

New Book from Elsevier

Equations of State for Fluids and Fluid Mixtures. Vol. 5, IUPAC Series on Experimental Thermodynamics. Edited by J. V. Sengers (Institute for Physical Science and Technology and Department of Chemical Engineering, University of Maryland, College Park, MD 20742, USA and Physical and Chemical Properties Division, National Institute of Standards and Technology, Gaithersburg, MD 20899, USA), R. F. Kayser (Technology Services, National Institute of Standards and Technology, Gaithersburg, MD 20899, USA), C. J. Peters (Laboratory of Applied Thermodynamics and Phase Equilibria, Faculty of Applied Sciences, Delft University of Technology, Julianalaan 136, 2628 BL Delft, Netherlands), and H. J. White, Jr. (Institute for Physical Science and Technology and Department of Chemical Engineering, University of Maryland, College Park, MD 20742, USA). Elsevier, Amsterdam, Netherlands (<http://www.elsevier.nl>). Hardcover, 2000, 928 pages. ISBN 0-444-50384-6, NLG 525.00, Euro 238.23, USD 275.00.

Contents

PART I. Introduction (J. V. Sengers *et al.*); Fundamental Considerations (M. B. Ewing, C. J. Peters); The Virial Equation of State (J. P. M. Trusler); Cubic and Generalized van der Waals Equations (A. Anderko); Perturbation Theory (T. Boublik). Equations of State from Analytically Solvable Integral-Equation Approximations (Yu. V. Kalyuzhnyi, P. T. Cummings); Quasilattice Equations of State for Molecular Fluids (N. A. Smirnova, A. V. Victorov); The Corresponding-States Principle (J. F. Ely, I. M. F. Marrucho); Mixing and Combining Rules (S. I. Sandler, H. Orbey); Mixtures of Dissimilar Molecules (E. Matteoli *et al.*); Critical Region (M. A. Anisimov, J. V. Sengers).

PART II. Associating Fluids and Fluid Mixtures (E. A. Müller, K. E. Gubbins); Polydisperse Fluids (D. Browarzik, H. Kehlen); Equations of State for Polymer Systems (S. M. Lambert *et al.*); Self-Assembled Systems (R. Nagarajan, E. Ruckenstein); Ionic Fluids (H. Krienke, J. Barthel); Ionic Fluids Near Critical Points and at High Temperatures (J. M. H. Levelt, J. V. Sengers *et al.*); Multiparameter Equations of State (R. T. Jacobsen *et al.*); Subject Index.

This book has been prepared under the auspices of the IUPAC Commission on Thermodynamics (I.2). The authors of the 18 chapters are all recognized experts in the field. The book gives an up-to-date presentation of equations of state for fluids and fluid mixtures. It is intended for postgraduate researchers in the fields of chemical engineering, mechanical engineering, chem-

istry, and physics.

All principal approaches for developing equations of state are covered. The theoretical basis and practical use of each type of equation is discussed, and the strengths and weaknesses of each are evaluated. Topics addressed include the virial equation of state, cubic equations and generalized van der Waals equations, perturbation theory, integral equations, and corresponding stated and mixing rules. Special attention is also devoted to associating fluids, polydisperse fluids, polymer systems, self-assembled systems, ionic fluids, and fluids near critical points.

New Book from IUPAC

Japanese Translation of *IUPAC White Book on Chlorine*. Special Issue of *Pure and Applied Chemistry* (Vol. 68, No. 9, 1996). Edited by R.-P. Martin and G. J. Martens; Translation coordinated by Junshi Miyamoto. IUPAC (2000), pp. xiv + 1–223. ISBN 4-87326-346-8, JY 8 000.

Please refer to the article under News from IUPAC on page 47 of this issue for details on content of this book and how to obtain a copy of it.

New Publications from AOAC International

Official Methods of Analysis of AOAC International, 17th Edition. Edited by William Horwitz. AOAC International (2000). 2 200+ pages, 2 volumes, loose-leaf. 237 illustrations. Indexes. ISBN 0-935584-67-6. USD 799 (print format). Also available in CD-ROM format for PC-compatible or Macintosh computers. USD 699 (CD-ROM format). USD 999 (print and CD-ROM formats).

Referred to as the “methods bible” by users worldwide, this compendium is the authoritative source of analytical methods related to foods, drugs, agriculture, and the environment that are used globally by industry, government, and academic laboratories. All methods are validated through the Official MethodsSM program, a rigorous time-tested protocol administered by AOAC International. This 17th edition contains more than 2 700 validated methods adopted by industry, government agencies (many of the methods are cited in the U.S. Code of Federal Regulations), and academic institutions as *de facto* standards in the operation of laboratories and quality assurance processes. The current compilation contains more than 200 new and modified methods, new safety and quality assurance chapters, and revised guidelines for collaborative study procedures.