular structure**.

Techniques covered include:

- Light microscopy including confocal microscopy
- All types of electron microscopy
- X-ray diffraction
- Nuclear magnetic resonance
- Scanning force microscopy, scanning probe microscopy, and tunneling microscopy
- Digital image processing
- Computational insights into structure

The field covered by the journal extends from the structural organization of cells and tissues, their membranes, compartments, organelles and supramolecular assemblies, to the structure and conformation of proteins and nucleic acids from the molecular to the atomic level. !!! Important information for NIH authors !!!

AUDIENCE

Biochemists, crystallographers, cell biologists, structural biologists

IMPACT FACTOR

2017: 3.433 © Clarivate Analytics Journal Citation Reports 2018
ABSTRACTING AND INDEXING

Scopus
EMBASE
EMBiology
Biological Abstracts
Chemical Abstracts
Current Contents/Life Sciences
Excerpta Medica
MEDLINE®
Research Alert
Science Citation Index

EDITORIAL BOARD

Editors-in-Chief:
Bauke W. Dijkstra, Groningen, Netherlands
Structural biology, Protein engineering, Enzyme mechanisms, Thermostability
Alasdair C. Steven, Silver Springs, Maryland, USA

Associate Editors:
David Alsteens, Université Catholique de Louvain (UCL), Louvain-la-Neuve, Belgium
Atomic force microscopy, protein structure, lipid membrane, Single-molecule interaction, binding free-energy landscape, kinetics, thermodynamics, folding
Adrian Elcock, University of Iowa, Iowa City, Iowa, USA
Molecular simulations, computational methods, protein folding
Rajan Sankaranarayanan, Council for Scientific and Industrial Research (CSIR), Hyderabad, India
X-ray crystallography, translation, lipid biosynthesis
Kenneth A. Taylor, Florida State University, Tallahassee, Florida, USA
3D electron microscopy, electron crystallography, electron tomography, helical and "single particle" 3D image reconstruction
Stephen Weiner, Weizmann Institute of Science, Rehovot, Israel
Biomineralization, calcification, biological materials, mineralized tissues, structure-function relations of hard biological materials/tissues, transient mineral phases, 3D large volume structural data, FIB SEM, Microarchaeology

Consulting Editor:
Wolfgang Baumeister, Max Planck Institut (MPI) für Biochemie, Martinsried, Germany
Structural Biology, Biophysics, Protein folding and degradation

Founding Editors:
Fritiof S. Sjöstrand
Journal of Ultrastructural Research in 1957

