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Introduction to ElectrodynamicsQUANTUM MECHANICSKlassische ElektrodynamikQuantenmechanikQuantenmechanikInteractions of Photons and Neutrons with MatterFundamentalQuantenmechanikIntroduction to Quantum Mechanics 2Durch Symmetrie die moderne Physik verstehenProgrammieren von Kopf bis Fu ß Quantum MechanicsRevolutions in Twentieth-Century PhysicsQuantenmechanikQuantenmechanikIntroduction to Mathematical PhysicsWarum Gott doch w ü rfeltQuantum MechanicsAn Introduction to Quantum MechanicsThe Physics of SolidsNon-Relativistic Quantum MechanicsIntroduction to Quantum MechanicsQuantenphysik f ü r DummiesIntroduction to Quantum MechanicsEinf ü hrung in die Physik des 20. JahrhundertsPhysik FormelsammlungIntroduction to Quantum MechanicsQuantenmechanik: Das Theoretische MinimumInstructor's Solutions ManualPhysikvorlesungElektrotechnik f ü r Ingenieure - FormelsammlungQuantum Mechanics Between Ontology and EpistemologyElektrodynamikQUANTUM MECHANICS : A TEXTBOOK FOR UNDERGRADUATESQuantum Principles and Particles, Second EditionModern Quantum MechanicsPhysics from SymmetryThe Book of the Sub KeennessSupersymmetric Quantum MechanicsOscillators Quantenph ä nomene und Elementarteilchen: Die seltsamen Gesetze der Natur Wir hatten die Sterne kartiert, die DNS isoliert und standen kurz vor der Atomspaltung. Unser Wissen war fast vollst ä ndig - dachten wir. Doch dann kam eine neue Herausforderung f ü r die Wissenschaft: die Quantenphysik. Ohne sie funktioniert nichts im Universum! Die Quantenphysik f ü hrt uns zu Orten, an denen parallele Universen und Paradoxien hinter jeder Ecke lauern und die Gegenst ä nde nicht auf Raum oder Zeit achten m ü ssen. In diesem unterhaltsamen Sachbuch erkl ä rt Tim James die seltsamen Ph ä nomene der Quantenwelt, wo alles Vertraute auf dem Kopf steht. - Basics der Quantenmechanik: Max Plancks Quantensprung und sein bahnbrechendes Strahlungsgesetz, Schr ö dingers Katze und die Heisenbergsche Unsch ä rferelation - Welle oder Teilchen? Der Doppelcharakter von Photonen und Elektronen - Tunneleffekt, verschr ä nkte Teilchen und Quantenteleportation: jenseits der Klassischen Physik - Vom Aufbau der Materie und der Wechselwirkung der Elementarteilchen: Quarks, Leptonen und das unverzichtbare Higgs-Boson - Warum Einstein die Quantenphysik ablehnte und weshalb die Schwerkraft der Quantenphysik nicht in den Kram passt Fantastischer Ü berblick ü ber die Geschichte der Quantenphysik Die brillantesten K ö pfe der Wissenschaft versuchen seit mehr als einem Jahrhundert, die Geheimnisse der Quantenphysik zu entschl ü sseln, mit schwindelerregenden Theorien und ausgekl ü gelten Experimenten. Dem Youtuber, Blogger und Lehrer Tim James gelingt es mit seinem Buch, selbst die kompliziertesten Aspekte der Quantenwelt zu erkl ä ren - humorvoll und leicht verst ä ndlich!Neben der Elektrodynamik ist die Quantenmechanik der wichtigste Pfeiler in der Physik. Viele grundlegende B ü cher versuchen sich an diesem Thema, werden aber in der Beschreibung und Zugangsweise demselben aber nicht immer gerecht. Es geht um die Fragen, wie wendet man die Quantenmechanik an und wie geht man mit den Problemematiken der Quantenmechanik um. Dieses in der internationalen Lehre fest etablierte Buch bietet Studenten genau diese moderne und nachvollziehbare Einf ü hrung in die modernen quantenmechanischen Konzepte und deren Verwendung

f ü r das 21. Jahrhundert. Neben der Elektrodynamik vo.Quantum mechanics touches all areas of physics, chemistry, life sciences, and engineering. It has emerged as a tool for researching and developing new technology that has had a deep impact on modern life. An essential ingredient of quantum mechanics is the role of the observer and the duality between particle and wave properties of matter at very small scales. This book covers such topics as complex space forms of quantum mechanics, entropy in quantum mechanics, and equations of relativistic quantum mechanics as well as applications of quantum mechanics to more complicated situations. Written by international experts, the book illustrates the wide scope, influence, and applicability of quantum mechanics.Die Übersetzung des Klassikers zur Quantenmechanik von Nobelpreistr ä ger Cohen-Tannoudji und seinen Co-Autoren f ü hrt Studierende auf hocheffektive Weise in die Prinzipien und Konzepte der Quantenphysik ein. Jedes Kapitel besteht aus zwei selbst ä ndigen Teilen: Zu Beginn werden die grundlegenden Konzepte vorgestellt und in den darauffolgenden Erg ä nzungen an Hand von zahlreichen Anwendungen illustriert und vertieft. Das Werk erscheint nun in f ü nfter, durchgehend ü berarbeiteter Auflage. 