

# BIG NEWS FOR 1982

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## CLASSICAL THERMODYNAMICS OF NONELECTROLYTE SOLUTIONS, With Applications to Phase Equilibria

**Hendrick C. Van Ness** and **Michael M. Abbott**,  
both of Rensselaer Polytechnic Institute  
1982, 482 pages  
*Solutions Manual*

This unique text—the *only textbook devoted entirely to the subject*—includes numerous worked examples and problems for solution. The book gives a systematic and comprehensive exposition of classical thermodynamics of nonelectrolyte solutions, including applications to the formulation and solution of problems in fluid-phase equilibria. In a thorough discussion of fluid properties and their interrelations, the authors include state-of-the-art methods for representing the properties of pure fluids and mixtures.

## SYNTHETIC FUELS

**Ronald F. Probstein**, Massachusetts Institute of Technology, and Water Purification Associates; and  
**R. Edwin Hicks**, Water Purification Associates  
1982, 496 pages  
*Solutions Manual*

The first complete textbook covering a new and important field, presented here as a unified engineering subject. The text includes relevant chemical and physical fundamentals and develops the basic principles of each technology.

## ENGINEERING EVALUATION OF ENERGY SYSTEMS

**Arthur P. Fraas**  
1982, 720 pages (tent.)

A comprehensive study of all major energy systems, including—for each system—historical background, underlying theory, and a critical review of actual test experience that defines the practical limitations of the system. Early chapters are devoted to the *characteristics of basic components and problem areas* common to most types of energy systems. Includes summaries for all chapters and for most sections, and over 300 figures and tables.

## PRINCIPLES OF POLYMER SYSTEMS, 2/e

**Ferdinand Rodriguez**, Cornell University  
1982, 576 pages  
*Solutions Manual*

This up-to-date second edition continues to teach students how to describe polymers in quantitative terms and how to manipulate quantitative data to predict and correlate the behavior of real polymer systems. Adopting a practical approach, this edition includes a new example of *drag reduction* based on the most current research, and an examination of *torsion pendulum* that gives students a test method for measuring mechanical properties at small deformations. It treats *chain transfer* and *emulsion polymerization* in *more quantitative terms*, and it includes new sections on *feedstocks for monomer production* and on *new polymer production methods* such as gas phase polymerization of ethylene and olefin metathesis of norbornene.

## MOMENTUM, HEAT AND MASS TRANSFER, 3/e

**Carroll O. Bennett**, University of Connecticut; and  
**J.E. Myers**, University of California, Santa Barbara  
1982, 848 pages (tent.)  
*Solutions Manual*

This text is designed for chemical engineering students in the transport staged operations sequence. Changes for the third edition include: a general updating throughout; 50% SI units; chapter summaries; and additional problems.

## MEASUREMENT AND DETECTION OF RADIATION

**Nicholas Tsoulfanidis**,  
University of Missouri—Rolla  
1982, 656 pages (tent.)

Covers all aspects of radiation measurement, using worked examples and problems to support concepts. The text includes the most current radiation detectors and techniques, teaching students to select the proper detector given the energy and type of particle to be counted and the purpose of the measurement.