



**USM** UNIVERSITI  
SAINS  
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# GUIDELINES FOR AUTHORS

## Aims and Scope

The *Journal of Engineering Science* presents a broad interdisciplinary knowledge hub on novel international practices and the most recent research findings of practical importance in all aspects of engineering science that could be of benefit to any community worldwide. The journal aims to be a catalyst towards the eventual success of United Nations Decade of Education for Sustainable Development (UNDESD) Programme. We welcome manuscript submission from various fields of engineering in our goal to enhance communication and understanding across all aspects of engineering science fraternity via publications of peer reviewed and original papers on engineering advancement and solutions to problems worldwide.

## Manuscript Preparation

Please read and follow the instructions carefully. The Publisher reserves the right to return manuscripts that are not prepared in accordance with these instructions.

Manuscripts should be clearly and concisely written in Standard English (UK). The manuscript may be rejected because of unsatisfactory command of the language. Please prepare your manuscript in Microsoft Word using Times New Roman, size 12, single column, double-spaced throughout, with wide margins.

## Article Structure

Manuscripts should be organised in the following order:

### 1. Title Page

The title page should be sent as a *separate document* from the main text. This page contains:

- **Title**  
Title should be concise and informative. It should be in uppercase and lowercase, avoiding long formulas and with no abbreviation.
- **Authors name and affiliation**  
Provide Authors' *full name* (first, middle, and last names), omitting the titles. Present Author's affiliation below the names, with full address of each affiliation (where the work was conducted), including the country name. Please indicate if current address of Author is different.
- **Corresponding author's contact information**  
The corresponding author should be indicated with an asterisk (\*) together with the appropriate e-mail address.
- **Acknowledgement**  
Any acknowledgement (including the grant number) should be included in the title page, not in the text.

## 2. Abstract

The abstract should be no longer than 200 words. The abstract should be a concise and factual description of the contents and conclusions as well as an indication of any new findings. Acronyms, abbreviations, mathematical equations, tabular materials, and references should be avoided.

## 3. Keywords

Keywords are to facilitate the retrieval of articles by search engines, therefore do not use general terms. Use recognised vocabulary related to the discipline discussed when selecting keywords. Keywords selected should not be less than five.

## 4. Running Head

Running head (a short title) must be *less than 50 characters*.

## 5. Main Document

- Introduction
- Materials and Methods
- Results
- Discussion
- Conclusion
- References

## 6. Tables and Figures

Be sure to cite every figure and table in the text. Each figure and table must have a caption that is complete and intelligible by itself without references to the text. Number figures and tables in the order in which they appear in text, and each must be provided as a separate file. Please do not combine figure/table and caption in a textbox or frame.

### • Tables

Do not use border and vertical lines to separate column. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate data described elsewhere in the article.

Place footnotes to table below the table body and indicate them with superscript lowercase letters. Use En-dash to indicate missing values and explain the empty cells in footnote.

Example:

Table 1: Maximum length of slurry pipe jacking method.

Bore (mm)	Maximum length (m)
800–900	150–300 <sup>a</sup> (600)
1000–1100	200–400 (720)
1200–1500	200–450 (850)
1650–2000	300–600 (930)

<sup>a</sup>( ): The case of cutter for boulder layer is indicated.

- **Figures**

Figure captions, contain title and description of figure, should be prepared in *separate files*. If a figure is separated into several parts, use lettering e.g. Figure 1(a), Figure 1(b).

When preparing illustrations that will appear in colour in the online journal and in black and white in the printed journal, authors must ensure that: (1) colours chosen will reproduce well when printed in black & white and (2) descriptions of figures in text and captions will be sufficiently clear for both print and online versions. This is the author's responsibility.

- **Graphs**

Graphs should be self-explanatory, their purpose evident without reference to the text. Indicate clearly what is being plotted, in both horizontal and vertical directions. Include appropriate units. Orient letters and numbers so that they may be easily read from the bottom or the right hand side of the graph. Relevant non-graphic material, such as the key to the symbolism in the graph, maybe included within the confines of the graph frame if it will fit without crowding; otherwise put the explanatory material in the caption.

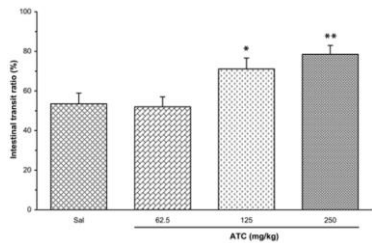
## Artwork

Submitting your illustrations, pictures, tables, audio, video, and other multimedia or other material in an electronic format helps us produce your work to the best possible standards, ensuring accuracy, clarity and a high level of detail. This process will also ensure that your article can be easily retrieved from the online indexing databases.

### Graphic Files

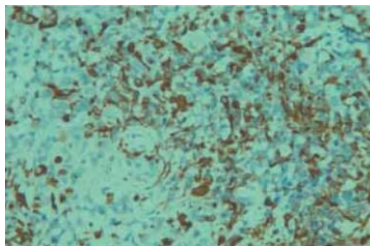
- Please submit *each* illustrations/figures in a separate file (in its original format).
- All files must be cross-platform compatible.
- Make sure you use uniform lettering and sizing of your original artwork.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Please note that we only accept TIFF and EPS format. (JPEG is only allowed if TIFF file is not available and highly restricted to the minimum of 500 dpi.)