Ueli Aebi
Journal of Structural Biology in 1989

Editorial Board:
Linda Amos, MRC Laboratory of Molecular Biology, Cambridge, United Kingdom
Adriaan Bax, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Bethesda, Maryland, USA
Nuclear magnetic resonance and its application in chemistry, biochemistry and biology
Elia Beniash, University of Pittsburgh, Pittsburgh, Pennsylvania, USA
Biomineralization, structure-function relationships in supramolecular assemblies, bioinspired materials, tissue engineering
Alain Brisson, European Institute of Chemistry and Biology (IECB), Bordeaux, France
Susan Buchanan, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Bethesda, Maryland, USA
membrane protein structural biology, X-ray crystallography, bacterial outer membrane proteins, outer membrane transport, protein biogenesis, secretion
Sarah Butcher, University of Helsinki, Helsinki, Finland
Electron microscopy, image processing, X-ray crystallography, nanotechnology, cryo-electron microscopy, bacteriology, archaea, virus-host interactions, picornavirus, immunity
José María Carazo, Spanish National Center for Biotechnology, Madrid, Spain
SpainCryo Electron Microscopy, Image Processing
José Carrascosa, Spanish National Center for Biotechnology (CNB), Madrid, Spain
Henry Chanzy, National Center for Scientific Research (CNRS), Grenoble, France
Yifan Cheng, University of California at San Francisco (UCSF), San Francisco, California, USA
Cryo-electron microscopy, proteasome
James Conway, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, USA
Cryo-electron microscopy, structure and function of macromolecular complexes, virus capsids
Sarel Fleishman, Weizmann Institute of Science, Rehovot, Israel
Rosetta design; antibodies; enzymes; membrane proteins; high-throughput screening
Robert M. Glaeser, University of California at Berkeley, Berkeley, California, USA
High-resolution electron microscopy, single-molecule, development of electron microscopy methodology
Nick Grishin, University of Texas Southwestern Medical Center, Dallas, Texas, USA
Computational biology
Dorit Hanein, Burnham Institute for Medical Research, La Jolla, California, USA
Cryo-electron microscopy, bioinformatics
Albert J.R. Heck, Universiteit Utrecht, Utrecht, Netherlands
Mass spectrometry
Harald Herrmann, German Cancer Research Center (DKFZ), Heidelberg, Germany
Birte Höcker, Bayreuth University, Bayreuth, Germany
John E. Johnson, The Scripps Research Institute, La Jolla, California, USA
Virus structure and assembly, cryo-EM
Andrey Kajava, National Center for Scientific Research (CNRS), Montpellier, France
Masahide Kikkawa, The University of Tokyo, Tokyo, Japan
Microtubule-based motors, kinesin and dynein, cryo-electron microscopy and image analysis
Abraham Koster, Leids Universitair Medisch Centrum (LUMC), Leiden, Netherlands
Electron microscopy
Carolyn Larabell, University of California at San Francisco (UCSF), San Francisco, California, USA
Development, microscopy, imaging, x-ray tomography
Steven Ludtke, Baylor College of Medicine, Houston, Texas, USA
Cryo-electron microscopy and tomography, quantitative Image Processing Algorithm Development, macromolecular assemblies, membranes and membrane proteins, protein structure-function and folding, antibiotic resistance
François Major, University of Montréal, Montréal, Québec, Canada
Tom Misteli, National Cancer Institute (NCI), Bethesda, Maryland, USA
Genome organization, nuclear architecture, chromosomes, high-throughput imaging, aging
Andrea Musacchio, Max Planck Institute of Molecular Physiology, Dortmund, Germany
Cell division, mitosis, X-ray crystallography, biochemistry, biophysics, electron microscopy
Raúl Padrón, Venezuelan Institute for Scientific Research (IVIC), Caracas, Venezuela
muscle thick filaments, myosin interacting-heads motif (IHM)
David A.D. Parry, Massey University, Palmerston North, New Zealand
Fibrous Proteins; muscle: collagen; intermediate filaments; structure; sequence analyses.
Anastassis Perrakis, Netherlands Cancer Institute (NKI), Amsterdam, Netherlands
Jürgen M. Plitzko, Max Planck Institute of Biochemistry, Martinsried, Germany
Tatyana Polenova, University of Delaware, Newark, Delaware, USA
Solid-state NMR, multidimensional NMR spectroscopy, computational, biochemical, and X-ray diffraction methods
Michael Radermacher, University of Vermont, Burlington, Vermont, USA
3D electron microscopy
Zihe Rao, Institute of Biophysics, CAS, Beijing, China
Cryo-electron microscopy, x-ray crystallography
Ivan Raška, Institute of Experimental Medicine, Academy of Sciences of the Czech Republic, Prague, Czech Republic
Felix Rey, Institute Pasteur, Paris, France
Michael Sattler, Technical University of Munich (TUM), Munich, Germany
Markus Sauer, Department of Biotechnology & Biophysics, University of Würzburg, Germany
Ilme Schlichting, Max Planck Institute for Medical Research, Heidelberg, Germany
Petra Schwille, Max Planck Institute of Biochemistry, Martinsried, Germany
Electron microscopy, biomineralization
John Squire, University of Bristol, Bristol, UK
X-ray crystallography, electron microscopy, single particle image analysis, 3D electron microscopy, electron tomography
Murray Stewart, Medical Research Council (MRC), Cambridge, UK
Nuclear trafficking, nuclear export of mRNA

Phoebe L. Stewart, Case Western Reserve University, Cleveland, Ohio, USA
Cryo-electron microscopy

Leann Tilley, University of Melbourne, Parkville, Victoria, Australia
Malaria, Erythrocyte, Super-resolution light microscopy, Electron Microscopy, Drug Development

Paul Wingfield, National Institute of Arthritis and Musculoskeletal & Skin Diseases (NIAMS), Bethesda, Maryland, USA

