

# Physical and Chemical Reference Data

CODEN: JPCRBU

ISSN: 0047-2689

[jpcrd.aip.org](http://jpcrd.aip.org)

## Co-Editors

Donald R. Burgess, Jr. (NIST, Gaithersburg, MD)

Allan H. Harvey (NIST, Boulder, CO)

Robert L. Watters, Jr. (NIST, Gaithersburg, MD)

## Editorial Board

*Term ending 31 December 2008*

David G. Shaw (University of Alaska Fairbanks, Fairbanks, AK)

Daniel G. Friend (NIST, Boulder, CO)

*Term ending 31 December 2009*

Karl K. Irikura (NIST, Gaithersburg, MD)

Brian H. Toby (Argonne National Laboratory, Argonne, IL)

*Term ending 31 December 2010*

James S. Chickos (University of Missouri, St. Louis, MO)

Yuri V. Ralchenko (NIST, Gaithersburg, MD)

## Management Board

Robert L. Watters, Jr. (NIST), Mark M. Cassar (AIP)

**Editorial Staff at NIST:** Linda Diane Decker

(E-mail: [jpcrd@nist.gov](mailto:jpcrd@nist.gov); Tel.: 301-975-3774)

**E-mail Production Staff at AIP:** [jpr@aip.org](mailto:jpr@aip.org)

## Information for Contributors

**Submissions:** The Editor welcomes appropriate manuscripts for consideration as Journal articles or monographs. Potential contributors who are interested in preparing a compilation are invited to submit an outline of the nature and scope of the proposed compilation, with criteria for evaluation of the data and other pertinent factors, to: Editor, J. Phys. Chem. Ref. Data, National Institute of Standards and Technology, 100 Bureau Drive, Mail Stop 2300, Gaithersburg, MD 20899-2300, USA.

**Preparation:** Manuscripts submitted for publication must be prepared in accordance with *Instructions for Preparation of Manuscripts for the Journal of Physical and Chemical Reference Data*, available on request from the Editor (Tel.: 301-975-3774; Fax: 301-926-0416; E-mail: [jpcrd@nist.gov](mailto:jpcrd@nist.gov)).

**Color Printing:** Authors or their institutions must bear the cost of any color they wish to use in their papers. A fixed rate of \$650 for the first color figure and \$325 for each additional color figure applies. For multipart figures, a single charge will apply only if all parts are submitted as a single piece of artwork.

**Reprints:** Order reprints with or without covers only in multiples of 50 from AIP, Circulation & Fulfillment/Reprints, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502; Fax: 516-349-9704; Tel.: 1-800-344-6909 (U.S. & Canada), or 516-576-2270.

**Supplemental Material** may be deposited with AIP's Electronic Physics Auxiliary Publication Service (EPAPS), a low-cost online depository. For a nominal fee, authors may submit multimedia, color figures, data tables, text, etc. Address requests to the Editor; for additional information, see

<http://www.aip.org/pubservs/epaps.html>.

**Online Status Inquiry:** During the production process, authors may access information about their accepted manuscripts at <http://www.aip.org/msinq/status.html>.

**Journal of Physical and Chemical Reference Data** (ISSN 0047-2689) is published by the American Institute of Physics (Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502) for the National Institute of Standards and Technology; content is published online daily, collected into quarterly online and printed issues (4 issues per year). The 2008 print + online base price is US\$940. POSTMASTER: Send address changes to *Journal of Physical and Chemical Reference Data*, AIP, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502. Periodicals postage rates are paid at Huntington Station, NY 11746, and at additional mailing offices.

Printed on Frabrite 35# paper, pH > 7.0.

**One source of contributions** to the Journal is The National Standard Reference Data System (NSRDS), which was established in 1963 as a means of coordinating on a national scale the production and dissemination of critically evaluated reference data in the physical sciences. Under the Standard Reference Data Act (Public Law 90-396) the National Institute of Standards and Technology of the U.S. Department of Commerce has the primary responsibility in the Federal Government for providing reliable scientific and technical reference data. The Standard Reference Data Program of NIST coordinates a complex of data evaluation centers, located in university, industrial, and other Government laboratories as well as within NIST, which are engaged in the compilation and critical evaluation of numerical data on physical and chemical properties retrieved from the world scientific literature. The participants in this NIST-sponsored program, together with similar groups under private or other Government support which are pursuing the same ends, compose the NSRDS.

