

GUIDE FOR AUTHORS (Revised—April 1976)

Policy. The *Journal of Chemical and Engineering Data* is a quarterly directed to the publication of experimental or, in some cases, derived data in sufficient detail to form a working basis for applying the information to scientific or engineering objectives. Experimental and computational methods should be referenced or described in sufficient detail to permit duplication of the data by others familiar with the field. Published or standardized procedures and their simple modifications need not be described, but a readily available reference should be cited. The data should be presented with such precision that information may be easily obtained from the paper within the stated limits of uncertainty of the experimental background. Estimates of uncertainty in measured data should be defined and reported whenever possible. Data obtained should be compared with all evaluated and/or reliable published literature data. For most studies, a tabular or a mathematical description is preferred to the use of graphical representation. Graphical depiction should be used primarily to portray the effect of the independent variables upon the behavior if absolutely necessary. A measure of statistical agreement of smoothed data with the experimental background should be included. Whenever an extensive set of symbols is used, a glossary of symbols and values of all auxiliary constants is recommended. The emphasis in this Journal, however, is primarily on data, not on the theoretical or mechanistic interpretation of data as is so often done in manuscripts on chemical kinetics.

Scope. The subject matter of the Journal may be conveniently divided into four categories, each covering a specific portion of the technical data of interest in the fields of chemistry and chemical engineering. The four categories are pure substances; mixtures; theoretical as it primarily relates to obtaining useful data or new or better correlation procedures; and data related to characterization or synthesis of new compounds.

Experimental or, in some cases, derived data relating to pure compounds or well-defined (or characterized) mixtures are included. The data are usually reported for a range of states. Quantitative results in the fields of phase equilibria, thermal or material transport, thermodynamics, or any physical property data such as refractive indices, viscosities, density, solubilities, etc., are examples of the subject matter. The source, purity, and characterization of the materials studied should be clearly defined. Extensive computer printout tabulations that result from well-known methods of calculation of effects of primary variables will not be considered for publication, but may be deposited with the ACS supplementary material service. Such data must conform to the specifications for supplementary material given below.

Theoretical manuscripts based on published experimental data will be considered. Manuscripts which are devoted to new methods or substantial improvement of existing methods of estimating or correlating properties of pure substances or carefully defined mixtures of pure substances will be considered. This would also include new or more precise methods of internal consistency calculations. Such manuscripts would normally contain evaluated published experimental data which are utilized to show how the new method of predicting or correlating makes a substantial and tangible contribution for future use of such data or future acquisition of such data.

New Compounds. Manuscripts relating primarily to synthesis of new compounds or to new or novel methods of synthesis of known compounds will be accepted. The details of the synthesis should be brief but in sufficient detail to be of value to an informed user and should be supported by the necessary physical property data needed to identify the compound. This physical property data may be pertinent IR or UV data (not the entire spectrum) densities, mp, bp, refractive index, etc. The manuscripts should be confined entirely to the synthesis; historical data or previous related work customarily found in the introduction should be eliminated or at most confined to one or two pertinent statements relating to the content of the manuscript. A satisfactory introductory statement would be one revealing faulty published data, or one related to yields, or substitution for dangerous or explosive, or sensitive material used in a published method of synthesis. Manuscripts based on experiment to aid in the identification of compounds will also be considered for publication.

The following manuscript preparation guide is published to aid authors in writing and editors in expediting review and publication.

Title. Use specific and informative titles. A main title and a subtitle are preferred to one lengthy title.

Abstract. Provide an abstract for all papers (preferably not to exceed 16 to 20 typewritten lines) presented in a findings-oriented format—that is, one in which the first sentence is a succinct, informative summation of the most important results and conclusions. The remainder should highlight pertinent supporting details, related findings, type or classes of compounds investigated, and methods used. The abstract should be self-contained for direct use in *Chemical Abstracts*.

Authorship. Be consistent in authorship designation. Given name, initial of second name, and last name are generally adequate for correct identification. Omit titles. Give complete mailing address of place where work was conducted. If current address is different, include it in a footnote on title page of article. Indicate by an asterisk author to whom all correspondence should be sent.