Sharon Grayer Wolf, Weizmann Institute of Science, Rehovot, Israel
Cryo-EM, cellular ultrastructure, structural biology, electron tomography, 3DEM

Nieng Yan, Princeton University, Princeton, New Jersey, USA
Membrane transporters, mechanisms of substrate recognition and transport

Ulrich Zachariae, University of Dundee, Dundee, Scotland, UK
Computational biology

Yang Zhang, University of Michigan, Ann Arbor, Michigan, USA
GUIDE FOR AUTHORS

INTRODUCTION

Journal of Structural Biology has an open access mirror journal, Journal of Structural Biology: X. The Journal of Structural Biology (J. Struct. Biol., JSB) publishes papers dealing with the structural analysis of biological matter at all levels of organization and the functional connotations of such observations. The field covered by the journal extends from individual macromolecules to cells and tissues with emphasis on the supramolecular (e.g. complexes and machines) and subcellular (e.g., membranes, compartments, cytoskeleton) levels of the structural hierarchy.

Novel applications of and methodological innovations in electron microscopy, X-ray diffraction, probe microscopy, and light microscopy, as well as aspects of computational biology, image processing, bioinformatics and structural prediction, and other biophysical techniques yielding structural information are of interest to the journal. In the context of structural cell biology, papers dealing with cellular architecture and dynamics are particularly welcomed. We see biomineralization as an important area of interest.

Preference will be given to research that correlates structural results with functional, biochemical, biophysical, immunological, or genetic data on the system under study. Purely descriptive contributions should deal with the discovery of novel structural entities of biological significance or novel insights from innovative imaging modalities.

Structural Data
For papers describing high-resolution structures of biological macromolecules, the coordinates and the related experimental data (structure factor amplitudes/intensities, NMR restraints, density maps obtained by electron microscopy) must be deposited at a member site of the Worldwide Protein Data Bank (http://deposit-next.wwpdb.org/deposition/): RCSB PDB, MSD-EBI, PDBj, BMRB, or EMDB. Similarly, for structures described at intermediate resolution, density maps obtained by electron microscopy or electron tomography must be deposited at EMDB. Manuscripts must carry a statement that coordinates and the supporting experimental data have been deposited in the Protein Data Bank. The accession number(s) must be cited in the manuscript at the end of the Materials and Methods section. Authors must agree to release the atomic coordinates and experimental data immediately upon publication. For molecular structures obtained by computational modeling, with or without other constraints applied, authors must provide PDB-format coordinate sets as supplementary material. For simulations of macromolecular dynamics, authors must provide final PDB-format coordinate sets for each system simulated as supplementary material.

Technical Notes and Structure Reports
In addition to regular full-length papers, the Journal of Structural Biology publishes Technical Notes and Structure Reports.

The primary consideration for eligibility as a Technical Note is that the methodological innovation reported should have sufficient significance and originality to merit publication separate from the application. That significance/originality should be described in the letter of submission.

Structure Reports concisely document macromolecular structures, including those emanating from structural genomics. Where no biological role is yet determined, these reports can be presented without such connections. In addition to appropriate quality of the reported structure, it is essential that the procedures used to prepare the protein and to determine the structure should be repeatable with the information provided.

A Technical Note or Structure Report should not exceed four printed pages including figures (1 page ~ 900 words/5000 characters).

Reviews and Opinion Articles
JSB will publish reviews related to the journal's sphere of interest (see above), as well as opinion articles describing emerging concepts, important methodological advances, and research hypotheses. The length of review articles is flexible and justified by their content. Opinion articles should be approximately four pages, including figures. Both will be subject to the same review process as regular papers. Topics, including a summary of 1-2 paragraphs, may be proposed to either editor.
Paper of the Year
The Journal of Structural Biology Paper of the Year Award is conferred annually and consists of a cash prize of $1000 and an award certificate. The recipient should be a young scientist (graduate student or postdoctoral fellow) who has been first author or co-first author of a paper that appeared in JSB in the preceding three years or who had that status (graduate student or fellow) at the time the published work was done. Nominations can be made by any reader. A nomination, not exceeding 300 words, should consist of a statement of the particular merit of the paper and should be sent by e-mail to jsb@elsevier.com. The cutoff date for nominations in any year is 31 December. An unsuccessful nomination will remain eligible in the following years, subject to the three-year limitation.

