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Thermodynamik - Charles Kittel 2013-05-02
Die Thermodynamik ist eines der Gebiete, welches durch die Einführung quantenmechanischer Konzepte ganz wesentlich vereinfacht wird. Erstaunlich ist, wie wenig formelle Quantenmechanik dazu benötigt wird. Eine solche Darstellung der Physik der Wärme ist das Ziel dieses Buches.
Books for College Libraries: Psychology, science, technology - 1975

New Problems, Methods and Techniques in Quantum Field Theory and Statistical Mechanics - Mario Rasetti 1990
http://www.worldscientific.com/worldscibooks/10.1142/1095
Zeitdiskrete Signalverarbeitung - Alan V. Oppenheim 2015-06-03
Wer die Methoden der digitalen Signalverarbeitung erlernen oder anwenden will, kommt ohne das weltweit bekannte, neu gefaßte Standardwerk "Oppenheim/Schafer" nicht aus. Die Beliebtheit des Buches beruht auf den didaktisch hervorragenden Einführungen, der umfassenden und tiefgreifenden Darstellung der Grundlagen, der kompetenten Berücksichtigung moderner Weiterentwicklungen und der Vielzahl verständnisfördernder Aufgaben.
Sukses Juara Olimpiade Fisika ON MIPA dan OSN Pertamina Perguruan Tinggi - Ahmad Faisal Harish 2019-03-06
ON MIPA dan OSN Pertamina merupakan ajang kompetisi olimpiade tahunan bergengsi di tingkat Perguruan Tinggi. Sehingga secara tidak langsung kompetisi tersebut merupakan salah satu tolak ukur SDM dan akademik di Universitas tersebut secara Nasional. Salah satu faktor tidak meratanya juara kompetisi tersebut di Perguruan tinggi favorit dan lainnya yaitu kurangnya bahan latihan soal seperti contoh-contoh soal tahun sebelumnya. Buku ini hadir menjawab permasalahan tersebut dengan menyajikan contoh-contoh soal tahun sebelumnya dari tahun 2009 hingga 2016. Dengan harapan peserta dapat memahami karakter soal-soal olimpiade sehingga siap untuk berjuang di ajang bergengsi tersebut.
Introduction to Statistical Physics - Kerson Huang 2001-09-20
Statistical physics is a core component of most undergraduate (and some post-graduate) physics degree courses. It is primarily concerned with the behavior of matter in bulk-from boiling water to the superconductivity of metals. Ultimately, it seeks to uncover the laws governing random processes, such as the snow on your TV screen. This essential new textbook guides the reader quickly and critically through a statistical view of the physical world, including a wide range of physical applications to illustrate the methodology. It moves from basic examples to more advanced topics, such as broken symmetry and the Bose-Einstein equation. To accompany the text, the author, a renowned expert in the field, has written a Solutions Manual/Instructor's Guide, available free of charge to lecturers who adopt this book for their courses. Introduction to Statistical Physics will appeal to students and researchers in physics, applied mathematics and statistics.
Library of Congress Catalog - Library of Congress 1960

Thermodynamik und statistische Mechanik - Walter Greiner 1993

Grundkurs Theoretische Physik 6 Statistische Physik - Wolfgang Nolting 1998-04-17
Die Bände dieser Reihe sind als unmittelbare Begleiter des Kurses in Theoretischer Physik gedacht und vermitteln in direkter und kompakter Form das theoretisch-physikalische Rüstzeug, das vonnöten ist, um anspruchsvollere Aufgaben und Themen im fortgeschrittenen Studium und in der Forschung bewältigen zu können. Die Darstellung ist bewußt ausführlich und in sich abgeschlossen, so daß der Grundkurs Theoretische Physik auch zum Selbststudium ohne Sekundärliteratur geeignet ist.
The Circulation of science and technology - Institut d'Estudis Catalans 2012-04-27