5. Auflage der Übersetzung des Klassikers von Nobelpreistr ä ger Cohen-Tannoudji und seinen Co-Autoren Effektiver Zugang zur Quantenmechanik Eignet sich als Lehr- und Übungsbuch sowie als Nachschlagewerk Mit zahlreichen Aufgaben Aus dem Inhalt: Elementare Streutheorie Der Spin des Elektrons Addition von Drehimpulsen Station ä re St ö rungstheorie Fein- und Hyperfeinstruktur des Wasserstoffatoms N ä herungsmethoden f ü r zeitabh ä ngige Probleme Systeme identischer TeilchenThis textbook offers a unique introduction to quantum mechanics progressing gradually from elementary quantum mechanics to aspects of particle physics. It presents the microscopic world by analysis of the simplest possible quantum mechanical system (spin 1/2). A special feature is the author ' s use of visual aids known as process diagrams, which show how amplitudes for quantum mechanical processes are computed. The second edition includes a new chapter and problems on time-dependent processes, in addition to new material on quantum computing and improved illustrations. Key Features: Provides a completely updated text with expanded contents. Includes a brand new chapter on time-dependent processes and expanded coverage of recent developments in particle physics. Emphasizes a visual approach employing process diagrams and utilizing new figures. Incorporates quantum information theory in a new appendix, with other helpful supplements on notation, lattice models, weak flavor mixing, and numerical simulations.Sometimes a quantum physicist goes too far. Sometimes is probably never now. First, there was The Quantum Physics For Dummies by Steve Holzner. Then The Quantum World: Quantum Physics for Everyone by Kenneth William Ford Then Quantum Mechanics for Scientists and Engineers (Classroom Resource Materials) by D. A. B. Miller, Quantum Mechanics Demystified by David McMahon, Quantum Mechanics: A Modern and Concise Introductory Course (Advances Texts in Physics) by Daniel R. B è s Then Introductory Quantum Mechanics (4th Edition) by Richard L. Liboff, Introduction to Quantum Mechanics (2nd Edition) by David J. Griffiths,Quantum Physics for Scientists and Technologists: Fundamental Principles and Applications for Biologists, Chemists, Computer Scientists, and Nanotechnologists by Paul Sanghera. And nowThe Book of the Sub keeness (How to use quantum probability to rule the world with dada)Von den Grundlagen bis zur Streutheorie - das Wichtigste zur Quantenmechanik Die Quantenphysik ist ein zentrales und spannendes, wenn auch von vielen Sch ü lern und Studenten ungeliebtes Thema der Physik. Aber keine Sorge! Steven Holzner erkl ä rt Ihnen

verst ä ndlich und lebendig, was Sie ü ber Quantenphysik wissen m ü ssen. Er erl ä utert die Grundlagen von Drehimpuls und Spin, gibt Ihnen Tipps, wie Sie komplexe Gleichungen l ö sen und nimmt den klassischen Problemen der Quantenphysik den Schrecken. Dabei arbeitet er mit Beispielen, die er ausf ü hrlich erkl ä rt und gibt Ihnen so zus ä tzliche Sicherheit auf einem vor Unsch ä rfen wimmelnden Feld.Viele Studenten kommen mit der ausf ü hrlichen Darstellung der elektrotechnischen Zusammenh ä nge in den Lehrb ü chern gut zurecht. Geht es dann in die Phase der Pr ü fungsvorbereitung, w ü nschen sie sich eine kompakte Darstellung mit Formeln, Beispielen und L ö sungswegen, mit denen Ü bungs- und Pr ü fungsaufgaben gel ö st werden k ö nnen. Bei der Vorbereitung auf Klausuren, aber auch zum Nachschlagen im sp ä teren Beruf leistet die Formelsammlung daher schnell und sicher Hilfe. Ein Verzeichnis aller verwendeten Formelzeichen und ein Sachwortverzeichnis optimieren den Einsatz des Buches. Der Inhalt Physikalische Grundbegriffe der Elektrotechnik - Gleichstromtechnik - Das elektromagnetische Feld - Wechselstromtechnik - Ortskurven - Der Transformator - Mehrphasensysteme - Ausgleichsvorg ä nge in linearen Netzen - Fourieranalyse - Vierpoltheorie Die Zielgruppen Studierende der Ingenieur- und Naturwissenschaften, insbesondere Elektrotechnik, Technische Informatik und Physik an Fachhochschulen und Technischen Hochschulen, Universit ä ten und Berufsakademien Der Autor Prof. Dr.-Ing. Wilfried Wei ß gerber lehrte an der Fachhochschule Hannover Grundlagen der Elektrotechnik, H ö here Mathematik und Theoretische Elektrotechnik.Modern Quantum Mechanics is a classic graduate level textbook, covering the main quantum mechanics concepts in a clear, organized and engaging manner. The author, Jun John Sakurai, was a renowned theorist in particle theory. The second edition, revised by Jim Napolitano, introduces topics that extend the text's usefulness into the twenty-first century, such as advanced mathematical techniques associated with quantum mechanical calculations, while at the same time retaining classic developments such as neutron interferometer experiments, Feynman path integrals, correlation measurements, and Bell's inequality. A