Paper title: Preparation of papers for *Journal of Advanced Ceramics*

(Only the first letter of the first word and proper nouns should be capitalized)

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Abstract: This instruction gives you guidelines for preparing papers for the journal *Journal of Advanced Ceramics*. Use this document as a template if you are using Microsoft Word or later for Windows, or Word X or later for Mac OS X. Otherwise, use this document as an instruction set. A concise and factual abstract is needed for manuscript except Comment and Reply to state the main purpose and research questions of the study, the methods, the main results, and the key conclusions. Abstract should be 120–250 words in length. No footnotes, references, figures, or tables may appear in the abstract. Be sure to define all symbols used in the abstract. Since the abstract is indexed in many databases, it should be self-contained without any undefined abbreviations or any cited references.

**Keywords:** Please provide 4–6 keywords, which can be used for indexing purpose. Keywords are not required for Comment and Reply.

# Introduction

*Journal of Advanced Ceramics* is a peer-reviewed, open access international journal published on behalf of the State Key Laboratory of New Ceramics and Fine Processing (Tsinghua University, China) and the Advanced Ceramics Division of the Chinese Ceramic Society.

*Journal of Advanced Ceramics* provides a forum for publishing original research papers, rapid communications, and commissioned reviews relating to advanced ceramic materials in the forms of particulates, dense or porous bodies, thin/thick films or coatings and laminated, graded and composite structures.

Please be advised that the Journal does not consider or publish papers concerning traditional ceramics and porcelains, glasses, concretes, geopolymers, and traditional refractories. In addition, papers concerning glass-ceramics, bioactive ceramics, and ceramic-containing metal- or polymer-matrix composites are also discouraged.

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*  Cover letter and graphical abstract (mandatory).
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Both Microsoft Word and PDF files can be uploaded for peer review, and original, high-quality figures are required.

# Manuscript preparation

## 3. 1 Language

The Journal’s language is English. Either British English or American English spelling and terminology may be used, but the system chosen should be followed consistently throughout the manuscript. Please write the text in good English. Possible grammatical or spelling errors should be carefully avoided, making the submissions conform to accepted standards of written technical English. The Journal's editors are not responsible for correcting errors in grammar or spelling. Manuscripts that require extensive English revision may be rejected without review.

Please always use past tense to state the authors' or previously reported work (experiments, observations, analyses, and discussions) and the present tense to state the experimental facts and conclusions.

## 3. 2 Length of manuscripts

There are no strict limits on the number of published pages for both research and review articles. Nevertheless, authors are asked to make the manuscript as concise as possible.

## 3. 3 Text formatting

For submission in Microsoft Word, use a normal, plain font (e.g., 12-point Times New Roman), double space line, and one column for text. Use the automatic page numbering function to number the pages. Do not use field functions. Use tab stops or other commands for indents, not the space bar. Use the table function, not spreadsheets, to make tables. Use the equation editor or MathType for equations. Note: If you use Word 2007, do not create the equations with the default equation editor but use MathType instead.

# Detailed formatting instructions

## 4. 1 Heading/section levels (numbered)

For regular research and review articles, please use the decimal system of headings. Please divide your manuscript into clearly defined and numbered sections and subsections. Sections should be numbered 1, 2, etc. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2 …), 1.2, etc. Use this numbering also for internal cross-referencing: Do not just refer to “the text”. Each section and subsection should be given a brief heading and each heading should appear on its own separate line.

## 4. 2 Scientific style

## Internationally accepted signs and symbols for units (SI units) should be used throughout. Negative exponents should be used instead of a slash, e.g., m⋅s−2 rather than m/s2.

 A decimal point (dot, full stop) should be used to mark the radix point instead of a comma, e.g., 0.5% rather than 0,5%.

 If the number is larger than 1000, each group of three digits should be separated by a comma, e.g., 1630000 should be written as 1,630,000.

All symbols that denote mathematical constants, variables, and unknown quantities in the manuscript must be explained. A list of symbols should follow the abstract if such a list is needed.

 The following standard mathematical notation should be used for symbols, etc.: Italics for single letters that denote mathematical constants, variables and unknown quantities; Roman (upright) face for numerals, operators and punctuation, and commonly defined functions or abbreviations, e.g., cos, e or exp, lim, log, max, min, d (for derivative), etc.; Bold face for vectors, tensors and matrices.

## 4. 3 Formulae and equations

Formulae and equations should be editable and we suggest that the authors create the formulae and equation with MathType. Please note that some formulae and equations entered using Microsoft Equation Editor do not convert correctly when a manuscript written in Microsoft Word is converted into a PDF. Authors should double-check all formulae and equations before final submission.

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*. Powers of e are often more conveniently denoted by exp.

Equations that have to be displayed separated from the text should be numbered consecutively using Arabic numerals and referred to, with Eq. (1), Eq. (2), …, Numbering consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text), and referring the equation with Eq. (1), Eq. (2)… in the text.

## 4. 4 Figures

All the figures, including data plots, photographs, diagrammatic sketches, flow charts, etc., should be embedded, approximately in their final sizes, in the main text near the paragraph in which they are first referenced, not on separate page(s) at the end. All figures should be numbered using Arab numerals as Fig. 1 XXX, Fig. 2 XXX … and supplied with a figure caption (figure parts should be denoted by lower-case letters). Please make sure that all elements found in the figure are identified in the caption. Figures should always be cited in the text, such as Fig. 1, Fig. 2, in consecutive numerical order.

