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Statistical Mechanics- Giuseppe Morandi 2001 This book covers the foundations of classical thermodynamics, with emphasis on the use of differential forms of classical and quantum statistical mechanics, and also on the foundational aspects. In both contexts, a number of applications are considered in detail, such as the general theory of response, correlations and fluctuations, and classical and quantum spin systems. In the quantum case, a self-contained introduction to path integral methods is given. In addition, the book discusses phase transitions and critical phenomena, with applications to the Landau theory and to the Ginzburg-Landau theory of superconductivity, and also to the phenomenon of Bose condensation and of superfluidity. Finally, there is a careful discussion on the use of the renormalization group in the study of critical phenomena.
Statistical Mechanics - Elisa Ercolessi 2001

Statistical Mechanics - G Morandi 2001-05-17 This book covers the foundations of classical thermodynamics, with emphasis on the use of differential forms of classical and quantum statistical mechanics, and also on the foundational aspects. In both contexts, a number of applications are considered in detail, such as the general theory of response, correlations and fluctuations, and classical and quantum spin systems. In the quantum case, a self-contained introduction to path integral methods is given. In addition, the book discusses phase transitions and critical phenomena, with applications to the Landau theory and to the Ginzburg–Landau theory of superconductivity, and also to the phenomenon of Bose condensation and of superfluidity. Finally, there is a careful discussion on the use of the renormalization group in the study of critical phenomena. Request

Statistical Physics of Fields - Mehran Kardar 2007-06-07 While many scientists are familiar with fractals, fewer are familiar with scale-invariance and universality which underlie the ubiquity of their shapes. These properties may emerge from the collective behaviour of simple fundamental constituents, and are studied using statistical field theories. Initial chapters connect the particulate perspective developed in the companion volume, to the coarse grained statistical fields studied here. Based on lectures taught by Professor Kardar at MIT, this textbook demonstrates how such theories are formulated and studied. Perturbation theory, exact solutions, renormalization groups, and other tools are employed to demonstrate the emergence of scale invariance and universality, and the non-equilibrium dynamics of interfaces and directed paths in random media are discussed. Ideal for advanced graduate courses in statistical physics, it contains an
intermediate set of problems, with solutions to selected problems at the end of the book and a complete set available to lecturers at [www.cambridge.org/9780521873413](http://www.cambridge.org/9780521873413).

**Intermediate Statistical Mechanics**-Jayanta Bhattacharjee 2016-12-15 In this new textbook, a number of unusual applications are discussed in addition to the usual topics covered in a course on Statistical Physics. Examples are: statistical mechanics of powders, Peierls instability, graphene, Bose-Einstein condensates in a trap, Casimir effect and the quantum Hall effect. Superfluidity and superconductivity (including the physics of high-temperature superconductors) have also been discussed extensively. The emphasis on the treatment of these topics is pedagogic, introducing the basic tenets of statistical mechanics, with extensive and thorough discussion of the postulates, ensembles, and the relevant statistics. Many standard examples illustrate the microcanonical, canonical and grand canonical ensembles, as well as the Bose-Einstein and Fermi-Dirac statistics. A special feature of this text is the detailed presentation of the theory of second-order phase transitions and the renormalization group, emphasizing the role of disorder. Non-equilibrium statistical physics is introduced via the Boltzmann transport equation. Additional topics covered here include metastability, glassy systems, the Langevin equation, Brownian motion, and the Fokker-Planck equation. Graduate students will find the presentation readily accessible, since the topics have been treated with great deal of care and attention to detail. Request Inspection Copy