Text. Give essential information in a concise fashion. Avoid wordiness and unnecessary detail. Avoid unnecessary duplication in text, tables, and graphs. Incorporate footnotes in text.

Tables. Raw Data. *JC&ED* exists to publish actual data. However, the author must limit the entries in a table to a useful number. For example, multiple measurements can be expressed as a mean, with a statement giving deviation. The authors are encouraged to submit unsmoothed experimental data if, in the authors' opinion, such information enhances the lasting value of the contribution.

Smoothed Data. Smoothed data tables are published if they cannot be expressed as an equation, and if they serve a purpose beyond that of the raw data. For example, tables of raw thermodynamic data are usually very difficult to use. Entries in smoothed data tables should be kept to the minimum required for accurate interpolation.

Figures and Graphs. *JC&ED* frequently publishes graphs of data even when they repeat tables. When data points are shown on such graphs, they should be unsmoothed, so as not to give a false impression of experimental accuracy and curve fit. Charts should be in such form as to be useful in engineering calculations. Whenever possible they will be published in large enough size to be read to at least ordinary engineering accuracy. Should space become a critical problem, we would choose tables in preference to graphs to provide greater accuracy.

Supplementary Material. Occasionally manuscripts include extensive tables, graphs, spectra, mathematical material, or other "supplementary material" which is of value primarily to those readers who need all of the data or all of the detail. The journals of the American Chemical Society have instituted a policy of including such supplementary material in the *microfilm* editions which are becoming available in many libraries. Subscribers to the microfilm editions also receive the supplementary material on microfiche cards as each issue of a journal becomes available. Alternatively, supplementary material (on microfiche only) is available on a subscription basis or may be obtained as photocopy or microfiche at nominal cost. The supplementary material is abstracted and indexed by "Chemical Abstracts."

Authors are encouraged to make use of this resource in the interests of shorter articles as well as clearer and more readable presentation. Supplementary material for inclusion in the microfilm edition should accompany each copy of a paper at the time of its original submission to an editor. Authors' attention is directed to the following specifications. (1) Material to be deposited should be identified as to content, manuscript title, and author, and must be in a form easily handled for photoreproduction. (2) The paper on which the supplementary material is displayed should preferably be $8\frac{1}{2} \times 11$ in. in dimensions. Maximum acceptable paper size is 17×11 in. (3) Original typed sheets are preferable to carbon or Xerox copies. A good clear, contrasty copy is acceptable, however, if the individual characters are clean. Likewise, computer printouts are acceptable if the individual figures are each clearly legible. (4) Minimum character size: in no case should the size of the smallest character on a sheet of supplementary material be less than 1.5 mm. (5) Figures and illustrative material should be matte prints. (6) Refer to the supplementary material in the text where appropriate and include a paragraph at the end of the paper indicating the nature of the supplementary material and ordering information for obtaining copies of the material. An example follows.

Supplementary Material Available: Tables I, II, and V (33 pages). Ordering information is given on any current masthead page.

Nomenclature. Follow the nomenclature recommendations found in publications of the ACS Committee on Nomenclature or the appropriate international organizations. If used, define trade names at first mention; use initial capital only and no accompanying footnote.

Whenever symbolic nomenclature is employed, include a "Nomenclature" section at end of paper, giving dimensions and units for all terms. Write out names of Greek letters and special symbols in margin of manuscript at point of first use. Some typed letters of the alphabet used to represent numbers can be misinterpreted—e.g., "el" and one, or "oh" and zero. Clearly identify to avoid ambiguity.

Equations and Formulas. Write all equations and formulas clearly and number equations consecutively. Place superscripts and subscripts accurately. Complicated structural formulas, including those containing benzene rings, must be submitted as drawings.

Safety. Authors are requested to call special attention—in both their manuscripts and their correspondence with the editors—to safety considerations such as explosive tendencies, special precautionary handling procedures, and toxicity.

Acknowledgment. Include only necessary credits in the acknowledgment section at the end of text. Include financial support in a note after Literature Cited.

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ed page for journal papers. Payment of such a charge in connection with publication of the results of sponsored research is expected. Such payment is *not* a prerequisite to publication; the editor's decision to publish is made independently of page charge considerations.

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