Instructions for authors

Article categories

EPJ B publishes **Regular Articles,** which are original research papers that report results in the domain of *Condensed Matter and Complex Systems*. Besides them, EPJ B publishes also **Colloquia**, that describe the development of new areas of research or the impact of new and promising experimental or theoretical methods in the fields that are within the spectrum of topics covered by the journal. While not as extensive and complete as reviews in the usual sense, they are intended to suitably introduce new research directions and techniques in their early stages of development, and to a wider audience. There is no explicit constraint regarding the length of such manuscripts, although 20 printed pages would be the most usual length. **Topical Reviews** provide a comprehensive and extensive summary of recent research results in a field that is within the spectrum of topics covered by EPJ B and are of current interest to a broader audience. A topical review should aim to summarize the pertinent experimental, theoretical, and computational results obtained by the key research groups working in the field in the past 10 years. Historical reviews of an entire sub-field of physics are discouraged. There is no explicit constraint regarding the length of such manuscripts, although 35 printed pages would be the most usual length. All invited/submitted manuscripts will undergo the same refereeing procedure as all other contributions submitted to the journal. For invited colloquium papers or topical review papers, authors will receive a honorarium of EUR 400, -- upon publication and color figures will be free of charge. Colloquium papers and topical review papers are generally solicited by the journal editors. Authors wishing to submit are advised to contact the colloquium and reviews editors.

A brief biography (a maximum of 100 words per author) and a photo (in colour, size of 40 x 40 mm) can be provided to be published at the end of the article. There can be a maximum of 4 individual biographies per article. In the case of more than 4 authors, a group biography can be provided.

The submission stage

The web-based submission (and resubmission), including via a preprint server, is preferred over other methods. The member of the Editorial Board or the Editor-in-Chief to whom the manuscript should be forwarded may be indicated in the submission form. Additionally authors are encouraged to suggest a list of possible referees (not more than 5). The content of the article should not be submitted simultaneously to another journal.

Electronic submission

Authors are asked to **submit** their paper **electronically** through the website (Inquiry System):

https://www.editorialmanager.com/epjb/

Authors can eventually submit their manuscript via email, but only through the Editorial Office at:

epjb@edpsciences.org

How to prepare a manuscript

There is no general limitation of the overall size nor of the number of figures, nor of the level of details considered to be necessary. However, the appropriate length of a manuscript depends on the information presented in the paper. A manuscript should consist of the following content.

Title

The title should be simple, concise and informative with only the first word capitalized. A shortened version of the title consisting of a maximum of 75 characters (including spaces) for running headers should also be provided.

Author(s) name(s) and affiliation(s)

A list of all authors (with first and last name(s) written in full), as well as corresponding addresses, should be provided. Each address should be preceded by a numerical superscript corresponding to the same superscript after the name of the author concerned. Addresses should contain all information necessary for an effective mail delivery. E-mail should also be provided to speed up communication between readers and authors. This information will be published unless authors request otherwise.

Abstract

An abstract should accompany each manuscript; it should be completely self-consistent (i.e., with no figure, table, equation or reference citations), not exceeding 200 words and written as a single paragraph. Mathematical expressions should be avoided, if possible.

Classification numbers

PACS numbers are not required since they are no longer published in EPJ journals.

Main body of the paper

There is not strict length limitation for publishing in EPJ B. However the editorial guideline is that (i) Regular Articles should normally be approximately 10 printed pages long and preferably not exceed 30 pages and (ii) Colloquia should be approximately 20 printed pages long and preferably not exceed 50 pages. The body of the paper could be divided into sections. Sections should be numbered with arabic (not roman) numerals. Subsections (second level) should be numbered 1.2, 1.3, etc., and sub-subsections (third level) 1.1.1, 1.1.2, etc. Appendices should be numbered A, B, etc. All sections must have a short descriptive title, in which only the first word should be capitalized. Equations, tables, figures, and references should follow a sequential numerical scheme in order to ensure a logical development of the subject matter. Standard copy-editing corrections are inserted by the Production Staff. For details, see the internationally agreed standards adopted by the International Union of Pure and Applied Physics (IUPAP) or defined by the International Organization of Standardization (ISO). However, sticking to the following main rules shall hasten the production procedure.

- Whichever spelling you choose (British or American English) please be consistent throughout.
- Use hyphens consistently and avoid unnecessary ones.
- The words "section(s)", "equation(s)", "fi gure(s)" and "reference(s)" are abbreviated as "Sect(s).", "Fig(s).", "Eq(s)." and "Ref(s)." unless they are the fi rst word of a sentence. Th e word "Table" is always written in full.
- Chemical formulas, units of measure and acronyms should be set in roman.
- Mathematical symbols should be set in italic except:
  ○ diff erentials,
  ○ standard mathematical functions (exp, log, sin, cos, …),
  ○ Im and Re for imaginary and real.
- Vectors and tensors should be set in bold and sans-serif bold, respectively.
- Long exponential equations are better set as exp (…) instead of e…
- For fractions in the text use the solidus putting only the parentheses necessary to avoid ambiguities.
- For normal units use the standard SI abbreviations (e.g., s instead of seconds…).