**Vortex Dynamics, Statistical Mechanics, and Planetary Atmospheres**-

**Statistical Physics for Biological Matter**-Wokyung Sung 2018-10-19 This book aims to cover a broad range of
topics in statistical physics, including statistical mechanics (equilibrium and non-equilibrium), soft matter and fluid physics, for applications to biological phenomena at both cellular and macromolecular levels. It is intended to be a graduate level textbook, but can also be addressed to the interested senior level undergraduate. The book is written also for those involved in research on biological systems or soft matter based on physics, particularly on statistical physics. Typical statistical physics courses cover ideal gases (classical and quantum) and interacting units of simple structures. In contrast, even simple biological fluids are solutions of macromolecules, the structures of which are very complex. The goal of this book to fill this wide gap by providing appropriate content as well as by explaining the theoretical method that typifies good modeling, namely, the method of coarse-grained descriptions that extract the most salient features emerging at mesoscopic scales. The major topics covered in this book include thermodynamics, equilibrium statistical mechanics, soft matter physics of polymers and membranes, non-equilibrium statistical physics covering stochastic processes, transport phenomena and hydrodynamics. Generic methods and theories are described with detailed derivations, followed by applications and examples in biology. The book aims to help the readers build, systematically and coherently through basic principles, their own understanding of nonspecific concepts and theoretical methods, which they may be able to apply to a broader class of biological problems.

Mathematical Physics II: Classical Statistical Mechanics-Matteo Petrera
2014 These Lecture Notes provide an introduction to classical statistical mechanics. The first part presents classical results, mainly due to L. Boltzmann and J.W. Gibbs, about equilibrium statistical mechanics of continuous systems. Among the topics covered are: kinetic
theory of gases, ergodic problem, Gibbsian formalism, derivation of thermodynamics, phase transitions and thermodynamic limit. The second part is devoted to an introduction to the study of classical spin systems with special emphasis on the Ising model. The material is presented in a way that is at once intuitive, systematic and mathematically rigorous. The theoretical part is supplemented with concrete examples and exercises.

Vorticity, Statistical Mechanics, and Monte Carlo Simulation-Chjan Lim 2007-07-28 This book is drawn from across many active fields of mathematics and physics. It has connections to atmospheric dynamics, spherical codes, graph theory, constrained optimization problems, Markov Chains, and Monte Carlo methods. It addresses how to access interesting, original, and publishable research in statistical modeling of large-scale flows and several related fields. The authors explicitly reach around the major branches of mathematics and physics, showing how the use of a few straightforward approaches can create a cornucopia of intriguing questions and the tools to answer them.

Thermal Physics-Robert Floyd Sekerka 2015-08-19 In Thermal Physics: Thermodynamics and Statistical Mechanics for Scientists and Engineers, the fundamental laws of thermodynamics are stated precisely as postulates and subsequently connected to historical context and developed mathematically. These laws are applied systematically to topics such as phase equilibria, chemical reactions, external forces, fluid-fluid surfaces and interfaces, and anisotropic crystal-fluid interfaces. Statistical mechanics is presented in the context of information theory to quantify entropy, followed by development of the most important ensembles: microcanonical, canonical, and grand canonical. A unified treatment of ideal classical, Fermi, and Bose gases is
presented, including Bose condensation, degenerate Fermi gases, and classical gases with internal structure. Additional topics include paramagnetism, adsorption on dilute sites, point defects in crystals, thermal aspects of intrinsic and extrinsic semiconductors, density matrix formalism, the Ising model, and an introduction to Monte Carlo simulation. Throughout the book, problems are posed and solved to illustrate specific results and problem-solving techniques. Includes applications of interest to physicists, physical chemists, and materials scientists, as well as materials, chemical, and mechanical engineers. Suitable as a textbook for advanced undergraduates, graduate students, and practicing researchers. Develops content systematically with increasing order of complexity. Self-contained, including nine appendices to handle necessary background and technical details.

Statistical Mechanics
Norman Davidson 2013-01-23

Sufficiently rigorous for introductory or intermediate graduate courses, this text offers a comprehensive treatment of the techniques and limitations of statistical mechanics. 82 figures. 15 tables. 1962 edition.

Introductory Statistical Mechanics for Physicists
D. K. C. MacDonald 2006
This concise introduction is geared toward those concerned with solid state or low temperature physics. It presents the principles with simplicity and clarity, reviewing issues of critical interest. 1963 edition.

