

Notes for the guidance of authors submitting papers for the Mineralogical Magazine.

The Mineralogical Magazine publishes in English the results of original scientific research in the fields of mineralogy, geochemistry, and petrology, including extra-terrestrial materials. Membership of the Mineralogical Society is not a prerequisite but a contribution towards the page charges will generally be sought from non-members whose work is published.

These instructions relate to the type-set section of the Mineralogical Magazine\* and failure of authors to comply will result in publication delays. These instructions should be read completely before preparing a typescript for submission and a recent number of the Magazine should be consulted to ensure that the typescript is prepared in the correct style. The instructions given here are brief because they relate only to the format and needs of the Magazine. Some excellent texts deal with more general aspects of authorship, including the use of English, nomenclature, symbols and abbreviations: we recommend Writing Scientific Papers in English, An ELSE-Ciba Foundation Guide for Authors (Maeve O'Connor and F. Peter Woodford, Elsevier, 1976).

The Concise Oxford Dictionary will be taken as standard for spelling and H.W. Fowler's Dictionary of Modern English Usage (2nd edition, revised by Sir Ernest Gowers, D.U.P., 1965) for grammar and punctuation. Also useful are Sir Ernest Gowers' The Complete Plain Words (2nd edition, revised by Sir Bruce Fraser, H.M. Stationery Office, 1973 and Pelican Books, 1973); Quantities, Units and Symbols (The Royal Society, 1975) and General Notes on the Preparation of Scientific Papers (3rd edition, The Royal Society, 1974).

Papers should be written in a free literary style but should be as concise as is consistent with clarity. Unnecessary detail should be avoided and it may be helpful to place certain data in the Miniprint section of the Magazine. Publication delays and much extra work for the editors often result from lack of attention to proper presentation and it is useful to persuade a colleague who is not a specialist in the subject under discussion to read the paper before it is submitted and to criticise it for style as well as for content.

Normally a paper should not exceed 12,000 words and most will not approach this length. It should be in its final form when submitted and modifications are not normally possible after acceptance for publication. The editor should be consulted at once if serious error is noticed after submission of the typescript.

Conditions of acceptance. Papers and notes will only be published if they have not previously been published and will not be published in substantially the same form elsewhere; circulation of Preprints is considered to be publication. Copyright of all papers accepted for publication shall be transferred to the Society. Reproduction of authors' summaries is authorized. Authors receive 50 offprints free, in consideration of which they must sign the copyright agreement form sent with the "in Press" notification.

Manuscripts should be submitted in duplicate. They must be typed with double line-spacing throughout and with ample (1½ inch) margins. All pages must be numbered and a gap of about two inches should be left at the top of the first page, above the title. The text should be typed in lower case throughout except for initial letters of personal and place-names, and this includes all headings and sub-headings. Items to be printed in italics should be underlined in pencil but no other underlining should be used. Authors' alterations should be made in the text and not in the margins. The title should be as brief as is consistent with a clear indication of the content of the paper. It should be followed by the names (with initials) of the authors and by their addresses.

Abstract. An abstract of not more than 200 words, and preferably less, must accompany the manuscript. This should state the principal results of the work, conclusions drawn and new mineral names proposed. New data presented should be mentioned.

\*Separate instructions are available from the Society for the presentation of data and full papers for Miniprint.

Short communications. Short articles (generally less than about 1500 words) and important corrections may be published. These items require the same format as the longer papers but no summary is required; there should generally be no sub-headings; figures can only be included at the expense of text; the author's name goes at the end of the note, to the right, and his address at the end and to the left.

Headings. Normally a maximum of three levels of sub-heading is used. If few headings are required they should be at the lowest level, i.e. set to the left hand side, on line with the text and underlined for italics. If sub-headings of a higher level are required these should be on a line by themselves, centred and underlined for italics. Major headings should be centred but not underlined. All headings should be typed in lower case.

Footnotes should be inserted on the same page as the passage to which they relate between parallel lines, and as close to the passage as possible. References to footnotes should be numbered sequentially through the typescript. Footnotes are very expensive to print and should be avoided whenever possible. Explanatory and paratextual material can be incorporated immediately before the list of references as numbered Notes and referred to in the text, e.g. (see Note 1).

Mineral names should follow The Chemical Index of Minerals (M.H. Hey, 2nd Edition, London, British Museum (Nat. Hist.), 1955, with appendices, 1963 and 1974.) Note especially: grossular, spessartine, sahlite, pyrrhotine, baryte. New mineral names will not be finally accepted for publication until they have been approved by the Commission on New Mineral Names of the International Mineralogical Association. Papers including new names may be accepted provisionally pending the Commission's decision. Names of rocks and minerals should not be written with initial capitals.

