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Non-Relativistic Quantum Mechanics Quantum Theory of Real Materials Quantum Mechanics, Quantum Field Theory Quantum Theory of Light Quantum Theory, Deformation and Integrability Principles of Quantum Mechanics The Quantum Theory of Motion Quantum Puzzle, The: Critique Of Quantum Theory and Electrodynamics The Quantum Theory of Light Advanced Molecular Quantum Mechanics Parametrized Relativistic Quantum Theory Time in Quantum Mechanics Quantum Theory of Chemical Reactivity Time, Causality, and the Quantum Theory Quantum Theory Paradox Lost Quantum Field Theory Quantum Mechanics Intermediate Spectral Theory and Quantum Dynamics Quantum Mechanics I Scattering Theory Topics in Advanced Quantum Mechanics for Quantum Physics Quantum Theory Advances in Quantum Chemistry: Lowdin Volume Quantum Relativity Quantum Mechanics II A First Course in Topos Quantum Theory Foundations of Molecular Quantum Electrodynamics Quantum Electrodynamics Quantum Theory of Chemical Reactivity Countum Mechanics II A First Course in Topos Quantum Theory Foundations of Molecular Quantum Electrodynamics Quantum Theory of Chemical Reactions The Cosmic Code Quantum Theory of the Chemical Bond Relativistic Quantum Theory of Atoms and Molecules Quantum Models of Cognition and Decision Symmetries in Quantum Mechanics

NON-RELATIVISTIC QUANTUM MECHANICS

2017-07-04

INTRODUCES READERS TO NON RELATIVISTIC QUANTUM MECHANICS AND ITS MATHEMATICAL METHODS

QUANTUM THEORY OF REAL MATERIALS

1996-02-29

A FESTSCHRIFT IN HONOR OF PROFESSOR MARVIN L COHEN THIS VOLUME IS A FESTSCHRIFT IN HONOR OF PROFESSOR MARVIN L COHEN THE ARTICLES CONTRIBUTED BY LEADING RESEARCHERS IN CONDENSED MATTER PHYSICS HIGH LIGHT RECENT ADVANCES IN THE USE OF QUANTUM THEORY TO EXPLAIN AND PREDICT PROPERTIES OF REAL MATERIALS THE INVENTION OF QUANTUM MECHANICS IN THE 1920 S PROVIDED DETAILED DESCRIPTIONS OF THE ELECTRONIC STRUCTURE OF ATOMS HOWEVER A SIMILAR UNDERSTANDING OF SOLIDS HAS BEEN ACHIEVED ONLY IN THE PAST 30 YEARS OWING TO THE COMPLEX ELECTRON ION AND ELECTRON ELECTRON INTERACTIONS IN THESE SYSTEMS PROFESSOR COHEN IS A CENTRAL FIGURE IN THIS ACHIEVEMENT HIS DEVELOPMENT OF THE PSEUDOPOTENTIAL AND TOTAL ENERGY METHODS PROVIDED AN ALTERNATE ROUTE USING COMPUTERS FOR THE EXPLORATION OF SOLIDS AND NEW MATERIALS EVEN WHEN THEY HAVE NOT YET BEEN SYNTHESIZED PROFESSOR COHEN S CONTRIBUTIONS TO MATERIALS THEORY HAVE BEEN BOTH FUNDAMENTAL AND ENCOMPASSING THE CORPUS OF HIS WORK CONSISTS OF OVER 500 PAPERS AND A TEXTBOOK HIS BAND STRUCTURES FOR SEMICONDUCTORS ARE USED WORLDWIDE BY RESEARCHERS IN SOLID STATE PHYSICS AND CHEMISTRY AND BY DEVICE ENGINEERS PROFESSOR COHEN S OWN USE OF HIS THEORIES HAS RESULTED IN THE DETERMINATION OF THE ELECTRONIC STRUCTURE OPTICAL PROPERTIES STRUCTURAL AND VIBRATIONAL PROPERTIES AND SUPERCONDUCTING PROPERTIES OF NUMEROUS CONDENSED MATTER SYSTEMS INCLUDING SEMICONDUCTORS METALS SURFACES INTERFACES DEFECTS IN SOLIDS CLUSTERS AND NOVEL MATERIALS SUCH AS THE FULLERIDES AND NANOTUBES