TEXTBOOK OF PHYSICAL CHEMISTRY
H. K. MOUDGIL 2014-10-21
This comprehensive textbook, now in its second edition, is mainly written as per the latest syllabi of physical chemistry of all the leading universities of India as well as the new syllabus recommended by the UGC. This thoroughly revised and updated edition covers the principal areas of physical chemistry, such as thermodynamics, quantum
chemistry, molecular spectroscopy, chemical kinetics, electrochemistry and nanotechnology. In a methodical and accessible style, the book discusses classical, irreversible and statistical thermodynamics and statistical mechanics, and describes macroscopic chemical systems, steady states and thermodynamics at a molecular level. It elaborates the underlying principles of quantum mechanics, molecular spectroscopy, X-ray crystallography and solid state chemistry along with their applications. The book explains various instrumentation techniques such as potentiometry, polarography, voltammetry, conductometry and coulometry. It also describes kinetics, rate laws and chemical processes at the electrodes. In addition, the text deals with chemistry of corrosion and nanomaterials. This text is primarily designed for the undergraduate and postgraduate students of chemistry (B.Sc. and M.Sc.) for their course in physical chemistry. Key Features • Gives a thorough treatment to ensure a solid grasp of the material. • Presents a large number of figures and diagrams that help amplify key concepts. • Contains several worked-out examples for better understanding of the subject matter. • Provides numerous chapter-end exercises to foster conceptual understanding.

R. Barnett, Statistical Physics, Second Edition develops a unified treatment of statistical mechanics and thermodynamics, which emphasises the statistical nature of the laws of thermodynamics and the atomic nature of matter. Prominence is given to the Gibbs distribution, leading to a simple treatment of quantum statistics and of chemical reactions. Undergraduate students of physics and related sciences will find this a stimulating account of the basic physics and its applications. Only an elementary knowledge of kinetic theory and atomic physics, as well as the rudiments of quantum theory, are presupposed for an understanding of this book. Statistical Physics, Second Edition features: A fully integrated treatment of thermodynamics and statistical mechanics. A flow diagram allowing topics to be studied in different orders or omitted altogether. Optional "starred" and highlighted sections containing more advanced and specialised material for the more ambitious reader. Sets of problems at the end of each chapter to help student understanding. Hints for solving the problems are given in an Appendix.

**Thermodynamics And Statistical Mechanics** - Richard Fitzpatrick
2020-07-07 This book provides a comprehensive exposition of the theory of equilibrium thermodynamics and statistical mechanics at a level suitable for well-prepared undergraduate students. The fundamental message of the book is that all results in equilibrium thermodynamics and statistical mechanics follow from a single unprovable axiom — namely, the principle of equal a priori probabilities — combined with elementary probability theory, elementary classical mechanics, and elementary quantum mechanics.

**Introduction to Statistical Physics** - Silvio Salinas
2013-03-09 This textbook covers the basic principles of statistical physics and
thermodynamics. The text is pitched at the level equivalent to first-year graduate studies or advanced undergraduate studies. It presents the subject in a straightforward and lively manner. After reviewing the basic probability theory of classical thermodynamics, the author addresses the standard topics of statistical physics. The text demonstrates their relevance in other scientific fields using clear and explicit examples. Later chapters introduce phase transitions, critical phenomena and non-equilibrium phenomena.

**A Modern Course in Statistical Physics** - L. E. Reichl 1984

**Statistical Physics of Particles** - Mehran Kardar 2007-06-07 Statistical physics has its origins in attempts to describe the thermal properties of matter in terms of its constituent particles, and has played a fundamental role in the development of quantum mechanics. Based on lectures taught by Professor Kardar at MIT, this textbook introduces the central concepts and tools of statistical physics. It contains a chapter on probability and related issues such as the central limit theorem and information theory, and covers interacting particles, with an extensive description of the van der Waals equation and its derivation by mean field approximation. It also contains an integrated set of problems, with solutions to selected problems at the end of the book and a complete set of solutions is available to lecturers on a password protected website at www.cambridge.org/9780521873420. A companion volume, Statistical Physics of Fields, discusses non-mean field aspects of scaling and critical phenomena, through the perspective of renormalization group.

**An Introduction to Statistical Mechanics and Thermodynamics** - Robert H. Swendsen 2012-03-01 This text presents statistical mechanics and thermodynamics as a
theoretically integrated field of study. It stresses deep coverage of fundamentals, providing a natural foundation for advanced topics. The large problem sets (with solutions for teachers) include many computational problems to advance student understanding.