**The objective of the Journal** is to provide critically evaluated physical and chemical property data, fully documented as to the original sources and the criteria used for evaluation. Critical reviews of measurement techniques, whose aim is to assess the accuracy of available data in a given technical area, are also included. Papers which report new estimation or prediction techniques and test these techniques against existing databases are also accepted. The journal is not intended as a publication outlet for original experimental measurements such as those that are normally reported in the primary research literature, nor for review articles of a descriptive or primarily theoretical nature.

## 2008 Subscription Prices

**Institutions:** For information, visit <http://librarians.aip.org>. Institutional rates may be found online at <http://jpcrd.aip.org/jpcrd/subpricing.jsp> or contact AIP Customer Services at [subs@aip.org](mailto:subs@aip.org) [Tel.: 800-344-6902 (U.S. & Canada) or 516-576-2270; Fax: 516-349-9704].

**Members:** For information, visit <http://jpcrd.aip.org/jpcrd/subpricing.jsp> or contact AIP Customer Services at [subs@aip.org](mailto:subs@aip.org) [Tel.: 800-344-6902 (U.S. & Canada) or 516-576-2270; Fax: 516-349-9704].

## Additional Availability

**Online Access:** *Journal of Physical and Chemical Reference Data* is available online at <http://jpcrd.aip.org>.

**Document Delivery:** Copies of journal articles can be ordered for online delivery from DocumentStore, AIP's online document delivery service (<http://www.documentstore.org>).

## Customer Service

**Subscription Orders and Renewals** should be addressed to American Institute of Physics, P.O. Box 503284, St. Louis, MO 63150-3284. Tel.: 1-800-344-6902 (U.S. & Canada) or 516-576-2270; Fax: 516-349-9704; E-mail: [subs@aip.org](mailto:subs@aip.org). Allow at least six weeks advance notice.

**Inquiries, Address Changes, Claims, Single Copy Replacements, and Back Volumes:** For address changes, please send both old and new addresses and, if possible, include the mailing label from a recent issue. Missing issue requests will be honored only if received within six months of publication date (nine months for Australia and Asia). Please forward your missing issue claim requests to [claims@aip.org](mailto:claims@aip.org). Single copies of a journal may be ordered and back volumes are available. Contact AIP Customer Services at 1-800-344-6902 (U.S. & Canada) or 516-576-2270; Fax: 516-349-9704; E-mail: [subs@aip.org](mailto:subs@aip.org).

**Reprint Billing:** Contact AIP Publication Charge and Reprints/CFD, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502; Tel.: 1-800-344-6909 (U.S. & Canada) or 516-576-2270; E-mail: [pcr@aip.org](mailto:pcr@aip.org).

## Rights and Permissions

**Copying:** Single copies of individual articles may be made for private use or research. Authorization is given to copy articles beyond the free use permitted under Sections 107 and 108 of the U.S. Copyright Law, provided that the copying fee of \$42 per copy per article is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA, <http://www.copyright.com>. For classroom use fees, contact CCC's Academic Permission Service. (Note: The ISSN for this journal is 0047-2689.)

Authorization does not extend to systematic or multiple reproduction, to copying for promotional purposes, to electronic storage or distribution, or to republication in any form. In all such cases, specific written permission from AIP must be obtained. Note: Copies of individual articles may also be purchased online via AIP's DocumentStore service (<http://www.documentstore.org>).

**Other Use:** See journal home page for author's web posting guidelines. Permission is granted to quote from the journal with the customary acknowledgment of the source. Republication of an article or portions thereof requires formal permission from AIP and may be subject to fees. Permission may be obtained online using Rightslink. Simply click on the Rightslink icon/Permission for Reuse link found in the article abstracts. You may also address requests to: AIP Office of Rights and Permissions, Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502; Fax: 516-576-2450; Tel.: 516-576-2268; E-mail: [rights@aip.org](mailto:rights@aip.org).

**Digital Object Identifier (DOI):** Each article published is assigned a unique DOI that serves to identify the article in a digital environment. In print, the DOI appears at the end of the abstract.

Copyright © 2008 American Institute of Physics. All rights reserved.