Place names should not be abbreviated. It should always be possible to find them in a good atlas unless the full locality is given in a paper to which reference is made, or where the reference is of minor importance.

Data should not be repeated from the literature unless it is only to be found in inaccessible journals and it is discussed in detail in the text. It may be appropriate for papers on rare or obscure minerals to contain a concise summary of available data. The publication of new data is encouraged and details for the preparation of tables are given below. Large quantities of data may be published in Miniprint and this may include essential petrography as well as analytical or X-ray data. X-ray powder data will normally only be published for new minerals, for new compositions in an isomorphous series, or when they are an improvement on those already in the PDF. Where powder data are used for identification, a statement that they are very similar or identical with those in the literature is sufficient.

Numbers. Large numbers and very small numbers should either be quoted in the form of powers or the digits should be grouped in threes but without the insertion of commas. With decimal numbers less than 1 the zero must not be omitted.

Half-tone illustrations and figures should not be used unless absolutely necessary. The principal criterion for their acceptance is the amount of important information they convey. Many illustrations can be replaced by a short sentence in the text. On the other hand, a single line drawing can often summarise the data in an extensive table which can then be appended in mini-print. When photographic prints or other half-tone material are submitted, care should be taken to see that the detail they are intended to show will be visible after reduction. X-ray photographs are particularly difficult to reproduce. Prints should be trimmed properly; the inclusion of areas of no special interest often leads to a degree of reduction that spoils the illustration. Material that carries no indication of scale within itself should be marked with the degree of magnification on the back. Photographs should not be mounted, indeed the blockmaker prefers them unmounted. Their number, size and arrangement may be changed following discussion with the editor. The originals of all illustrations must not exceed 11" x 16". Colour prints are very expensive, but if the author is prepared to pay for

them a quotation will be obtained.

The standard of the drawings from which figures are to be reproduced must be that of a skilled draughtsman. Authors may therefore find it useful to submit rough drafts in the first place, and have the final versions prepared after the number and size of the figures has been decided in consultation with the editor. Due consideration should be given to the fitting of figures into the Magazine page. As the Magazine is now printed in double columns, figures may be designed to fill the full page width of  $5\frac{1}{2}$  inches or the single-column width of  $2\frac{5}{8}$  inches (both on reduction). The height should not exceed 8 inches on reduction (including the title and legend). Two or more figures may be set across the two columns. They may be of different widths but should be of nearly the same height. Originals should be about twice the size they will be printed. Letters and numbers will not be legible if they are less than 1 mm high after reduction; an acceptable line thickness is 1/10 mm for thin lines, 1/5 mm for thick lines and up to 2/5 mm at the very most for thicker lines, all after reduction. Uniformity of line thickness and of the style and size of letters adds greatly to the appearance of a paper, and a uniform degree of reduction will help a great deal in this respect. It may also reduce the cost of reproduction. Figures should be drawn in Indian or other fully black ink, on white board, tracing cloth or matt-plastic tracing materials. Feint blue-lined graph paper is acceptable provided it is free from creases and will lie flat. Titles should not normally be included on figures, but should form part of the explanatory caption, which will be printed with the figure. Captions should be provided for all figures except self-explanatory maps, and should be collected on a separate sheet of typescript at the end of the paper.

References should be supplied typed with double line spacing. If appropriate, reference should be added to Mineralogical Abstracts in the form: (M.A. 2-27). Experience has shown that in many typescripts the references have not been checked. No reference should be cited that has not been seen by the author, unless it be distinguished by square brackets and the source seen is quoted: Smith (J), 1891. Proc. Roy. Soc. Tasmania, 1, 33 ; abstr. in Zeits. Kryst. Min., 1893, 12, 762. References are arranged alphabetically although some historical papers may give them in chronological order with the date first. For several publications of an author with different co-authors the following order must be followed: publications of the author alone, in chronological order; publications of the author with a single co-author in alphabetical order of co-authors; publications of the author with more than one co-author in chronological order (as they are cited in the form "Jones et al" in the text). Authors must check all references against the original and against the entries in the text.

The inclusion of the titles of papers is optional but if these are given they should be exactly as in the original, and without quotation marks. A translation should be appended in square brackets if the reference is not in one of the Teutonic or Romance languages. References that have gone through many editions under different editors should be referred to under the original author. (e.g. Dana's System of Mineralogy).

