New Manuscript Submission and Review Procedures for Journals in the Field of Thermophysical and Thermochemical Properties

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In August of 2008, the Editorial Boards of the *Journal of Chemical and Engineering Data*, *Fluid Phase Equilibria*, *The Journal of Chemical Thermodynamics*, *International Journal of Thermophysics*, and *Thermochimica Acta* agreed to simultaneously implement a new process for the submission of original manuscripts that include experimental thermophysical and thermochemical property data. A requirement for submission of a manuscript describing properties always includes a literature search and comparison of the new results with previously reported values. Often, reviewers cannot make informed decisions regarding the manuscript because the authors have made only a minimal literature review and comparisons. It is an unacceptable burden to require reviewers to research previously published literature data to ensure a proper comparison has been made, and hence, determine the ultimate worth of the manuscript. To accommodate this, a new arrangement has been made with the Thermodynamics Research Center (TRC) of the National Institute of Standards and Technology (NIST). Specifically, thermophysical property data for systems reported in a newly submitted manuscript are captured at NIST with Guided Data Capture (GDC) software compared against the NIST SOURCE Data Archive using the dynamic-data-evaluation algorithms of the NIST ThermoData Engine (TDE) software. A report for each relevant article is provided by NIST to the Editors, who at their discretion, forward it to the reviewers and/or the authors. This new procedure is mandatory and operates by collaborative agreement with all Journals in this field, as noted above. The editors have concurred that, "this additional data review will substantially benefit the scientific and engineering communities because of the increase in quality and usefulness of the reported experimental data." Details of the implementation of this process at NIST will be described.