solution manual for instructors using this textbook can be downloaded from www.cambridge.org/9781108422413.Die "Physikvorlesung" ist ein Standardwerk der Aristoteles-Forschung. Das in acht B ü cher eingeteilte Werk bildet die Zusammenfassung mehrerer Einzelabhandlungen ü ber Prinzipien und Begriffe der Natur sowie die Gr ü nde des Seins, insofern es mit Ver ä nderungen und Bewegungen zu tun hat. Buch I enth ä lt eine Auseinandersetzungen mit den Meinungen fr ü herer Philosophen ü ber Anzahl und Charakter der Prinzipien in der Natur. In Buch II erfolgt die aristotelische Wesensbestimmung des Naturbegriffs und der Prinzipien des Naturgeschehens. Zur Erkl ä rung dieses Naturgeschehens bezeichnet und analysiert Aristoteles die Begriffe Bewegung (Buch III und V), Raum und Zeit (Buch IV) sowie Kontinuum und Teilbarkeit (Buch VI). In den B ü chern VII und VIII schlie ß t sich noch einmal eine Analyse des Bewegungsbegriffs in Abgrenzung zu anderen Formen der Ver ä nderung und in der Diskussion der Frage nach der Ewigkeit oder Anfang und Urasche der Bewegung an.Was sind die Prinzipien der Quantenmechanik? Wie funktioniert Verschr ä nkung? Was besagt das Bellsche Theorem? Mit diesem Buch gehen Leonard Susskind und Art Friedman eine Herausforderung an, die jeder Physik-Fan bew ä ltigen will: die Quantenmechanik. Begeisterte Physik-Amateure bekommen die notwendige Mathematik und die Formeln an die Hand, die sie f ü r ein wirkliches Verst ä ndnis ben ö tigen. Mit glasklaren Erkl ä rungen, witzigen und hilfreichen Dialogen und grundlegenden Ü bungen erkl ä ren die Autoren nicht alles, was es ü ber Quantenmechanik zu wissen gibt - sondern

alles Wichtige."The conceptual changes brought by modern physics are important, radical and fascinating, yet they are only vaguely understood by people working outside the field. Exploring the four pillars of modern physics - relativity, quantum mechanics, elementary particles and cosmology - this clear and lively account will interest anyone who has wondered what Einstein, Bohr, Schr è odinger and Heisenberg were really talking about. The book discusses quarks and leptons, antiparticles and Feynman diagrams, curved space-time, the Big Bang and the expanding Universe. Suitable for undergraduate students in non-science as well as science subjects, it uses problems and worked examples to help readers develop an understanding of what recent advances in physics actually mean"--Auf der Basis von Symmetrie- Ü berlegungen bietet dieses Buch eine einzigartige Herleitung der fundamentalen Theorien der Physik. Daf ü r werden zun ä chst alle mathematische Werkzeuge eingef ü hrt, die der Leser ben ö tigt, um mit Symmetrien in der Physik zu arbeiten. Hierbei wird jedoch nur gew ö hnliche Schulmathematik vorausgesetzt. Anschlie ß end werden diese Werkzeuge benutzt, um durch Symmetrie- Ü berlegungen die fundamentalen Gleichungen der Quantenmechanik, Quantenfeldtheorie, Elektrodynamik und Klassischen Mechanik herzuleiten. So ist der Leser in der Lage, die Basis-Annahmen hinter und die Verbindungen zwischen den modernen Theorien der Physik zu verstehen. Im letzten Teil des Buches werden dann Anwendungen der zuvor hergeleiteten Gleichungen besprochen. Das Buch richtet sich an alle, die sich ein tieferes Verst ä ndnis der modernen Physik w ü nschen. Anf ä nger und Selbstlerner erhalten durch die "Symmetrie-Perspektive" einen schnellen, aber tiefen Ü berblick ü ber die moderne Physik. Erfahrene Studierende k ö nnen durch den unkonventionellen Blickwinkel ihr Verst ä ndnis vertiefen und Wissensl ü cken f ü llen. Nachdem das Buch "Physics From Symmetry" Leser in aller Welt begeisterte, erscheint nun mit "Physik und Symmetrie" eine verbesserte deutsche Version.Solid State Physics emphasizes a few fundamental principles and extracts from them a wealth of information. This approach also unifies an enormous and diverse subject which seems to consist of too many disjoint pieces. The book starts with the absolutely minimum of formal tools, emphasizes the basic principles, and employs physical reasoning (" a little thinking and imagination" to quote R. Feynman) to obtain results. Continuous comparison with experimental data leads naturally to a gradual refinement of the concepts and to more sophisticated methods. After the initial overview with an emphasis on the physical concepts and the derivation of results by dimensional analysis, The Physics of Solids deals with the Jellium Model (JM) and the Linear Combination of Atomic Orbitals (LCAO) approaches to solids and introduces the basic concepts and information regarding metals and semiconductors.Newton'sche Axiome? Reynoldszahl? Carnot-Prozess? Operationsverst ä rker? - Diese Formelsammlung f ü hrt klar und anschaulich durch den Mikrokosmos der physikalischen Formeln und ihren Anwendungen in Technik und Naturwissenschaften. Von der klassischen Bewegungslehre bis zur modernen Atomphysik liefert diese Formelsammlung hilfreiche Basis- und Hintergrundinformation, wenn Studium, Pr ü fungen und Beruf schnelle und sichere Antworten fordern.A clear and accessible introduction to theory and applications of quantum mechanics for junior/senior undergraduate students of physics.This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. For junior/senior-level electricity and magnetism courses. This book is known for its clear, concise, and accessible coverage of standard topics in a logical and pedagogically sound order.