The titles of periodicals cited should either be given in full or abbreviated following B.S. 4148 Part 2, 1975 'The abbreviation of titles of periodicals pt. 2, Word Abbreviation List', except that diacritical marks are to be retained as are the full stops after abbreviated words. Journal contractions include: Acta Crystallogr., Am.J. Sci., Am.Mineral, Bull.Soc.fr.Mineral. Crystallogr. (note, vols. 9-71 omit Crystallogr. and vols. 1-8 are Bull.Soc. Miner.Fr.), Carnegie Inst. Washington Yearb., Can.Mineral., Clay Mineral.(Bull.), C.R. Acad.Sci.Paris, Dokl.Akad. nauk.SSR, Contrib. Mineral.Petrol. (vol.12 onwards, earlier, Beitr.Mineral.Petrogr.), Econ.Geol.,Geochim.Cosmochim.Acta, Geol.Soc.Am.Bull. (or Mem.), J.Geol., J. Geophys.Res., J.Sediment.Petrol., Meddels. Grønland, Mineral.Mag., Mineral.Abstr., Naturwiss., Neues Jahrb.Mineral., Abh. (vol. and page) or Monatsh. (page, not Heft). Proc.R.Soc., Q.J. Geol.Soc., Tschemmaks Mineral. Petrogr.Mitt., U.S. Geol.Surv.Bull., Z.Kristallogr. (1920 and earlier, Krystallogr.), Zap.Vses. mineral. Obshch. Part numbers should only be quoted if they are individually paginated.

Some examples of the style now required for references in the Mineralogical Magazine now follow:-

## REFERENCES

- Agrell, S.O. (1950). Am. Mineral. 35, 1080.  
 ——— (1965). Mineral. Mag. 34, 1-15 [M.A. 17, 77]  
 Black, P.M. (1964). Igneous and Metamorphic rocks from Tokatoka, Northland. M.Sc.thesis, Univ. of Auckland.  
 Norrish, K. and Hutton, J.T. (1969). Geochim. Cosmochim. Acta, 33, 431-53 [M.A. 69-2795].  
 Pabst, A. (1934). Z. Kristallogr. 89, 514-7 [M.A. 6, 44] .  
 ——— and Sharp, W.N. (1973). Am.Mineral. 58, 116-27 [M.A. 73-2912].  
 ——— Sawyer, D.L., and Switzer, G. (1963). Ibid. 48, 485-510 [M.A. 16, 545].  
 Tilley, C.E. (1952). Am. J. Sci., Bowen Vol., 529-45 [M.A. 12, 151].  
 ——— and Harwood H.F. (1931). Mineral. Mag. 22, 439-68.

Mathematical expressions are often written in a form unsuitable for printing. Short, simple expressions and equations should be set on line with the text unless they are numbered, when they should have lines of their own. Fractions should normally be written with the solidus (/), and all algebraically necessary brackets must be used. A common error is to write Fe/Fe + Mg for Fe/(Fe + Mg). If complex expressions are needed authors are asked to consult 'Notes for Authors' of the Institute of Physics (1964, pp. 16-18) or the Printing of Mathematics, T.W. Chaundy, P.R. Barrett, and Charles Batey, O.U.P., 1954.

Chemical formulae. Note that a subscript number outside a parenthesis multiplies everything inside the parenthesis. Thus  $(\text{Fe}_{1.5}\text{Mg}_{0.5})_2$  means  $\text{Fe}_3\text{Mg}_2$ . To indicate  $\text{Fe}_{1.5}\text{Mg}_{0.5}$  one can write  $(\text{Fe}_{1.5}\text{Mg}_{0.5})_{\times 2.0}$ . Ionic charge is indicated by a superscript plus or minus sign following the symbol for the ion; for multiple charges an Arabic superscript numeral precedes the sign, e.g.  $\text{Na}^+$ ,  $\text{Fe}^{3+}$ .

Hyphens often cause trouble. A brief and helpful account of their use is given in 'The Complete Plain Words'. Hyphens are necessary between the members of a compound adjective ('The unit-cell contents', but 'The unit cell contains', and 'High-temperature polymorph', but 'Crystallization at high temperature'). Double-barrelled names or adjective-noun pairs cannot be hyphenated. ('the boundary between New York and New Jersey' not 'the New York-New Jersey boundary'). In lists of minerals in parageneses and associations a hyphen with spaces before and after will be printed as an en-rule.

Diacritical marks (accents, umlauts, etc.) should never be omitted, nor should the German modified vowels be written as ae, oe, and ue, unless they are so written in the original. Both forms are used in personal names.