The New Encyclopaedia Britannica - 1980

Elementare Grundlagen der statistischen Mechanik - Josiah Willard Gibbs 1905

Introduction to Statistical Physics, Second Edition - Kerson Huang 2009-09-21
Written by a world-renowned theoretical physicist, Introduction to Statistical Physics, Second Edition clarifies the properties of matter collectively in terms of the physical laws governing atomic motion. This second edition expands upon the original to include many additional exercises and more pedagogically oriented discussions that fully explain the concepts and applications. The book first covers the classical ensembles of statistical mechanics and stochastic processes, including Brownian motion, probability theory, and the Fokker–Planck and Langevin equations. To illustrate the use of statistical methods beyond the theory of matter, the author discusses entropy in information theory, Brownian motion in the stock market, and the Monte Carlo method in computer simulations. The next several chapters emphasize the difference between quantum mechanics and classical mechanics—the quantum phase. Applications covered include Fermi statistics and semiconductors and Bose statistics and Bose–Einstein condensation. The book concludes with advanced topics, focusing on the Ginsburg–Landau theory of the order parameter and the special kind of quantum order found in superfluidity and superconductivity. Assuming some background knowledge of classical and quantum physics, this textbook thoroughly familiarizes advanced undergraduate students with the different aspects of statistical physics. This updated edition continues to provide the tools needed to understand and work with random processes.
Über einige fragen der kinetischen gastheorie - Ludwig Boltzmann 1887

Penyelesaian Soal ON MIPA-PT - Abdurrouf 2014-10-01
ON MIPA-PT adalah olimpiade nasional matematika dan ilmu pengetahuan alam perguruan tinggi. Kompetisi ini disponsori oleh Kemendikbud, dan berlangsung setiap tahun sejak tahun 2009. ON MIPA-PT menyediakan 4 bidang lomba, yaitu Fisika, Kimia, Matematika, dan Biologi. Buku ini mencoba memberi informasi tentang ON MIPA-PT, mengenal karakter kompetisinya, mengakrabi model soalnya, dan menunjukkan referensi terkait. Bagian terbesar dari buku ini berisi contoh soal ON MIPA-PT bidang uji termodinamika dan fisika statistik, baik tingkat provinsi maupun nasional, berikut pembahasannya. Dengan buku ini, diharapkan mahasiswa dapat mempersiapkan keikutsertaannya dalam kompetisi ON MIPA-PT secara mandiri.
American Book Publishing Record Cumulative, 1950-1977 - R.R. Bowker Company. Department of Bibliography 1978

Statistische Physik - L. D. Landau 1987-12

Scientific and Technical Books in Print - 1972

Introduction to Statistical Physics - Kerson Huang 2001-11-09
Statistical physics is a core component of most undergraduate (and some post-graduate) physics degree courses. It is primarily concerned with the behavior of matter in bulk-from boiling water to the superconductivity of metals. Ultimately, it seeks to uncover the laws governing random processes, such as the snow on your TV screen. This essential ne
Statistische Physik und Theorie der Wärme - Frederick Reif 1987-01-01

Mathematische Modelle in der Biologie - Jan W. Prüss 2008

Thermal Physics - Joon Chang Lee 2002-03-14
This book is an informal, readable introduction to the basic ideas of thermal physics. It is aimed at making the reader feel comfortable with the extremum principles of entropy and free energies. There is a repeating theme: Molecules (spins) do X to maximize their entropy, and molecules (spins) do XX to minimize their free energy. This finally leads to the idea of the Landau-Ginzburg free energy functional. The author illustrates how powerful the idea is by using two examples from phase transitions.
Lectures on Statistical Physics and Protein Folding - Kerson Huang 2005-05-30
' This book introduces an approach to protein folding from the point of view of kinetic theory. There is an abundance of data on protein folding, but few proposals are available on the mechanism driving the process. Here, presented for the first time, are suggestions on possible research directions, as developed by the author in collaboration with C C Lin. The first half of this invaluable book contains a concise but relatively complete review of relevant topics in statistical mechanics and kinetic theory. It includes standard topics such as thermodynamics, the Maxwell-Boltzmann distribution, and ensemble theory. Special discussions include the dynamics of phase transitions, and Brownian motion as an illustration of stochastic processes. The second half develops topics in molecular biology and protein structure, with a view to discovering mechanisms underlying protein folding. Attention is focused on the energy flow through the protein in its folded state. A mathematical model, based on the Brownian motion of coupled harmonic oscillators, is worked out in the appendix. Contents:EntropyMaxwell–Boltzmann DistributionFree EnergyChemical PotentialPhase TransitionsKinetics of Phase TransitionsThe Order ParameterCorrelation FunctionStochastic ProcessesLangevin EquationThe Life ProcessSelf-AssemblyKinetics of Protein FoldingPower Laws in Protein FoldingSelf-Avoiding Walk and TurbulenceConvergent Evolution in Protein Folding Readership: Graduate students, researchers and academics interested in statistical physics and molecular biology. Keywords:Statistical Physics;Protein Folding;BiophysicsReviews:“My particularly favorite is the chapter on order parameters, explaining with simplicity and clarity this subject so frequently difficult and confusing for the beginning students ... the book makes a strong attempt to place the protein folding problem where it really belongs — in the context of fundamental statistical mechanics. Whether the attempt is successful or not is a matter of a reader's opinion, but the very direction is both timely and welcome.”Professor Alexander Grosberg University of Minnesota '
Studies in Statistical Mechanics - 1964

