

H. J. Fischbeck, K. H. Fischbeck

Formulas, Facts and Constants

for Students and Professionals
in Engineering, Chemistry and Physics

1982. XII, 251 pages

DM 32,-. ISBN 3-540-11315-0

Prices are subject to change without notice

This book provides a handy and convenient source of formulas, conversion factors and constants for students and professionals in engineering, chemistry, mathematics and physics. Section 1 covers the fundamental tools of mathematics needed in all areas of the physical sciences. Section 2 summarizes the SI system (International System of Units of measurement), lists conversion factors and gives precise values of fundamental constants. Sections 3 and 4 review the basic terms of spectroscopy, atomic structure and wave mechanics. These sections serve as a guide to the interpretation of modern literature. Section 5 is a resource for work in the laboratory, listing data and formulas needed in connection with frequently used equipment such as vacuum systems and electronic devices. Material constants and other data are listed for information and as an aid for estimates or problem solving.

Formulas and tables are accompanied by examples in all those cases where their use might not be self-explanatory.



Springer-Verlag
Berlin Heidelberg New York Tokyo

Tiergartenstr. 17, D-6900 Heidelberg 1 or 175 Fifth Ave., New York, NY 10010, USA
or 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan

627715/2hb

G. Ludwig

Foundations of Quantum Mechanics II

Translated from the German by C. A. Hein

1985. 54 figures. XVI, 416 pages

(Text and Monographs in Physics)

Hard cover DM 228,-

ISBN 3-540-13009-8

Contents: Representations of Hilbert Spaces by Function Spaces. - Equations of Motion. - The Spectrum of One-Electron Systems. - Spectrum of Two Electron Systems. - Selection Rules and the Intensity of Spectral Lines. - Spectra of Many-Electron Systems. - Molecular Spectra and the Chemical Bond. - Scattering Theory. - The Measurement Process and the Preparation Process. - Quantum Mechanics, Macrophysics and Physical World-Views. - Appendix V: Groups and Their Representations. - References. - Index.

In Volume I the author presented the fundamental concepts of Quantum Mechanics from first principles. In particular the concept of "effect" as developed by the author himself becomes the important link between experiment and theory. In the second volume of his impressive work the author shows how the basic concepts can be applied to problems of atomic spectra, structure and spectra of molecules, and scattering theory. In so doing, Prof. Ludwig provides the first systematic treatment of scattering theory as a tool in solving problems of real measurement in quantum theory. This unparalleled textbook also contains many new experimental results, making it of interest to students and researchers alike.



Springer-Verlag
Berlin Heidelberg New York Tokyo

Tiergartenstr. 17, D-6900 Heidelberg 1 or 175 Fifth Ave., New York, NY 10010, USA
or 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan

7482/5/2h