Symbols, units and abbreviations. The International System of Units (SI) is to be used following the practice laid down in 'Quantities, Units and Symbols' (The Royal Society, 1975). Certain widely used and convenient derived or special units are retained: e.g., centimetre, angstrom, litre, calorie and kilocalorie, bar and kilobar. The micron is replaced by the micrometre and the millimicron by the nanometre. Millions of years are denoted Ma.

Sides and angles of the crystallographic unit cell are denoted a, b, c, α, β, γ, (not a<sub>0</sub>, b<sub>0</sub>, c<sub>0</sub> etc.) and of the reciprocal cell a\*, b\*, c\*, α\*, β\*, γ\*. Co-ordinates of atoms in a crystal structure are given as fractions of the cell sides: x, y, z.

Crystallographic axes are also labelled  $a$ ,  $b$ ,  $c$ , (in the hexagonal systems  $a_1$ ,  $a_2$ ,  $a_3$ ,  $c$ ). The Miller axes should be used for crystals having a rhombohedral lattice. The Hermann-Mauguin symbols should be used for the 32 crystal classes and the 230 space-groups; the Schoenflies symbols may be added if desired. If the space group has been newly determined or re-determined, the systematic absences should be cited as well as the space-group symbol.

All x-ray spacings should be given in true Å; when quoting from old data, care should be taken to ascertain whether the units are true Å or kX (Siebahn units). Determinants are enclosed in single vertical parallel lines and matrices in brackets. Face-indices are enclosed in parentheses ( ), form-indices in braces { }, zone-indices in brackets [ ], a form of zones in carets < >, while x-ray diffractions are not enclosed. When hexagonal indices are given the third index should not be omitted and where one index exceeds 9 it should be written as e.g. 4.6.10.0. Longitudes and co-latitudes, measured on the two circle goniometer are  $\phi$  and  $\rho$ .

Refractive indices and principal axes of the indicatrix are  $\alpha$ ,  $\beta$ ,  $\gamma$ , (biaxial crystals)  $\epsilon$ , and  $\omega$  (uniaxial crystals) and  $n$  for isotropic material. The true optic axial angle is  $2V\alpha$  or  $2V\gamma$  not  $2V+$  or  $2V-$ . This angle measured in air is  $2E$  and in an immersion medium,  $2H$ . Dispersion of the angle is written  $v > r$  meaning the angle for violet is greater than that for red. Extinction angles are preferably recorded as for example  $\gamma$ :  $[001] = 10^\circ$  in the obtuse angle  $\beta$ ; meaning, the extinction angle of a monoclinic crystal measured on (010). Extinction angles of monoclinic crystals on other than (010) or of anorthic (triclinic) crystals are preferably cited as, for example:

'(110),  $\gamma$ ':  $[001] = 10^\circ$  in the obtuse angle  $[001] : [110]$

Normative symbols should be those defined by the authors of the normative system, e.g. Cross, Iddings, Pirsson and Washington (J. Geol., 1902), but where the norm is less familiar the abbreviations should be defined. Other widely used contractions may be employed but ad hoc contractions should have at least three letters.

Acceptable abbreviations for the rare earths are RE or Ln (for the lanthanons, i.e. Yb-La inclusive but excluding Y). The latter has some advantage over RE, which may or may not include Y.

#### Other abbreviations and symbols

<u>P</u> : pressure	$I/I_0$ relative intensity
<u>V</u> : volume	$d$ interplanar spacing
<u>T</u> : temperature	Mo-K $\alpha$ , radiation
<u>D</u> : density	$\perp$ perpendicular to
	// parallel to

p. = page	<u>et al.</u> = et alii = and others
pp. = pages	etc. = etcetera = and other things
c. = circa	i.e. = id est = that is
calc. = calculated	e.g. = exempli gratia = for example
meas. = measured	cf. = confer = compare
obs. = observed	
vs. = versus	

Tables. The typesetting of tables, especially if heavily edited, is expensive and authors are requested to pay particular attention to their design and production. They should be self-explanatory as far as is possible and should have a title and an explanation. They should be designed to occupy the minimum area consistent with clarity and can often be much simplified by placing single or limited items of data in the explanation. Except for tables of a few lines only, these should be supplied as camera-ready-copy. Instructions for camera-ready-copy are available from the Society. Follow the style used in current issues of the Magazine in drafting tables and always consider carefully the space they will occupy on a printed page. A single column contains 40-48 characters and a full page-width has 90-96 characters.