Statistical Mechanics - Huang Kerson 1963
Unlike most other texts on the subject, this clear, concise introduction to the theory of microscopic bodies treats the modern theory of critical phenomena. Provides up-to-date coverage of recent major advances, including a self-contained description of thermodynamics and the classical kinetic theory of gases, interesting applications such as superfluids and the quantum Hall effect, several current research applications, The last three chapters are devoted to the Landau-Wilson approach to critical phenomena. Many new problems and illustrations have been added to this edition.
An Introduction to Thermodynamics and Statistical Mechanics - Keith Stowe 2007-05-10
This introductory textbook for standard undergraduate courses in thermodynamics has been completely rewritten to explore a greater number of topics, more clearly and concisely. Starting with an overview of important quantum behaviours, the book teaches students how to calculate probabilities in order to provide a firm foundation for later chapters. It introduces the ideas of classical thermodynamics and explores them both in general and as they are applied to specific processes and interactions. The remainder of the book deals with statistical mechanics. Each topic ends with a boxed summary of ideas and results, and every chapter contains numerous homework problems, covering a broad range of difficulties. Answers are given to odd-numbered problems, and solutions to even-numbered problems are available to instructors at www.cambridge.org/9781107694927.
Path Integral Quantization and Stochastic Quantization - Michio Masujima 2008-11-21
In this book, we discuss the path integral quantization and the stochastic quantization of classical mechanics and classical field theory. Forthe description ofthe classical theory, we have two methods, one based on the Lagrangian formalism and the other based on the Hamiltonian formal ism. The Hamiltonian formalism is derived from the Lagrangian·formalism. In the standard formalism ofquantum mechanics, we usually make use ofthe Hamiltonian formalism. This fact originates from the following circumstance which dates back to the birth of quantum mechanics. The first formalism ofquantum mechanics is Schrodinger's wave mechan ics. In this approach, we regard the Hamilton-Jacobi equation of analytical mechanics as the Eikonal equation of "geometrical mechanics". Based on the optical analogy, we obtain the Schrodinger equation as a result ofthe inverse of the Eikonal approximation to the Hamilton-Jacobi equation, and thus we arrive at "wave mechanics". The second formalism ofquantum mechanics is Heisenberg's "matrix me chanics". In this approach, we arrive at the Heisenberg equation of motion from consideration of the consistency of the Ritz combination principle, the Bohr quantization condition and the Fourier analysis of a physical quantity. These two formalisms make up the Hamiltonian.formalism of quantum me chanics.
Stellar Evolution Physics - Icko Iben 2012-11-29
Describes how stars respond to microscopic physics in the advanced stages of their evolution with many numerical examples and illustrations.
Renormalization Methods - W. D. McComb 2004
This text fills a gap between undergraduate and more advanced texts on quantum field theory. It covers a range of renormalization methods with a clear physical interpretation, proceeds to the epsilon-expansion and ends with the first-order corrections to critical exponents beyond mean-field theory.
Journal of Scientific & Industrial Research - 1964

Mathematical Reviews - 1998

Supraleiter-Elektronik - Johann H. Hinken 2013-07-01
Das Buch beschreibt elektronische Bauelemente aus Supraleitern in ihrem Aufbau, ihrer physikalischen Wirkungsweise und in technischen Anwendungen. Dabei werden die physikalischen Grundlagen für die gesamte Supraleiter-Elektronik dargestellt und ihre Anwendungen innerhalb der Mikrowellentechnik im Detail erläutert. Ausführlich widmet sich der Autor den SiS-Mischern und Josephson-Gleichspannungsnormalen. Besondere Kapitel geben Hinweise auf Herstellungsverfahren und Materialauswahl sowie auf Tiefsttemperaturtechnik. Das Buch berücksichtigt neueste Erkenntisse über Hochtemperatur-Supraleiter, für deren Entdeckung 1987 der Physik-Nobelpreis verliehen wurde. Supraleiter-Elektronik stellt eine fundierte Einführung für Studenten der Elektrotechnik und Physik dar, eignet sich darüber hinaus aber auch zum Selbststudium für alle, die sich einen Überblick über das Gebiet verschaffen wollen. Ein ausführliches Literaturverzeichnis weist den Weg für vertiefende Lektüre.
The Principles of Thermodynamics - N.D. Hari Dass 2013-10-02
This text presents the conceptual and technical developments of the subject without unduly compromising on either the historical or logical perspective. It also covers the tremendous range of scientifically deep and technologically revolutionary applications of thermodynamics. The text explains how thermodynamics evolved from a few basic laws that
Quarterly of Applied Mathematics - 1963