Quantum Annealing and Related Optimization Methods - Arnab Das
2005-11-10 physics

From Classical to Quantum Mechanics - Giampiero Esposito
2004-03-11
This 2004 textbook provides a pedagogical introduction to the formalism, foundations and applications of quantum mechanics. Part I covers the basic material which is necessary to understand the transition from classical to wave mechanics. Topics include classical dynamics, with emphasis on canonical transformations and the Hamilton-Jacobi equation, the Cauchy problem for the wave equation, Helmholtz equation and eikonal approximation, introduction to spin, perturbation theory and scattering theory. The Weyl quantization is presented in Part II, along with the postulates of quantum mechanics. Part III is devoted to topics such as statistical mechanics and black-body radiation, Lagrangian and phase-space formulations of quantum mechanics, and the Dirac equation. This book is intended for use as a textbook for beginning graduate and advanced undergraduate courses. It is self-contained and includes problems to aid the reader's understanding.

Statistical and Thermal Physics - Harvey Gould
2021-09-14
A completely revised edition that combines a comprehensive coverage of statistical and thermal physics with enhanced computational tools, accessibility, and active learning activities to meet the needs of today's students and educators. This revised and expanded edition of Statistical and Thermal Physics introduces students to the essential ideas and techniques used in many areas of contemporary physics. Ready-
to-run programs help make the many abstract concepts concrete. The text requires only a background in introductory mechanics and some basic ideas of quantum theory, discussing material typically found in undergraduate texts as well as topics such as fluids, critical phenomena, and computational techniques, which serve as a natural bridge to graduate study. Completely revised to be more accessible to students Encourages active reading with guided problems tied to the text Updated open source programs available in Java, Python, and JavaScript Integrates Monte Carlo and molecular dynamics simulations and other numerical techniques Self-contained introductions to thermodynamics and probability, including Bayes’ theorem A fuller discussion of magnetism and the Ising model than other undergraduate texts Treats ideal classical and quantum gases within a uniform framework Features a new chapter on transport coefficients and linear response theory Draws on findings from contemporary research Solutions manual (available only to instructors)

**From Classical Mechanics To Quantum Field Theory, A Tutorial**-Ercolessi Elisa 2020-01-14 This book collects an extended version of the lectures delivered by the authors at the Fall Workshop on Geometry and Physics in the years 2014, 2015, 2016. It aims at introducing advanced graduate and PhD students, as well as young researchers, to current research in mathematics and physics. In particular, it fills the gap between the more physical-oriented and the more mathematical-oriented literature on quantum theory. It introduces various approaches to methods of quantization, along with their impact on modern mathematical methods.

**Thermodynamics and Statistical Mechanics**-Padmakar V. Panat 2008
**Lattice Systems**-Sacha Friedli 2017-11-30 A self-contained, mathematical introduction to the driving ideas in equilibrium statistical mechanics, studying important models in detail.

**Statistical Mechanics**-A. J. Berlinsky 2019-10-03 In a comprehensive treatment of Statistical Mechanics from thermodynamics through the renormalization group, this book serves as the core text for a full-year graduate course in statistical mechanics at either the Masters or Ph.D. level. Each chapter contains numerous exercises, and several chapters treat special topics which can be used as the basis for student projects. The concept of scaling is introduced early and used extensively throughout the text. At the heart of the book is an extensive treatment of mean field theory, from the simplest decoupling approach, through the density matrix formalism, to self-consistent classical and quantum field theory as well as exact solutions on the Cayley tree. Proceeding beyond mean field theory, the book discusses exact mappings involving Potts models, percolation, self-avoiding walks and quenched randomness, connecting various athermal and thermal models. Computational methods such as series expansions and Monte Carlo simulations are discussed, along with exact solutions to the 1D quantum and 2D classical Ising models. The renormalization group formalism is developed, starting from real-space RG and proceeding through a detailed treatment of Wilson’s epsilon expansion. Finally the subject of Kosterlitz-Thouless systems is introduced from a historical perspective and then treated by methods due to Anderson, Kosterlitz, Thouless and Young. Altogether, this comprehensive, up-to-date, and engaging text offers an ideal package for advanced undergraduate or graduate courses or for use in self study.

**Lecture Notes on Newtonian Mechanics**-Ilya L. Shapiro 2013-08-15 One could make the claim that all branches of physics are
basically generalizations of classical mechanics. It is also often the first course which is taught to physics students. The approach of this book is to construct an intermediate discipline between general courses of physics and analytical mechanics, using more sophisticated mathematical tools. The aim of this book is to prepare a self-consistent and compact text that is very useful for teachers as well as for independent study.