The highly polished Fourth Edition features a clear, accessible treatment of the fundamentals of electromagnetic theory, providing a sound platform for the exploration of related applications (ac circuits, antennas, transmission lines, plasmas, optics, etc.). Its lean and focused approach employs numerous new examples and problems.Primarily intended for the undergraduate students of physics, the book, in its second edition, apprises the students with the fundamentals of quantum mechanics. While retaining the same flow of contents and distinguishing features of the previous edition, the book now encompasses a number of modifications and additions. The author sets out with Planck ' s quantum hypothesis and takes the students along through the new concepts and ideas, providing an easy-to-understand description of core quantum concepts and basic mathematical structures. The fundamental principles and the mathematical formalism introduced are amply illustrated through a number of solved examples. Chapter-end exercises and review questions, generally designed as per the examination pattern, serve to reinforce the material learnt. Chapter-end summaries capture the key points discussed in the text. NEW TO THE SECOND EDITION · Incorporates detailed historical introduction to quantum mechanics · Comprises new sections on Time Variation of the Expectation Value of An Observable and Ehrenfest ' s Theorem in the respective chapter · Includes several new numerical problems as well as solutions/hints to the existing exercise problemsFor one-semester/-year, junior-/senior-level courses in Quantum Mechanics and Quantum Chemistry. This text first teaches students how to do quantum mechanics, and then provides them with a more insightful discussion of what it means. Fundamental principles are covered, quantum theory presented, and special techniques developed for attacking realistic problems. Two-part coverage organizes topics under basic theory, and assembles an arsenal of approximation schemes with illustrative applications.This book develops and simplifies the concept of quantum mechanics based on the postulates of quantum mechanics. The text discusses the technique of disentangling the exponential of a sum of operators, closed under the operation of commutation, as the product of exponentials to simplify calculations of harmonic oscillator and angular momentum. Based on its singularity structure, the Schr ö dinger equation for various continuous potentials is solved in terms of the hypergeometric or the confluent hypergeometric functions. The forms of the potentials for which the one-dimensional Schr ö dinger equation is exactly solvable are derived in detail. The problem of identifying the states of two-level systems which have no classical analogy is addressed by going beyond Bell-like inequalities and separability. The measures of quantumness of mutual information in two two-level systems is also covered in detail.We have written this book in order to provide a single compact source for undergraduate and graduate students, as well as for professional physicists who want to understand the essentials of supersymmetric quantum mechanics. It is an outgrowth of a seminar course taught to physics and mathematics juniors and seniors at Loyola University Chicago, and of our own research over a quarter of a century.This textbook is written as a basic introduction to Quantum Mechanics for use by the undergraduate students in physics, who are exposed to this subject for the first time. Providing a gentle introduction to the subject, it fills the gap between the available books which provide comprehensive coverage appropriate for postgraduate courses and the ones on Modern Physics which give a rather incomplete treatment of the subject leaving out many conceptual and mathematical details. The author sets out with Planck ' s quantum hypothesis and takes the student along through the new concepts and