Statistical Mechanics - Kerson Huang 1987-05-13
Treating mechanics through a clearly written introduction of the theory of microscopic bodies based on the fundamental atomic laws, this book contains a brief but self-contained discussion of thermodynamics and the classical kinetic theory of gases. An introduction to the modern theory of critical phenomena is featured that is concise and pedagogically orientated. This second edition contains up-to-date coverage of recent major advances and important applications, such as superfluids and the Quantum Hall Effect. A large part of the text is devoted to selected applications of statistical mechanics and its value as an illustration of calculating techniques.
The New Encyclop©Œdia Britannica - 1983

Ludwig Boltzmann (1844-1906) - Ilse Fasol 2007-02-05
Ludwig Boltzmann revolutionierte die Physik des ausgehenden 19. Jahrhunderts. Er kämpfte beharrlich um Anerkennung, dass jede Materie aus Atomen besteht. Er begründete seine kinetische Gastheorie, die statistische Thermodynamik und war somit ein wesentlicher Begründer der statistischen Physik. Der Reader beschreibt seinen Kampf um Anerkennung, seine Zeitgenossen und Philosophie. Mit bisher unveröffentlichten Texten, Bildern und Dokumenten.
Thermal Physics - Joon Chang Lee 2011
The book aims to explain the basic ideas of thermal physics intuitively and in the simplest possible way. It is aimed at making the reader feel comfortable with the ideas of entropy and free energy. Thermal physics is prone to misunderstanding, confusion and is often being overlooked. However, a good foundation is necessary to prepare the reader for advanced level studies.
Elektrodynamik - David J. Griffiths 2018-08-10

Nanophysik und Nanotechnologie - Edward L. Wolf 2015-08-26
Noch hat das Motto “Alles muss kleiner werden” nicht an Faszination verloren. Physikern, Ingenieuren und Medizinern erschließt sich mit der Nanotechnologie eine neue Welt mit faszinierenden Anwendungen. E.L. Wolf, Physik-Professor in Brooklyn, N.Y., schrieb das erste einführende Lehrbuch zu diesem Thema, in dem er die physikalischen Grundlagen ebenso wie die Anwendungsmöglichkeiten der Nanotechnologie diskutiert. Mittlerweile ist es in der 3. Aufl age erschienen und liegt jetzt endlich auch auf Deutsch vor. Dieses Lehrbuch bietet eine einzigartige, in sich geschlossene Einführung in die physikalischen Grundlagen und Konzepte der Nanowissenschaften sowie Anwendungen von Nanosystemen. Das Themenspektrum reicht von Nanosystemen über Quanteneff ekte und sich selbst organisierende Strukturen bis hin zu Rastersondenmethoden. Besonders die Vorstellung von Nanomaschinen für medizinische Anwendungen ist faszinierend, wenn auch bislang noch nicht praktisch umgesetzt. Der dritten Aufl age, auf der diese Übersetzung beruht, wurde ein neuer Abschnitt über Graphen zugefügt. Die Diskussion möglicher Anwendungen in der Energietechnik, Nanoelektronik und Medizin wurde auf neuesten Stand gebracht und wieder aktuelle Beispiele herangezogen, um wichtige Konzepte und Forschungsinstrumente zu illustrieren. Der Autor führt mit diesem Lehrbuch Studenten der Physik, Chemie sowie Ingenieurwissenschaften von den Grundlagen bis auf den Stand der aktuellen Forschung. Die leicht zu lesende Einführung in dieses faszinierende Forschungsgebiet ist geeignet für fortgeschrittene Bachelor- und Masterstudenten mit Vorkenntnissen in Physik und Chemie. Stimmen zur englischen Vorauflage „Zusammenfassend ist festzustellen, dass Edward L. Wolf trotz der reichlich vorhandenen Literatur zur Nanotechnologie ein individuell gestaltetes einführendes Lehrbuch gelungen ist. Es eignet sich – nicht zuletzt dank der enthaltenen Übungsaufgaben – bestens zur Vorlesungsbegleitung für Studierende der Natur- und Ingenieurwissenschaften sowie auch spezieller nanotechnologisch orientierter Studiengänge.“ Physik Journal „... eine sehr kompakte, lesenswerte und gut verständliche Einführung in die Quantenmechanik sowie ihre Auswirkungen auf die Materialwissenschaften ...“ Chemie Ingenieur Technik