Caution: Mathematical expressions often need to be displayed on two or more lines ("broken") because of the line length limitation of the two-column layout. There are situations where breaking an equation *is not possible or appropriate* (long fractions or matrices). Unbroken long equations are thus placed at the bottom or at the top of the concerned page(s) by the production staff according to the page layout (float equation) with an appropriate citation in the text. For example: see equation (8) above (below) (next page)

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Footnotes

There are 3 main types of footnotes:

1. Introductory footnotes (referring to new addresses of authors, address of corresponding author…) indicated with the following lower-case letters: [a], [b], [c], etc.
2. Footnotes to text material, which should be kept to a minimum, and which should be indicated by numerical superscripts: [1], [2], [3], etc. They should be placed at the foot of the relevant page.
3. Footnotes to tables, which should be indicated by superscript lower case letters and placed in a list immediately below the concerned table.

Acknowledgments and appendices

The acknowledgments section should follow the main body of the paper and should precede any appendix. Appendices should be labelled A, B, etc. (Appendix A or Appendix A. Complex developments, when there is a title). Equations in the appendices should be numbered consecutively, but separately from those in the main body of the paper (A.1), (A.2), etc. In each appendix equations should be numbered separately (B.1), (B.2), etc

Author contribution statement

Please provide a statement at the end of the paper (after the Acknowledgments) in which the nature of the contribution of each author is made explicit. Statements indicating that all authors contributed equally to the paper are also acceptable.

References

It is important to check the accuracy of bibliographic information in references. This has become more important with the on-line version. Hyperlinks will be programmed to enable readers to jump directly to the material cited. If your reference citations are incorrect or incomplete (e.g., missing author name, or an incorrect volume number or page), the associated hyperlinks may fail, and the usefulness of your paper in the on-line environment may be diminished.

References are quoted with arabic numerals in square brackets in order of appearence in the text. Literature citation of periodicals [1-3], books [4], proceedings [5] and preprints [6] should be organized according to the following examples. Note that journal names should be abbreviated according to the list of serial title word abbreviation of the ISDS (International Serial Data System) if available, otherwise full journal names are preferable.

Journals

1. C. Green, Eur. Phys. J. B **80**, 123 (2011)

Books

2. J.M. Smith, in *Molecular Dynamics*, edited by C. Brown, 2nd edn. (EDP Sciences, Les Ulis, 2010)

Proceedings

3. J.M. Smith, in Proceedings of the *International Conference on Low Temperature Physics, Madison*, 1975, edited by C. Brown (EDP Sciences, Les Ulis, 1998), p. 201

Reports and Theses

4. J.M. Smith, Brookhaven National Laboratory Report No. 110, 1982 (unpublished)

5. J.M. Smith, Ph.D. thesis, University of Paris XI, 1990 If available the DOI (Digital Object Identifier) of the cited literature should be added at the end of the reference.

IMPORTANT: To ensure that the CrossRef facility can hyper-link to the articles quoted in the bibliography, **multiple references must not be used.** I.e., a list of

references under the same number is not allowed: **each reference has to be singly numbered.**

Figure and table captions

Each caption should be written as a single brief paragraph without indentation. Figures and tables should be consecutively numbered with **arabic numerals** as they are cited in the text.

Figures

Each figure should be cited in the text. The final quality of the illustration depends on the quality of the original artwork so that they must conform to the criteria given below:

- Letters, numbers and symbols should have uniform strength and contrast, should be appropriately oriented on the axes and consistent with those used in the text.
- Unnecessary text around, such as captions, figure number and author's name should not be included in the files.
- The final size of the figures should fit either one column width (8.8 cm) or full-page width. All details of the figure should be visible and labelling legible, therefore:
  ○ make sure that the size of the lines is not lower than 0.3 pt,
  ○ avoid too thin continuous or dotted lines or too heavy lettering and thick lines that may result unsightly after reduction (if any).
- When supplying your PostScript files please strictly adhere to the criteria given in the section Guidelines for submission after acceptance.
- Colour figures: Online publication of color illustrations is free of charge. For color in the print version, authors will be expected to make a contribution towards the extra costs.