Submission of Manuscripts
It is a condition of publication that all manuscripts must be written in clear and grammatical English and be submitted to the Journal of Structural Biology Web site at http://ees.elsevier.com/jsb. If you are unable to provide an electronic version, please contact the Editorial Office prior to submission (e-mail: jsb@elsevier.com; telephone: (619)699-6375; or fax: (619) 699-6700).

Revised manuscripts should be accompanied by point-by-point responses to each point made by reviewers. These should be formatted by first repeating the point at issue, as stated, followed by the authors response in a different font.

BEFORE YOU BEGIN

Ethics in publishing
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

Declaration of interest
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors should complete the declaration of interest statement using this template and upload to the submission system at the Attach/Upload Files step. If there are no interests to declare, please choose: 'Declarations of interest: none' in the template. This statement will be published within the article if accepted. More information.

Declaration of interest
All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: in the Cover Letter and in a separate standard DOI form which can be downloaded here: https://www.elsevier.com/__data/promis_misc/declaration-of-competing-interests.docx. For your convenience, you may consult the standard phrasing here: https://supportcontent.elsevier.com/Support%20Hub/Documents/Example_Conflict%20of%20Interest%20Form.pdf. If there are no interests to declare then please state this: 'Declarations of interest: none'. It is important for potential interests to be declared in both places and that the information matches. More information.

Preprints
Authors are required to disclose in their cover letter if their manuscript has been previously posted on a preprint server.

Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').
Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Open access
This journal offers authors a choice in publishing their research:

Subscription
- Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs.
- No open access publication fee payable by authors.
- The Author is entitled to post the accepted manuscript in their institution's repository and make this public after an embargo period (known as green Open Access). The published journal article cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

Gold open access
- Articles are freely available to both subscribers and the wider public with permitted reuse.
- A gold open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For gold open access articles, permitted third party (re)use is defined by the following Creative Commons user licenses:

Creative Commons Attribution (CC BY)
Lets others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)
For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The gold open access publication fee for this journal is USD 2750, excluding taxes. Learn more about Elsevier's pricing policy: https://www.elsevier.com/openaccesspricing.
Green open access
Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our open access page for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. Find out more.
This journal has an embargo period of 12 months.

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

Language (usage and editing services)
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's WebShop.

Submission
Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail. The initial submission should be a PDF file including text, Figures and Tables, with the Figures and Tables inserted at the points in the text where they are first cited. The legends should accompany the Figures and Table. Revised submissions should include a similar integrated PDF plus Word files for text, Tables and legends and high resolution individual files for Figures. Please use line numbering which makes it easier for reviewers and editors to locate controversial or revised passages of text.

PREPARATION

Peer review
This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. More information on types of peer review.

Article structure
Subdivision - unnumbered sections
Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

Introduction
State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Material and methods
Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.
Results
Results should be clear and concise.

Discussion
This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information
• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
• Author names and affiliations. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.
• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract
A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Graphical Abstract
The graphical abstract is mandatory as it draws more attention to the online article and helps the reader seize rapidly the overall message of the article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site. Authors can make use of Elsevier's Illustration Services to ensure the best presentation of their images and in accordance with all technical requirements.

Highlights
Highlights are a short collection of bullet points that convey the core findings of the article. Highlights are mandatory and should be submitted in a separate editable file in the online submission system. Please use ‘Highlights’ in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view example Highlights on our information site.
Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources
List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Math formulae
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork
Electronic artwork
General points
• Make sure you use uniform lettering and sizing of your original artwork.
• Embed the used fonts if the application provides that option.
• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Size the illustrations close to the desired dimensions of the published version.
• Submit each illustration as a separate file.
A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.
Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

**EPS (or PDF):** Vector drawings, embed all used fonts.
**TIFF (or JPEG):** Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
**TIFF (or JPEG):** Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
**TIFF (or JPEG):** Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

**Please do not:**
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

**Color artwork**
Color figures will be published free of charge.

Please make sure that artwork files are in an acceptable format (TIFF, EPS or MS Office files) and with the correct resolution. For further information on the preparation of electronic artwork, please see [https://www.elsevier.com/artworkinstructions](https://www.elsevier.com/artworkinstructions).