ideas, providing an easy-to-understand description of core quantum concepts and basic mathematical structures. The fundamental principles and the mathe-matical formalism introduced, are amply illustrated through a number of solved examples. Chapter-end exercises and review questions, generally designed as per the examination pattern, serve to reinforce the material learnt. Chapter-end summaries capture the key points discussed in the text. Beside the students of physics, the book can also be used by students of chemistry and first-year students of all branches of engineering for gaining a basic understanding of quantum mechanics, otherwise considered a difficult subject.This authoritative, advanced introduction provides a complete, modern perspective on quantum mechanics. It clarifies many common misconceptions regarding wave/particle duality and the correct interpretation of measurements. The author develops the text from the ground up, starting from the fundamentals and presenting information at an elementary level, avoiding unnecessarily detailed and complex derivations in favor of simple, clear explanations. He begins in the simplest context of a two-state system and shows why quantum mechanics is inevitable, and what its relationship is to classical mechanics. He also outlines the decoherence approach to interpreting quantum mechanics. Distinguishing features: Provides a thorough grounding in the principles and practice of quantum mechanics, including a core understanding of the behavior of atoms, molecules, solids, and light. Utilizes easy-to-follow examples and analogies to illustrate important concepts. Helps develop an intuitive sense for the field, by guiding the reader to understand how the correct formulas reduce to the non-relativistic ones. Includes numerous worked examples and problems for each chapter.This is a textbook that derives the fundamental theories of physics from symmetry. It starts by introducing, in a completely self-contained way, all mathematical tools needed to use symmetry ideas in physics. Thereafter, these tools are put into action and by using symmetry constraints, the fundamental equations of Quantum Mechanics, Quantum Field Theory, Electromagnetism, and Classical Mechanics are derived. As a result, the reader is able to understand the basic assumptions behind, and the connections between the modern theories of physics. The book concludes with first applications of the previously derived equations. Thanks to the input of readers from around the world, this second edition has been purged of typographical errors and also contains several revised sections with improved explanations.This book explores the prospects of rivaling ontological and epistemic interpretations of quantum mechanics (QM). It concludes with a suggestion for how to interpret QM from an epistemological point of view and with a Kantian touch. It thus refines, extends, and combines existing approaches in a similar direction. The author first looks at current, hotly debated ontological interpretations. These include hidden variables-approaches, Bohmian mechanics, collapse interpretations, and the many worlds interpretation. He demonstrates why none of these ontological interpretations can claim to be the clear winner amongst its rivals. Next, coverage explores the possibility of interpreting QM in terms of knowledge but without the assumption of hidden variables. It examines QBism as well as Healey ' s pragmatist view. The author finds both interpretations or programs appealing, but still wanting in certain respects. As a result, he then goes on to advance a genuine proposal as to how to interpret QM from the perspective of an internal realism in the sense of Putnam and Kant. The book also includes two philosophical interludes. One details the notions of probability and realism. The other highlights the connections between the notions of locality, causality, and reality in the context of violations of Bell-type inequalities.This invaluable book

is based on lecture notes developed for a one-semester graduate course entitled “Interaction of Radiation with Matter”, taught in the Department of Nuclear Science and Engineering at the Massachusetts Institute of Technology. The main objective of the course is to teach enough quantum and classical radiation theory to allow students in engineering and the applied sciences to understand and have access to the vast literature on applications of ionizing and non-ionizing radiation in materials research. Besides presenting the fundamental physics of radiation interactions, the book devotes individual chapters to some of the important modern-day experimental tools, such as nuclear magnetic resonance, photon correlation spectroscopy, and the various types of neutron, x-ray, and light-scattering techniques. End-of-chapter problems have been added for the new edition, making the book more appropriate as a course textbook.A comprehensive survey of all the