

INSTRUCTIONS TO AUTHORS

1 Scope

Proceedings series A is published monthly. It contains original papers on any aspect of mathematical and physical sciences, including chemistry and engineering and papers of an interdisciplinary nature. The normal maximum length is 25 printed pages (about 15000 words). Short papers ('Rapid Communications') are especially welcome (up to 10 printed pages; for example, equivalent to about 5000 words and 3 figures), and if accepted are normally published within three months of receipt at the Society. These should contain reports of completed work; preliminary reports ('letters') are not encouraged.

2 Submission

Submitted papers must not have been published previously, nor be under consideration for publication elsewhere. In order to give the Royal Society authority to deal with matters of copyright, authors will be asked to assign to the Society the copyright in any article published in the journal. In assigning copyright, authors will not be forfeiting the right to use their original material elsewhere subsequently. This may be done without seeking permission and subject only to normal acknowledgement to the journal. However, it would be appreciated if authors would inform the Society in this event. The Society is concerned to preserve the integrity of the work of those publishing in its journals and to avoid misrepresentations caused by selective quotation of texts or by the redrawing of illustrations. Accordingly, where copyright has been assigned to the Society, it will give permission for a figure to be reproduced without reference to the original authors *only* if the figure will be reproduced photographically in full with the complete original legend. Requests for reproduction of partial texts or redrawn figures will always be referred to authors, as will any doubtful cases. Requests for facsimile reproductions of complete papers will not be referred to authors.

Papers may be submitted either (i) direct to the Editorial Office, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, or (ii) to a Regional Editor of the journal. Three copies (double-sided) of the typescript (and of any figures, together with original drawings and prints) are required. The extra copies of any photographs should be prints rather than photocopies. Authors should include details of their address, and their telephone, fax and e-mail numbers.

When sending their papers authors may, if they wish, suggest the names of referees, but with the understanding that such suggestions will not necessarily be adopted. Authors are invited to say if they wish their paper to be treated as a Rapid Communication if it is judged to be of appropriate length.

3 Copy

Papers should be clearly typewritten, **with double spacing throughout**, on one side of the paper only, with a margin of at least 3 cm all round; the sheets should be serially numbered and **securely clipped together**. Typescripts must be carefully corrected by authors before being sent in. Spelling should conform to the preferred spelling of the *Shorter Oxford English Dictionary*. Footnotes should be avoided.

4 Title, Abstract

The title should be as concise as possible and should be typed on a separate covering sheet which should also bear the names of the authors and their affiliations and addresses. Where the title is long, a short title suitable for page headings should also be indicated. Each paper must be accompanied by an abstract, which should not exceed 5% of the length of the paper.

5 Sectional headings

Papers should be divided into sections, described by short headings. Sections should be numbered and, when necessary, reference should be made to them in the text by use of the section sign (§) with the number, e.g. see §4. Subsections should be lettered (*a*), etc., and sub-subsections numbered (i), etc.

6 Units and symbols

As far as possible the recommendations contained in *Quantities, units, and symbols* (1975, The Royal Society, £2.50) should be followed; in particular the International System of Units (SI) should be used whenever it is practicable to do so.

Special care is necessary in differentiating between handwritten symbols of comparable shape, e.g. *V v ν, w W, s S, p ρ P, T τ*. Marginal indications and differential underlinings should be used where necessary, the normal conventions being followed where applicable, e.g. $\sim\sim$ to signify bold characters. This is required for the printer's information even if the typescript has been prepared on a printer that implements such typographical distinctions.

Organic chemical formulae should be labelled by means of (unbracketed) bold arabic numbers.

7 Illustrations

The author's name should be written on the back of all illustrations, and the number of the figure should also be shown there. Figures should be numbered in one sequence throughout the paper.

The position of each illustration should be clearly marked in the typescript thus:

Figure 2 near here

Line drawings

Long descriptions should appear not on the figures themselves but, much more conveniently for the printer, in the legends. Any labelling that is necessary for the understanding of a figure, e.g. the differentiation of curves, should be indicated lightly in pencil on the original drawings and exactly the same labelling should be inserted carefully in ink on the duplicate copies.

Where a graph is the subject of the illustration the description of the coordinates should be given on the duplicate copies.

All lettering of words should be in lower case except for proper names, where an initial capital should be used. Lettering for symbols should strictly follow the case and fount of type called for in the text. The printer's artist will insert these on the originals in a standard style of lettering and to a size to suit the reduction that will be made before printing. If an author is able to call on the services of an experienced lettering artist it is often preferable for heavily labelled figures, e.g. maps, to be completely lettered before submission. Adequate consultation between authors or their draughtsmen and the Publications Department (telephone 071-839 5561, extension 229) will help to ensure satisfactory results. A leaflet on the preparation of illustrations for publication is available from the Publications Department.