1. If a figure comprises several parts, please integrate all the parts into a single picture.
2. Original figures should be in high quality with the resolution of 600 dpi.

(3) Figures should be in the proper size, less than 8 cm or 16 cm in width, and less than 24 cm in height. When making a figure, please set the size first, and then write down words, numbers, symbols, etc.

(4) Use a normal, uniform font (10-point Times New Roman,) for all the words and numbers in figures.

(5) Only the first letter of the first word in a phrase should be capitalized, except proper nouns.

(6) If there is an axis system in the figure, the coordinate line and coordinate point should be drawn in bold.

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(9) The unit in axis titles should be enclosed in parentheses, for example, “Flow discharge (m3/s)”.

(10) The background of figures should be deleted.



Fig. 1 This is where the ﬁgure caption goes.

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Tables should be placed next to the relevant text in the manuscript, not on separate page(s) at the end. Please insert tables as editable text and not as images. Use the table function, not spreadsheets, to make tables. All tables should be numbered using Arab numerals as Table 1 XXX, Table 2 XXX … and supplied with a table title which explains clearly and concisely the components of the table. Tables should not duplicate results presented elsewhere in the manuscript (for example, in figures). Tables should always be cited in the text, such as Table 1, Table 2, in consecutive numerical order.

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(2) Only the first letter of the first word in a phrase should be capitalized, except proper nouns.

(3) If the number is larger than 1000, each group of three digits should be separated by a comma. For instance, 1630000 should be written as 1,630,000.

**Table 1 Table caption**

|  |  |  |  |
| --- | --- | --- | --- |
| Time (day)Mass (kg) | Case 1 | Case 2 | Case 3 |
| 202.9\* | 300 | 400 | 70.2\* | 100 | 150 | 205.7\* | 300 | 400 |
| Orbital averaging | 197.52 | 182.82 | 175.15 | 36.45 | 30.58 | 29.75 | 199.32 | 177.07 | 171.82 |
| Guidance scheme | 197.45 | 183.06 | 176.92 | 36.42 | 30.52 | 29.69 | 199.20 | 177.56 | 173.04 |

## 4. 6 Units, abbreviations, and footnotes

Please adhere to internationally agreed standards such as those defined by the International Organization of Standardization (ISO). Metric SI units should be used throughout except where non-SI units are more common (e.g., liter (L) for volume).

Abbreviations should be defined at the point of first use and be used consistently thereafter. Abbreviations defined in the Abstract should be re-defined in the main text of the submission.

Essential footnotes to the text should be numbered consecutively and placed at the bottom of the page to which they refer. Footnotes to the table should be indicated by superscript lower-case letters (or asterisks) and placed immediately below the table.

# Conclusions

A conclusion is not restatement of the abstract, but to stress the importance of the work, to give the paper a sense of completeness, and leave a final impression on the readers. The conclusion section is the last section of the paper to be numbered.

## Appendix (if applicable)

An appendix, if needed, is presented without numbers. If there are two or more appendices, they should be numbered consecutively. Equations in appendices should be designated differently from those in the main body of the manuscript, e.g., (A1), (A2), etc. In each appendix equations should be numbered separately.

## Acknowledgements

The content of Acknowledgments is a list of people who contributed to the work in the manuscript but are not named in the author list, and a list of funding sources that supported the research presented. The names of funding organizations should be written in full. Do not include acknowledgements on the title page, as a footnote to the title or otherwise.

**Declaration of competing interest** (please confirm when the manuscript is submitted)

The authors have no competing interests to declare that are relevant to the content of this article.

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## References

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should only be mentioned in the text. Papers just accepted for publication are cited by the DOI. Do not use footnotes or endnotes as a substitute for a reference list. Please ensure references are given in the correct style as shown below in order to avoid delays in typesetting your article.

Examples:

***Journal style***

[1] Han YC, Li SP, Wang XY, *et al.* Synthesis and sintering of nanocrystalline hydroxyapatite powders by citric acid sol-gel combustion method. *Mater Res Bull* 2004, **39**: 25–32.

***Book style***

[2] Lawn BR. *Fracture of Brittle Solids*. Cambridge (UK): Cambridge University Press, 1993.

***Chapter in book style***

[3] Craighead HG. Nanostructures in electronics. In: *Nanomaterials: Synthesis, Properties and Applications*. Edelstein A, Cammatata R, Eds. New York: Taylor and Francis, 1998: 565–566.

***Others***

[4] Hammond PW. Four-quadrant AC-AC drive and method. U.S. patent 6 166 513, Dec. 2000.

[5] Peng ZJ. Surface modification of ceramic cutting tools by energetic ions. Ph.D. Thesis. Beijing (China): Tsinghua University, 2002.

[6] Information on http://www.weld.labs.gov.cn.

 **Citation in text**

References to the literature are cited by number in square brackets at appropriate locations (before a period, comma, etc.) in the text. Some examples are given below:

(1) There are several different methods, such as chemical precipitation [1], hydrothermal [2–4], sol–gel [2,5,6], and mechanochemical methods [7,8].

(2) This phenomenon was originally observed by John and Williams [1] in 1980.

(3) This effect has been widely studied [1–3,7].

**Graphical abstract**

Graphical abstract is mandatory to supply which can summarize your content vividly in a concise, pictorial form designed to capture the attention of a wide readership online (at least 600 dpi, 5 cm × 8 cm, the ratio of height to length should be less than 1 and larger than 5/8). Graphical abstract should be submitted as a separate file. No additional outline or synopsis should be included.