Geometry from Dynamics, Classical and Quantum-José F. Cariñena 2014-09-23 This book describes, by using elementary techniques, how some geometrical structures widely used today in many areas of physics, like symplectic, Poisson, Lagrangian, Hermitian, etc., emerge from dynamics. It is assumed that what can be accessed in actual experiences when studying a given system is just its dynamical behavior that is described by using a family of variables ("observables" of the system). The book departs from the principle that "dynamics is first" and then tries to answer in what sense the sole dynamics determines the geometrical structures that have proved so useful to describe the dynamics in so many important instances. In this vein it is shown that most of the geometrical structures that are used in the standard presentations of classical dynamics (Jacobi, Poisson, symplectic, Hamiltonian, Lagrangian) are determined, though in general not uniquely, by the dynamics alone. The same program is accomplished for the geometrical structures relevant to describe quantum dynamics. Finally, it is shown that further properties that allow the explicit description of the dynamics of certain dynamical systems, like integrability and super integrability, are deeply related to the previous development and will be covered in the last part of the book. The mathematical framework used to present the previous program is kept to an elementary level throughout the text, indicating where more advanced notions will be needed to proceed further. A
family of relevant examples is discussed at length and the necessary ideas from geometry are elaborated along the text. However no effort is made to present an "all-inclusive" introduction to differential geometry as many other books already exist on the market doing exactly that. However, the development of the previous program, considered as the posing and solution of a generalized inverse problem for geometry, leads to new ways of thinking and relating some of the most conspicuous geometrical structures appearing in Mathematical and Theoretical Physics.

**Statistical Thermodynamics of Nonequilibrium Processes**
Joel Keizer 2012-12-06 The structure of the theory of thermodynamics has changed enormously since its inception in the middle of the nineteenth century. Shortly after Thomson and Clausius enunciated their versions of the Second Law, Clausius, Maxwell, and Boltzmann began actively pursuing the molecular basis of thermodynamics, work that culminated in the Boltzmann equation and the theory of transport processes in dilute area and thereafter the connection between the two is presented and discussed. In addition, mathematical techniques are introduced at appropriate times, highlighting such use as: exact and inexact differentials, partial derivatives, Caratheodory's theorem, Legendre transformation, and combinatorial analysis. * Emphasis is placed equally on fundamentals and applications * Several problems are included.
gases. Much later, Onsager undertook the elucidation of the symmetry of transport coefficients and, thereby, established himself as the father of the theory of nonequilibrium thermodynamics. Combining the statistical ideas of Gibbs and Langevin with the phenomenological transport equations, Onsager and others went on to develop a consistent statistical theory of irreversible processes. The power of that theory is in its ability to relate measurable quantities, such as transport coefficients and thermodynamic derivatives, to the results of experimental measurements. As powerful as that theory is, it is linear and limited in validity to a neighborhood of equilibrium. In recent years it has been possible to extend the statistical theory of nonequilibrium processes to include nonlinear effects. The modern theory, as expounded in this book, is applicable to a wide variety of systems both close to and far from equilibrium. The theory is based on the notion of elementary molecular processes, which manifest themselves as random changes in the extensive variables characterizing a system. The theory has a hierarchical character and, thus, can be applied at various levels of molecular detail.

**Intermediate Physics for Medicine and Biology**
Russell K. Hobbie 2015-04-15
This classic text has been used in over 20 countries by advanced undergraduate and beginning graduate students in biophysics, physiology, medical physics, neuroscience, and biomedical engineering. It bridges the gap between an introductory physics course and the application of physics to the life and biomedical sciences. Extensively revised and updated, the fifth edition incorporates new developments at the interface between physics and biomedicine. New coverage includes cyclotrons, photodynamic therapy, color vision, x-ray crystallography, the electron microscope, cochlear implants, deep brain stimulation, nanomedicine, and other topics highlighted.
in the National Research Council report BIO2010. As with the previous edition, the first half of the text is primarily biological physics, emphasizing the use of ideas from physics to understand biology and physiology, and the second half is primarily medical physics, describing the use of physics in medicine for diagnosis (mainly imaging) and therapy. Prior courses in physics and in calculus are assumed. Intermediate Physics for Medicine and Biology is also ideal for self study and as a reference for workers in medical and biological research. Over 850 problems test and enhance the student's understanding and provide additional biological examples. A solutions manual is available to instructors. Each chapter has an extensive list of references.