mathematical methods that should be available to graduate students in physics. In addition to the usual topics of analysis, such as infinite series, functions of a complex variable and some differential equations as well as linear vector spaces, this book includes a more extensive discussion of group theory than can be found in other current textbooks. The main feature of this textbook is its extensive treatment of geometrical methods as applied to physics. With its introduction of differentiable manifolds and a discussion of vectors and forms on such manifolds as part of a first-year graduate course in mathematical methods, the text allows students to grasp at an early stage the contemporary literature on dynamical systems, solitons and related topological solutions to field equations, gauge theories, gravitational theory, and even string theory. Free solutions manual available for lecturers at www.wiley-vch.de/supplements/.Quantum mechanics is the foundation of modern technology, due to its innumerable applications in physics, chemistry and even biology. This second volume studies Schr ö dinger's equation and its applications in the study of wells, steps and potential barriers. It examines the properties of orthonormal bases in the space of square-summable wave functions and Dirac notations in the space of states. This book has a special focus on the notions of the linear operators, the Hermitian operators, observables, Hermitian conjugation, commutators and the representation of kets, bras and operators in the space of states. The eigenvalue equation, the characteristic equation and the evolution equation of the mean value of an observable are introduced. The book goes on to investigate the study of conservative systems through the time evolution operator and Ehrenfest's theorem. Finally, this second volume is completed by the introduction of the notions of quantum wire, quantum wells of semiconductor materials and quantum dots in the appendices.An oscillator is dedicated to the generation of signals. It is used in computers, telecoms, watchmaking, astronomy, and metrology. It can be a pendulum, an electronic oscillator based on quartz technology, an optoelectronic oscillator, or an atomic clock, depending on its application. Since water clocks of antiquity, mechanical clocks invented during the thirteenth century, and the discovery of piezoelectricity by Jacques and Pierre Curie in 1880, oscillators have made great progress. This book does not attempt to tell the story of oscillators, but rather provides an overview of particular oscillator structures through examples from mathematics to oscillators, and from the millimeter scale to the vibration of a building, focusing on recent developments, as we live in a time when technology and mathematical analysis play a vital role.The core content of even the most intricate intellectual edifices is often a simple fact or idea. So is it with quantum mechanics; the entire mathematical fabric of the formal description of quantum mechanics stems

essentially from the fact that quantum probabilities interfere (i.e., from the superposition principle). This book is dedicated to substantiating this claim. In the process, the book tries to demonstrate how the factual content of quantum mechanics can be transcribed in the formal language of vector spaces and linear transformations by disentangling the empirical content from the usual formal description. More importantly, it tries to bring out what this transcription achieves. The book uses a pedagogic strategy which reverse engineers the postulates of quantum mechanics to device a schematic outline of the empirical content of quantum mechanics from which the postulates are then reconstructed step by step. This strategy is adopted to avoid the disconcerting details of actual experiments (however simplified) to spare the beginner of issues that lurk in the fragile foundations of the subject. In the Copenhagen interpretation of quantum mechanics, the key idea is measurement. But "measurement" carries an entirely different meaning from the connotation that the term carries elsewhere in physics. This book strives to underline this as strongly as possible. The book is intended as an undergraduate text for a first course in quantum mechanics. Since the book is self contained, it may also be used by enthusiastic outsiders interested to get a glimpse of the core content of the subject. Features: Demonstrates why linear algebra is the appropriate mathematical language for quantum mechanics. Uses a reconstructive approach to motivate the postulates of quantum mechanics. Builds the vocabulary of quantum mechanics by showing how the entire body of its conceptual ingredients can be constructed from the single notion of quantum measurement.