**Cover art**
Authors of accepted papers are encouraged to submit a full page design related to their paper for consideration for cover art. The cover should be 210 mm x 280 mm, 300dpi or higher, in TIFF, PNG or JPEG format. You may submit the cover during submission or send it directly to the journal manager at jsb@elsevier.com. Please make sure to include a short descriptive legend.

**Figure captions**
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

**Tables**
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

**References**

**Citation in text**
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

**Web references**
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

**Data references**
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.
References in a special issue
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/journal-of-structural-biology
When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Reference style
Text: All citations in the text should refer to:
1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
2. Two authors: both authors' names and the year of publication;
3. Three or more authors: first author’s name followed by 'et al.' and the year of publication.
Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.
Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown ....'

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.
Examples:
Reference to a journal publication:
Reference to a book:
Reference to a chapter in an edited book:


Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.

Video and datasets
Journal of Structural Biology offers the possibility to their authors to publish alongside their article any high resolution large video files or datasets. Files can be directly uploaded in the editorial system during submission.

For files larger than 700Mb, we recommend uploading them to Mendeley data (maximum of 10GB per dataset, see details here). Mendeley data allows authors to freely upload their large datasets, attributing a DOI to each dataset/video, so that they can be linked to the main research article published in JSB on ScienceDirect. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted video files should be properly labeled so that they directly relate to the video file's content.
We strongly advise our authors to submit the videos files in the browser-streamable format MP4 (H.264+AAC). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. Since video and animation cannot be embedded in the print version of the journal, please provide clear and consistent names for both the electronic and the print version for the portions of the article that refer to this content.

To facilitate streaming by readers whose internet connection may not allow them to fully experience high resolution video streaming, you may also consider depositing the high resolution version of your video in Mendelay data while providing during submission a lower resolution version of the video which is to be directly embedded in the published HTML version of your article.

**Data visualization**
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

**Supplementary material**
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**Research data**
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Mendeley Data**
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.
For more information, visit the Mendeley Data for journals page.

Data in Brief
You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to Data in Brief where it will be editorially reviewed and published in the open access data journal, Data in Brief. Please note an open access fee of 500 USD is payable for publication in Data in Brief. Full details can be found on the Data in Brief website. Please use this template to write your Data in Brief.

Data statement
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

Submission checklist
The initial submission should be a Word file including the main text, figures and tables. Figures and tables should be inserted at the points in the text where they are first cited and their legends should accompany them. Please use line numbering which makes it easier for reviewers to refer to specific passages in the text. Revised submissions should include, in addition to the above, high resolution individual files of each figure.

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

Mandatory information: One author designated as the corresponding author with complete contact details (email address, full postal address, phone number) Graphical abstract Highlights Keywords Cover letter: please specify if your manuscript has been previously deposited in an online archive and any specific circumstances related to the work presented All figures and corresponding captions All tables (including title, description, footnotes) Declaration of interest High resolution figure files (for revised version) Separate Word file with tracked changes (for revised version)

Further considerations: Manuscript has been 'spell-checked' and 'grammar-checked' All references mentioned in the Reference list should be correctly cited in the text, and vice versa Permission has been obtained for use of copyrighted material from other sources (including the Web) Suggest cover art (see Artwork)

AFTER ACCEPTANCE
Online proof correction
Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.
If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.
We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.
**Offprints**
The corresponding author will, at no cost, receive a customized Share Link providing 50 days free access to the final published version of the article on ScienceDirect. The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's Webshop. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**Issue copies**
Authors also may order extra copies of the journal, more offprints, or certificates and posters. Please go to http://webshop.elsevier.com. Non-authors also may order extra copies of the journal or any special issue by contacting customer service (Europe, Middle East and Africa: nlinfo-f@elsevier.com; America: usjcs@elsevier.com; or Asia: asiainfo@elsevier.com).

**AUTHOR INQUIRIES**
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.
You can also check the status of your submitted article or find out when your accepted article will be published.