**Equilibrium Statistical Physics**-Michael Plischke 1994 This textbook concentrates on modern topics in statistical physics with an emphasis on strongly interacting condensed matter systems. The book is self-contained and is suitable for beginning graduate students in physics and materials science or undergraduates who have taken an introductory course in statistical mechanics. Phase transitions and critical phenomena are discussed in detail including mean field and Landau theories and the renormalization group approach. The theories are applied to a number of interesting systems such as magnets, liquid crystals, polymers, membranes, interacting Bose and Fermi fluids; disordered systems, percolation and spin of equilibrium concepts are also
discussed. Computer simulations of condensed matter systems by Monte Carlo-based and molecular dynamics methods are treated.

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.

Statistical Mechanics-R K Pathria 2017-02-21 Statistical Mechanics discusses the fundamental concepts involved in understanding the physical properties of matter in bulk on the basis of the dynamical behavior of its microscopic constituents. The book emphasizes the equilibrium states of physical systems. The text first details the statistical basis of thermodynamics, and then proceeds to discussing the elements of ensemble theory. The next two chapters cover the canonical and grand canonical ensemble. Chapter 5 deals with the formulation of quantum statistics, while Chapter 6 talks about the theory of simple gases. Chapters 7 and 8 examine the ideal Bose and Fermi systems. In the next three chapters, the book covers the statistical mechanics of interacting
systems, which includes the method of cluster expansions, pseudopotentials, and quantized fields. Chapter 12 discusses the theory of phase transitions, while Chapter 13 discusses fluctuations. The book will be of great use to researchers and practitioners from wide array of disciplines, such as physics, chemistry, and engineering.

An Axiomatic Basis for Quantum Mechanics
Günther Ludwig 2012-12-06
In the first volume we based quantum mechanics on the objective description of macroscopic devices. The further development of the quantum mechanics of atoms, molecules, and collision processes has been described in [2]. In this context also the usual description of composite systems by tensor products of Hilbert spaces has been introduced. This method can be formally extrapolated to systems composed of "many" elementary systems, even arbitrarily many. One formerly had the opinion that this "extrapolated quantum mechanics" is a more comprehensive theory than the objective description of macrosystems, an opinion which generated unsurmountable difficulties for explaining the measuring process. With respect to our foundation of quantum mechanics on macroscopic objectivity, this opinion would mean that our foundation is no foundation at all. The task of this second volume is to attain a compatibility between the objective description of macrosystems and an extrapolated quantum mechanics. Thus in X we establish the "statistical mechanics" of macrosystems as a theory more comprehensive than an extrapolated quantum mechanics. On this basis we solve the problem of the measuring process in quantum mechanics, in XI developing a theory which describes the measuring process as an interaction between microsystems and a macroscopic device. This theory also allows to calculate "in principle" the observable measured by a device. Neither an incorporation of consciousness nor a mysterious imagination such as "collapsing" wave packets are necessary.
Principles of Condensed Matter Physics - P. M. Chaikin
2000-09-28 Now in paperback, this book provides an overview of the physics of condensed matter systems. Assuming a familiarity with the basics of quantum mechanics and statistical mechanics, the book establishes a general framework for describing condensed phases of matter, based on symmetries and conservation laws. It explores the role of spatial dimensionality and microscopic interactions in determining the nature of phase transitions, as well as discussing the structure and properties of materials with different symmetries. Particular attention is given to critical phenomena and renormalization group methods. The properties of liquids, liquid crystals, quasicrystals, crystalline solids, magnetically ordered systems and amorphous solids are investigated in terms of their symmetry, generalised rigidity, hydrodynamics and topological defect structure. In addition to serving as a course text, this book is an essential reference for students and researchers in physics, applied physics, chemistry, materials science and engineering, who are interested in modern condensed matter physics.

General Register - University of Michigan 1967
Announcements for the following year included in some vols.