### Figure Graphic Formatting Guidelines

Image type	Example	Recommended format	Color mode	Resolution
<u>Line Art</u> An image composed of lines and text, which does not contain tonal or shaded areas		TIFF or EPS	Monochrome 1-bit (Bitmap) or RGB	900–1200 dpi

**Halftone**

A continuous tone photograph, which contains no text

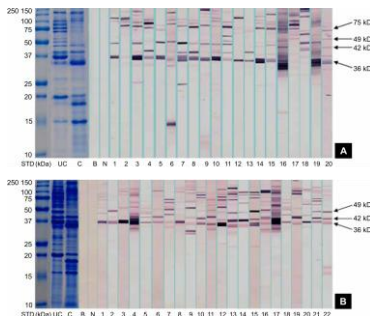


TIFF

RGB or 300 dpi  
Grayscale

**Combination**

Image contains halftone + text or line art elements



TIFF or EPS

RGB or 500-900 dpi  
Grayscale

**Line Art Specifications**

Size of the artwork	Both width and height of the line art must not exceed 5 inches.
Font	Use only Times New Roman
Font size	8 points or higher
Solid lines	Line weight should be 0.15-1.5 point at intended display size. Lines must not be broken up.
Image areas	Image areas must not appear pixelated/"stair stepped"/"jagged"
Colour mode	Monochrome 1-bit (Bitmap) or RGB
Resolution	Minimum 900 dpi, maximum 1200 dpi
Application/software for creating line art	The following list, in order of preference, specifies application/software that is recommended for creating line art.

**Adobe Illustrator**

Save the artwork in EPS format.

**Microsoft Office (Word/Excel)**

Make sure all the AutoShapes are created at intended display size. All elements/information (lines, shapes, arrows, textbox, etc.) in the artwork must be grouped together to avoid any problem of missing elements/ information.

*Do not* use colour when preparing graphs/charts. Colours that display a clear difference may appear very similar to each other when converted to gray. As other alternative, author may choose to use varieties of patterns or line styles in the graphs/charts.

Please do not supply any embedded graphics in DOC or XLS document.

Save the artwork in DOC or XLS format. We do not accept DOCX or XLSX format.

**Corel Draw/Other vector authoring tools**

"Save As" or "Export" the artwork to EPS format.

## Pixel Requirements for Images

	Image width	Line Art	Halftone	Combination
Maximum size	5 inches	6000 pixels	1500 pixels	4500 pixels
Minimum size	2 inches	1800 pixels	600 pixels	2500 pixels

## Equations

Please follow the guideline when including equations in the text:

- Equations explicitly referred to in text need be sequentially numbered (on the right-hand side of the equation and in parentheses).
- Long equations should be broken apart and continued for several lines for ease of understanding.
- Use the word “equation” in text and labelled each equations by numbers (e.g. (1),(2) and etc.).
- Greek letters and other non-Latin or handwritten symbols should be explained in the margin where they are first used. Take special care to clearly show the difference between zero (0) and the letter O, and between one (1) and the letter l.
- Subscripts and superscripts should be clearly indicated.
- Symbols should be explained immediately after the equation in which they are first used. Avoid unusual characters or symbols.
- Set variables in italic.
- For simple fractions use the solidus (/) instead of a horizontal.
- Use comma between tens, hundreds and thousands (e.g. 1,000, 10,000, 100,000).
- The use of fractional powers instead of root signs is recommended. Also powers of e are often more conveniently denoted by exp.

## Nomenclature and Units

The use of nomenclature and symbols adopted by IUPAC is recommended (Quantities, Units and Symbols in Physical Chemistry, Blackwell Scientific, Oxford, 1988).

All measurements should be in accordance to the International System of Units (SI).

Example,

Quantity	SI unit
Length	metre (m)
Weight	kilogram (kg)
Time	second (s)
Electrical current	ampere (A)
Luminous intensity	candela (cd)

When referring to a unit without the numerical value in the text, use full word instead of abbreviation.

Example,

... in gram            ... in kilometer  
 ... 15 g                ... 100 km

## Listing

When providing listing, the order should be (1), (2), (3) followed by (a), (b), (c), and then (i), (ii), (iii).

For run-in-list, please use the following example:

White light consists of three colours: (1) red, (2) green, and (3) blue.

## Heading

Provide short, descriptive headings for each section. Section and subsection should be numbered (to be used in internal reference) as follows:

- 1. FIRST LEVEL HEADING**  
*Left-aligned, full-caps, bold*
- 1.1 Second Level Heading**  
*Left-aligned, title case, bold*
- 1.1.1 Third level heading**  
*Left-aligned, sentence case, bold, italic*

Text .....  
*Left-aligned, first-line indentation from paragraph 2 onwards*

## References and Citation Style

All references made to publications in the text should be presented in a list of reference following the text of the manuscript. References in the list must be numbered in the order in which they were cited. The manuscript should be carefully checked to ensure that the information given in the text is exactly the same as that given in the reference list. Authors are responsible for the accuracy of the references. References in text (the corresponding number should be superscripted and appear after punctuation):

... referring to Nadal.<sup>1,2</sup> OR

...as explained by Matthews et. al.<sup>3-6</sup>

References to the literature should be made according to the system described below in the list of references at the end of article. Examples: -

Book.

