

Springer

1st
edition

2013, XVII, 382 p.

Printed book

Softcover

Printed book

Softcover

ISBN 978-3-642-43082-4

£ 54,99 | CHF 83,00 | 70,08 € |

77,09 € (A) | 74,99 € (D)

Available

Discount group

Standard (0)

Product category

Graduate/advanced undergraduate textbook

Series

Graduate Texts in Physics

Physics : Thermodynamics

de Oliveira, Mário J., Universidade de São Paulo, São Paulo, Brazil

Equilibrium Thermodynamics

- Presents many applications in several areas of physics and chemistry and gives a special treatment of phase transitions
- Ideal mixture of thorough theoretical explanation and presentation of applications in several areas of physics and chemistry
- Worked examples, problems and exercises to deepen the knowledge

This textbook provides an exposition of equilibrium thermodynamics and its applications to several areas of physics with particular attention to phase transitions and critical phenomena. The applications include several areas of condensed matter physics and include also a chapter on thermochemistry. Phase transitions and critical phenomena are treated according to the modern development of the field, based on the ideas of universality and on the Widom scaling theory. For each topic, a mean-field or Landau theory is presented to describe qualitatively the phase transitions. These theories include the van der Waals theory of the liquid-vapor transition, the Hildebrand-Heitler theory of regular mixtures, the Griffiths-Landau theory for multicritical points in multicomponent systems, the Bragg-Williams theory of order-disorder in alloys, the Weiss theory of ferromagnetism, the Néel theory of antiferromagnetism, the Devonshire theory for ferroelectrics and Landau-de Gennes theory of liquid crystals. This textbook is intended for students in physics and chemistry and provides a unique combination of thorough theoretical explanation and presentation of applications in both areas. Chapter summaries, highlighted essentials and problems with solutions enable a self sustained approach and deepen the knowledge.

Order online at springer.com/booksellers**Springer Nature Customer Service Center GmbH**

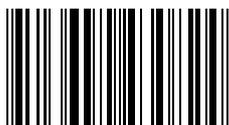
Customer Service

Tiergartenstrasse 15-17

69121 Heidelberg

Germany

T: +49 (0)6221 345-4301

row-booksellers@springernature.com

ISBN 978-3-642-43082-4 / BIC: PHH / SPRINGER NATURE: SCP21050

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

Part of **SPRINGER NATURE**