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DESCRIPTION

The *Journal of Chemical Thermodynamics* exists primarily for dissemination of significant new knowledge in experimental **equilibrium thermodynamics** and transport properties of **chemical systems**. The defining attributes of The Journal are the quality and relevance of the papers published.

The Journal publishes work relating to gases, liquids, solids, polymers, mixtures, solutions and interfaces. Studies on systems with variability, such as biological or bio-based materials, gas hydrates, among others, will also be considered provided these are well characterized and reproducible where possible. Experimental methods should be described in sufficient detail to allow critical assessment of the accuracy claimed.

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The Journal welcomes review articles in the field of chemical thermodynamics but prospective authors should first consult one of the [Editors](#) concerning the suitability of the proposed review.

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To find out more, please visit the Preparation section below.

INTRODUCTION

General

Please consult this Guide for Authors for further details on the requirements for submitting your paper to *The Journal of Chemical Thermodynamics*. The guidelines described in this document, as well as those listed in the JCT Style Notes, should be carefully adhered to ensure high-quality and rapid publication of your manuscript.

Aims and Scope

The Journal of Chemical Thermodynamics exists primarily for dissemination of significant new measurements in experimental thermodynamics and thermophysics including bio-thermodynamics, calorimetry, phase equilibria, equilibrium thermodynamic properties and transport properties.

The Journal publishes work relating to gases, liquids, solids, mixtures, solutions, interfaces, including polymers and biological materials, provided that the systems studied are characterised and reproducible.

The defining attributes of The Journal are the quality and relevance of the papers published. Authors are expected to describe their methods and present their results in sufficient detail to allow critical assessment of the accuracy claimed.

Further, The Journal welcomes theoretical papers reporting on thermodynamics using molecular theory or modeling, provided the relationship with experiment is clearly described. Review articles will also be considered but prospective authors should first consult one of the Editors concerning the suitability of the proposed review.

Experimental measurements of a routine nature or those conducted on uncharacterised materials are not accepted.

The Journal of Chemical Thermodynamics, along with other journals in the field, cooperates with the Thermodynamics Research Center (TRC) of the National Institute of Standards and Technology (NIST) for the purpose of ensuring the quality of published experimental data. This collaboration relates to articles that report experimental measurements falling within the scope of the NIST ThermoML Archive (<http://www.trc.nist.gov/ThermoML.html>) and has two elements. First, upon submission of an article, NIST will provide a literature report to the authors and reviewers containing relevant references from the NIST Data Archive. Second, NIST will provide a data evaluation at the end of the review process immediately prior to acceptance of the article. This data evaluation will compare the reported experimental data with that existing in the NIST Data Archive and highlight any unexpectedly large discrepancies such as those arising from typographical errors. In order to facilitate the necessary electronic data capture, the experimental results and their uncertainties must be tabulated as described in this Guide (see also <http://trc.nist.gov/JCT-Support.html>).

For more information, please read the [Editorial](#)

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No.

Stop here - it is only to report experimental data.

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State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

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Results should be clear and concise.

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This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

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Style Requirements

Symbols, Units and Equations

1. Symbols and terminology must follow the recommendations of IUPAC (see: Quantities, Units and Symbols in Physical Chemistry, third ed.; RSC Publishing, Cambridge 2007, ISBN 0 85404 433 7).
2. SI units should be used throughout.
3. The algebra of quantities must be followed. Accordingly, the symbol for a physical quantity represents a pure number multiplied by a unit or combination of units.
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5. The symbol for a physical quantity must appear in italic or sloping type, even when the symbol appears in a subscript or a superscript. Conversely, symbols not designating a physical quantity should appear in Roman or upright type: e.g. YJCHT_ST_1.JPG represents the perfect-gas molar heat capacity (italic 'p' for pressure, Roman 'm' for molar).
6. Symbols should be defined in the text when they are first used, and also in figure and table legends.
7. Equations must always be dimensionally consistent. Equations used to correlate experimental data may be best in a dimensionless form.

Example

YJCHT_ST_2.JPG

8. The arguments of logarithmic, exponential and trigonometric functions must be dimensionless: e.g. $\ln(p/\text{MPa})$ or $\ln(p/p_0)$ but not $\ln(p)$.
9. Equations, when displayed, should be centred and numbered, flush right, in parenthesis eg

YJCHT_ST_3.JPG (1)

10. Always puncture after an equation to place it correctly within the sentence that contains it (see example above).
11. Wherever possible set equation and expressions on a single line: e.g.: dp/dT not YJCHT_ST_4.JPG

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12. When reporting experimental results, the uncertainty of each measured quantity should be reported and combined in quadrature to obtain the uncertainty of any derived quantities (see <http://physics.nist.gov/cuu/>).
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14. Number figures consecutively in accordance with their appearance in the text.
15. Plot each figure in a full rectangular (or triangular) frame.
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22. Avoid the use of colour in graphs; data sets should be distinguished by symbol or line styles only. Exceptionally, essential colour illustrations may be included.
23. Similar figures should be plotted in identically-sized frames.
24. Triangular diagrams must be equilateral and must have correctly ticked, scaled and labelled axes on all three sides.
25. Include error bars where appropriate but only when they exceed the size of the plotting symbols.

Example figure and legend text

YJCHT_ST_5.JPG

FIGURE 1. (a) Densities ρ of pentafluoroethane at temperatures T : \square , saturated liquid; \bullet , saturated vapour; -----, saturated vapour and liquid calculated from Eq. (4). (b) Deviations of experimental saturated liquid densities ρ_1 from values ρ_{calc} calculated from Eq. (4).

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29. Footnotes may be cited using lower-case Roman superscripts (e.g. ^{a,b}). Define the footnotes at the base of the table.

30. The uncertainty of each tabulated quantity must be specified either in a footnote or, if variable, included in the table as an additional column (for further examples, see <http://trc.nist.gov/JCT-Support.html>).

31. Where experimental values of heat capacities are reported, tabulate the values as, e.g., $C_{p,m}/R$. In addition (but not as an alternative), a column of heat capacity values with units may be given: e.g., $C_p/(\text{J K. mol}^{-1})$.

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33. Missing entries in a table should be shown as blanks.

Example table and legend text

YJCHT_ST_6.JPG

Miscellaneous

34. All chemical samples must be identified by IUPAC systematic name and the following details should be provided: sample source, initial purity, method of purification, final purity (as used) and analytical method used to determine the purity. Preferably, all of these details should be provided in a table (see <http://trc.nist.gov/JCT-Support.html>).

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36. Use p^0 for the standard pressure and specify its value at first usage.

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38. Give lists of values as, e.g., $T/\text{K} = (300, 400 \text{ and } 500)$ or $T = (300, 400 \text{ or } 500) \text{ K}$ but not $T = 300, 400 \text{ and } 500 \text{ K}$.

39. Chemical depictions of electrochemical cells should be displayed and numbered with upper case roman numerals.

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