Graphical abstract

EPJB features a graphical abstract that contains a graphic presentation for each published articles on www.epj.org, in addition to the title and author list. Before acceptance, authors are required to submit a graphic that, in conjunction with the paper title, is meant to convey the essence of the work and capture the reader's attention. Please note that the graphical abstract is not an abstract and is not to provide specific results. It may be an item already present in the manuscript or a purposemade graphic. If the paper has no graphic, the authors can create a new one (or use an equation). Of course, the submission of a graphical abstract already used in the graphical abstract or in the contents of another journal publication is not allowed. The use of color is strongly encouraged. It should be of high visual quality in order to reproduce well. The graphical abstract file should be created at publication size, ideally a graphic file (ONLY .jpg, .png) with a maximum width of 480 pixel.

Electronic supplementary material

Electronic multimedia files (animations, movies, audio, etc.) and other supplementary information (appendices, (large) tables, images, programmes, etc.) which is either too voluminous for printing or is designed specifically for the Web can be published on-line along with the article.

- Authors should submit the material in electronic format together with the article:
  ○ use standard file formats: MPEG-1 (.mpg) for audio, video and animations; PDF for text and presentations,
  ○ supply a concise and descriptive caption for each file,
  ○ make a specific mention of the supplementary material in the text (e.g., as shown in movie 2) and name your files accordingly, e.g., movie2.mpg.
- Electronic supplementary material will be published as received from the authors without any conversion, editing, or reformatting.

For more information, please contact the Editorial Office.

The acceptance stage

In the case that the files have not been sent with the revised version, and before sending the official letter of acceptance, the Editorial Office will ask for the final electronic file(LaTeX, TEX, Word) of the paper corresponding exactly to the pdf accepted by the editor.

Authors are informed that any missing element in an accepted article (electronic file of the text or of the figures) will delay the publication date. The Editorial Office will keep the paper on a waiting list until all missing material is received. At this stage no modifications can be made either to the text or to the figures. If any, the manuscript will be sent back to the editor and possibly to the referees.

File formats

Each

We would appreciate receiving articles prepared in LaTeX2e with the EPJ class. In this case, authors are requested to carefully follow the instructions detailed in the documentation and to adhere as much as possible to the rules given in the section How to **prepare a manuscript.** The macro package is available at

<center>www.epj.org</center>

We will, however, accept texts written with any common variant of TeX, including:

– LaTeX2e (standard, article class),

– Rev TeX,

– AMS-LaTeX

and Word files.

No customized or personal style files should be used. Also, no particular fonts should be used (authors are reminded that the journal will be printed with Computer Modern (CM) standard fonts). In any case, the AMS LaTeX package, that defines several environments for creating multiline display equations, may be used. For manuscripts prepared with Word authors should be aware that only the text will be processed and that mathematical symbols and equations will be retyped in LaTeX by the Production Staff.

Figures

Remember that figures should be in separate files, and that no unnecessary text material (captions, figure numbers, author name, frames, etc.) should be included. The preferred macro package for including EPS graphics files is the LaTeX "graphicx" package.

Vector Encapsulated Postscript (EPS) are welcome, although Postscript (PS) may also be sent. These files can be used directly to give high-quality results, provided the following rules are adhered to:

- use standard fonts (Times, Helvetica, Courier, Symbol) and include them with the option saved "with fonts included" in the EPS file,
- EPS should not include a TIFF preview and should be in ASCII (not binary) format,
- the line strength should be greater than 0.3 pt (or higher if the figure needs scaling),
- bitmap format such as PDF, TIFF, BMP, PNG and JPG are acceptable but they need to be transformed into EPS format in the production procedure. Bitmap images may present quality problems in the production of the printed version of the journal due to low resolution. For this reason black and white graphics files should have a resolution of at least 600 dpi and greyscale graphics files of at least 300 dpi.

For extended instructions on how to prepare graphics please contact the Editorial or Production Office.

The proof correction stage

- Once proofs are ready, an e-mail will inform the authors on how to download them.
- Authors are asked to carefully check the proofs and they should keep in mind that the aim of proofreading is to correct errors that may have occurred during the production. Therefore they should particularly check completeness of text, equation breaks, figures, tables and references.
- Only **essential corrections are accepted**. Any substantial modification of the text or mathematical formulas altering the content of the accepted version of the paper might reopen the revision process.
- The author has the final responsibility for the corrections.
- Corrections should be returned **within 48 hours.**
- As soon as the proofs are returned, the paper will be corrected and posted for the **on-line** publication. Note that **once the paper is published on-line, further changes and amendments cannot be accepted unless by submission of an Erratum.**

Offprints

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Copyright transfer

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Open Access Publishing

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<center>https://www.epj.org/open-access</center>

Policy on publishing integrity

EPJ is committed to safeguarding good scientific practice in publishing at all levels. Strong measures will be taken in all cases of misconduct.

Research data policy

EPJB strongly encourages that all datasets on which the conclusions of the paper rely should be available to readers and that the authors should provide a statement of data availability in their article, in which they describe where the relevant data can be found. Please click here for more details and information on recommended repositories.