**DESCRIPTION**

In this newly revised 5th Edition of *Chemical and Engineering Thermodynamics*, Sandler presents a modern, applied approach to chemical thermodynamics and provides sufficient detail to develop a solid understanding of the key principles in the field. The text confronts current information on environmental and safety issues and how chemical engineering principles apply in biochemical engineering, bio-technology, polymers, and solid-state-processing. This book is appropriate for the undergraduate and graduate level courses.

**ABOUT THE AUTHOR**

**STANLEY I. SANDLER** is the H. B. du Pont Professor of Chemical Engineering at the University of Delaware as well as professor of chemistry and biochemistry. He is also the founding director of its Center for Molecular and Engineering Thermodynamics. In addition to this book, Sandler is the author of 235 research papers and a monograph, and is the editor of a book on thermodynamic...
modeling and five conference proceedings. He earned his B.Ch.E. degree in 1962 from the City College of New York, and his Ph.D. in chemical engineering from the University of Minnesota in 1966.

### RELATED RESOURCES

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### NEW TO EDITION

Thermodynamics illustrations and homework problems have been added that use ASPEN simulation software, allowing students to solve more interesting and practical problems with greater efficiency.

- Many new illustrative and homework problems have been added.
- Illustrations have been added not only to demonstrate new concepts, but also to provide breaks among pages of mathematical derivations or thermodynamic philosophy. These should make thermodynamics and phase equilibria more relevant to the interests of students.
- There are additional sections on chemical reactions in biochemical systems and additional material on energy and energy-related processes.
- The biochemical applications now appear throughout the second half of the book rather than being relegated to the final chapter.

**Resources**

**Instructor Resources**

Algebra and calculus programs for MATHCAD provide solutions to many homework and illustration problems in the text.

ASPE 8.6 input files for numerous illustrations and problems presented in the text.

**Student Resources**
MATHCAD worksheets, VISUAL BASIC programs, MATLAB programs and older DOS BASIC program are provided as aids to solving

FEATURES

• Realistic problems familiarize students with the types of challenges they will encounter in industry and graduate research.

• Introduction of environmental and safety applications of thermodynamics provides course material required for ABET accreditation.

• Web based problems sets. Students can visit the text’s web site to download problem sets and solve equations using programs such as MATHCAD®.

• SI units are utilized throughout the text

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