- No. Author, A. A., Author, B. & Author, C. C. (year). *Title of Book*. Place of publishing: Publisher, page numbers.
- 5. Perry, L. M. (1980). *Medicinal plant of East and Southeast Asia*. Cambridge: MIT Press.

Articles/ chapters in book.

- No. Author, A., Author, B. & Author, C. (year). Title of article/ chapter. In X. Author & Y. Author (Eds.). *Title of Book*, nth ed (if applicable). Place of publishing: Publisher, page numbers.
- 10. Fitch, R. M. & Tsai, C. H. (1971). Polymer colloids. In R. M. Fitch (Ed.). *Polymer colloids*. New York: Plenum Press, 73.

## Journal.

- No. Author, A. A., Author, B., Author, C. C., Author, D., & Author, E. E. (year). Title of article. *Name of Journal* (abbreviated), volume number (issue number), page numbers, DOI URL.
13. Kyung, H. R. & Yinzhe, J. (2006). Recovery of catechin compounds from Korean tea by solvent extraction. *Bioresour. Technol.*, 97(5), 790–793, <https://doi.org/10.1016/j.biortech.2005.04.001>.

## Forthcoming.

- No. Author, A. A. & Author, B. B. (forthcoming). Title of article. *Name of Journal* (abbreviated).
7. Puganesh, S., Azlina, N. M. A. & Normisbah, W. C. (forthcoming). How to prepare a manuscript for submission in a physical science journal. *J. Phy. Sci.*

## Web References.

- No. Author, A. A. (year). Title of article. *Name of Journal* (abbreviated), volume number (issue number), page numbers (if applicable). Retrieved from URL on date month year.
9. Rabbani, S. I., Devi, K. and Khanam, S. (2010). Role of pioglitazone with metformin or glimepiride on oxidative stress-induced nuclear damage and reproductive toxicity in diabetic rats. *Malaysian J. Med. Sci.*, 17(1), 3–11. Retrieved from <http://ernd.usm.my/journal/journal/02-1710A1pioglitazone.pdf> on 21 March 2010.
- No. Author, A. A. (year). Title of article. *Name of article*, date. Retrieved from URL on date month year.
2. Remington, J. P. & Wood, H. C. (1918). *The dispensatory of the United States of America*. Retrieved from <http://www.henriettesherbal.com> on 23 January 2009.

## Conferences.

- No. Author, A. A. & Author, B. B. (year). Title of paper presented. Paper presented at the *Name of proceeding*. Venue (province/city, country), date(s), page number(s).
8. Goh, E. G., Wan Nik, W. M. N., Fadhli Ahmad, M. & Amran, A. (2009). The assessment of rheological model reliability in lubricating behaviour of vegetable oils. Paper presented at the *National Tribology Conference*. Universiti of Malaya, NTC, Kuala Lumpur, 4–5 May 2009, 58–65.

## Thesis.

- No. Author, A. (year). Title of thesis. Undergraduate/ Masters/ PhD diss., name of university.
6. Abdullah, N. (2005). An assessment of pyrolysis for processing empty fruit bunches. PhD diss., Aston University.

## Multiple authors.

List all names for 6 authors, if more than 6 authors, list the first 6 authors followed by “et al.”

- No. Author, A. A., Author, B., Author, C. C., Author, D., Author, E. E., Author, F., *et al.* (year). Title of article. *Name of Journal* (abbreviated), volume number (issue number), page numbers.
14. Taniguchi, S., Kuroda, K., Doi, K., Inada, K., Yoshikado, N., Yoneda *et al.* (2007). Evaluation of gambir quality based on quantitative analysis of polyphenolic constituents. *Yakugaku Zasshi*, 127(8), 1291–1300.

**For further information on preparing and formatting manuscript, please refer to the *Chicago Manual of Style: The Essential Guide for Writers, Editors, and Publishers, 16<sup>th</sup> Edition*.**

## Checklist

Please refer to this list for the final checking of your article before sending it to us.

- Cover letter
- A title page, including author(s) name(s), affiliation(s) and acknowledgement (if any).
- Corresponding Author of the article
- Name
- Email address
- Full postal address
- Telephone and fax numbers
- Manuscript title
- Running title (limit 50 characters)
- Keywords (up to 5 keywords)
- All tables (including title and description)
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- All necessary files are attached (Figures/Tables) in the *CORRECT FORMAT*
- All figure captions
- The total number of words in the manuscript, including title, abstract, main document, references and appendices
- An anonymised version of the manuscript. Articles will be reviewed in a double-blind fashion, shielding authors' and reviewers' identities wherever possible. Authors should take care to remove all pointers to their own identity or to that of their institution.

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