Legends

These should be typed with double spacing on a separate sheet at the end of the paper and should state concisely the points that the author wishes the reader to notice.

Figure legends should follow the style of presentation of information given below.

Figure 1. The course of oxidation of 2-methylpentane at 2.0 MPa and 800 K. (a) Non-sampling run: curve 1, pressure; curve 2, light transmission at 265 nm. Point A is the end of compression, B is the cool-flame reaction and C is the hot ignition. (b) Sampling run: curve 1, pressure; curve 2, light transmission at 265 nm.

Photographs

When it is essential to include photographs in a paper they should be carefully chosen to make the most efficient use of the space required. The area covered by the photographs should be restricted to the subject in question, or to a *minimum* representative area in photomicrographs, etc. This enables the photograph to be reproduced at the largest possible scale. The text area available in *Proceedings* series A is 212 mm × 135 mm.

Authors should supply unmounted glossy prints marked on the back with the author's name and the number of the figure and with top and bottom indicated. When lettering has to be inserted a rough set should be provided with the lettering clearly marked.

Colour figures will be published on scientific merit but authors will be invited to make a financial contribution to the extra printing cost.

8 Tables

Tables, however small, should be numbered in arabic numerals and referred to in the text by their numbers (e.g. 'see table 3'), because it may not be possible to print a table in its immediate context.

The position of each table should be indicated as in the following example:

Table 3 near here

Table headings should be brief, and will be set in italic print. Column headings should be in lower-case lettering except for the capital initial letters of proper names. The units of measurement and any numerical factors should be placed unambiguously at the head of the column, e.g. F/MHz , $10^{28} \sigma/\text{m}^3$ or $q/(\text{kJ mol}^{-1})$.

9 References

References to the literature cited must be given in double-spaced typing, in alphabetical order at the end of the paper. They should be arranged as follows.

1. Name(s) with initials of the author(s).
2. Year of publication of the paper or book.
3. The title of the paper.
4. The title of the periodical, abbreviated according to the principles of the *World list of scientific periodicals* (4th edn, 1963–5), underlined to indicate italics. A booklet entitled *Short titles of commonly cited scientific journals* is available from the Royal Society at £2.00, including postage. When the correct abbreviation for a title cannot be deduced it should be given in full.
5. Volume number underlined thus 24, preceded where applicable by the series number in parentheses.
6. First and last page numbers of the paper.
7. When the title of a book is cited the place of publication, the name of the publisher, and the number of the edition should be given.

The reference to a paper will then be printed as in the following examples:

Hill, A. B. 1953 The mechanics of active muscle. *Proc. R. Soc. Lond.* B **141**, 104–117.

Taylor, G. I. 1930 Recent work on the flow of compressible fluids. *J. Lond. math. Soc.* **5**, 224–240.

and to an article in a multi-author work or to a book:

Penrose, R. 1979 Singularities and time-asymmetry. In *General relativity: an Einstein centenary survey* (ed. S. W. Hawking & W. Israel), pp. 581–638. Cambridge University Press.

Marchbanks, R. M. 1975 Biochemistry of cholinergic neurons. In *Handbook of psychopharmacology* (ed. L. L. Iversen, S. D. Iversen & S. H. Snyder), vol. 3 (*Biochemistry of biogenic amines*), pp. 247–326. New York and London: Plenum Press.

References in the text are made by giving the author's name and date of publication, e.g. (Brown 1965). Such reference is usually placed in parentheses unless the name of the author is part of the sentence, in which case the year only is required in parentheses. Where two or more papers published in any year by the same author are cited, each paper should be distinguished by a small letter, *a*, *b*, etc., placed after the date, e.g. (Brown 1965*a*). Where there are more than

two authors to a paper it should be cited thus: (Brown *et al.* 1978) unless there are good reasons for including all the authors, up to five, at the first mention. All the authors should, however, be included in the list of References. References to books should be to the latest editions.

References by serial number (e.g. A. N. Other (8)) are not permitted.

10 Proofs

Great care is necessary in checking proofs to ensure that all misprints are detected. Authors should note that systematic emendations may have been made to their typescript in accordance with the normal style of the Society's journals. If any changes are necessary to proofs every effort should be made by substituting matter of similar length to avoid extensive rearrangement. Authors are warned that they are liable for the cost of excessive alterations to their proofs.

October 1993

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† These papers were produced from the authors' disks by the T_EX typesetting system.