QUANTUM MECHANICS, QUANTUM FIELD THEORY

2004-12

THE AUTHOR DOES NOT WANT A BOOK DESCRIPTION ON THE BACK COVER

QUANTUM THEORY OF LIGHT

1981

ABOUT FOUR YEARS AGO A PROMINENT STRING THEORIST WAS QUOTED AS SAYING THAT IT MIGHT BE POSSIBLE TO UNDERSTAND QUANTUM MECHANICS BY THE YEAR 2000 SOMETIMES NEW MATHEMATICAL DEVELOPMENTS MAKE SUCH UNDERSTANDING APPEAR POSSIBLE AND EVEN CLOSE BUT ON THE OTHER HAND INCREASING LACK OF EXPERIMENTAL VERIFICATION MAKE IT SEEM TO BE FURTHER DISTANT IN ANY EVENT ONE SEEMS TO ARRIVE AT NEW REVOLUTIONS IN PHYSICS AND MATHEMATICS EVERY YEAR THIS BOOK HOPES TO CONVEY SOME OF THE EXCITMENT OF THIS PERIOD BUT WILL ADOPT A RELATIVELY PEDESTRIAN APPROACH DESIGNED TO ILLUMINATE THE RELATIONS BETWEEN QUANTUM AND CLASSICAL THERE WILL BE SOME DISCUSSION OF PHILOSOPHICAL MATTERS SUCH AS MEASUREMENT UNCERTAINTY DECOHERENCE ETC BUT PHILOSOPHY WILL NOT BE EMPHASIZED GENERALLY WE WANT TO ENIOY THE FRUITS OF COMPUTATION BASED ON THE OPERATOR FORMULATION OF QM AND QUANTUM FIELD THEORY IN CHAPTER CONNECTIONS OF QM TO DETERMINISTIC BEHAVIOR ARE EXHIBITED IN THE TRAJECTORY REPRESENTATIONS OF FARAGGI MATONE CHAPTER] ALSO INCLUDES A REVIEW OF KP THEORY AND SOME PRELIMINARY REMARKS ON COHERENT STATES DENSITY MATRICES ETC AND MORE ON DETERMINISTIC THEORY WE DEVELOP IN CHAPTER 4 RELATIONS BETWEEN QUANTIZATION AND INTEGRABILITY BASED ON MOYAL BRACKETS DISCRETIZATIONS KP STRINGS AND HIROTA FORMULAS AND IN CHAPTER 2 WE STUDY THE OM OF EMBEDDED CURVES AND SURFACES ILLUSTRATING SOME QM EFFECTS OF GEOMETRY CHAPTER 3 IS ON QUANTUM INTEGRABLE SYSTEMS QUANTUM GROUPS AND MODERN DEFORMATION QUANTIZATION CHAPTER 5 INVOLVES THE WHITHAM EQUATIONS IN VARIOUS ROLES MEDIATING BETWEEN QM AND CLASSICAL BEHAVIOR IN PARTICULAR CONNECTIONS TO SEIBERG WITTEN THEORY ARISING IN N 2 SUPERSYMMETRIC SUSY YANG MILLS YM THEORY ARE DISCUSSED AND WE WOULD STILL LIKE TO UNDERSTAND MORE DEEPLY WHAT IS GOING ON THUS IN CHAPTER 5 WE WILL TRY TO GIVE SOME CONCEPTUAL BACKGROUND FOR SUSY GAUGE THEORIES RENORMALIZATION ETC FROM BOTH A PHYSICAL AND MATHEMATICAL POINT OF VIEW IN CHAPTER 6 WE CONTINUE THE DEFORMATION QUANTIZATION THEN BY EXHIBITING MATERIAL BASED ON AND RELATED TO NONCOMMUTATIVE GEOMETRY AND GAUGE THEORY

QUANTUM THEORY, DEFORMATION AND INTEGRABILITY

2000-11-09

R SHANKAR HAS INTRODUCED MAJOR ADDITIONS AND UPDATED KEY PRESENTATIONS IN THIS SECOND EDITION OF PRINCIPLES OF QUANTUM MECHANICS NEW FEATURES OF THIS INNOVATIVE TEXT INCLUDE AN ENTIRELY REWRITTEN MATHEMATICAL INTRODUCTION A DISCUSSION OF TIME REVERSAL INVARIANCE AND EXTENSIVE COVERAGE OF A VARIETY OF PATH INTEGRALS AND THEIR APPLICATIONS ADDITIONAL HIGHLIGHTS INCLUDE CLEAR ACCESSIBLE TREATMENT OF UNDERLYING MATHEMATICS A REVIEW OF NEWTONIAN LAGRANGIAN AND HAMILTONIAN MECHANICS STUDENT UNDERSTANDING OF QUANTUM THEORY IS ENHANCED BY SEPARATE TREATMENT OF MATHEMATICAL THEOREMS AND PHYSICAL POSTULATES UNSURPASSED COVERAGE OF PATH INTEGRALS AND THEIR RELEVANCE IN CONTEMPORARY PHYSICS THE REQUISITE TEXT FOR ADVANCED UNDERGRADUATE AND GRADUATE LEVEL STUDENTS PRINCIPLES OF QUANTUM MECHANICS SECOND EDITION IS FULLY REFERENCED AND IS SUPPORTED BY MANY EXERCISES AND SOLUTIONS THE BOOK S SELF CONTAINED CHAPTERS ALSO MAKE IT SUITABLE FOR INDEPENDENT STUDY AS WELL AS FOR COURSES IN APPLIED DISCIPLINES

PRINCIPLES OF QUANTUM MECHANICS

2012-12-06

AN EXPLANATION OF HOW QUANTUM PROCESSES MAY BE VISUALISED WITHOUT AMBIGUITY IN TERMS OF A SIMPLE PHYSICAL MODEL

THE QUANTUM THEORY OF MOTION

1995-01-26

IN 1861 JAMES CLERK MAXWELL PUBLISHED PART II OF HIS FOUR PART SERIES ON PHYSICAL LINES OF FORCE IN IT HE ATTEMPTED TO CONSTRUCT A VORTEX MODEL OF THE MAGNETIC FIELD BUT AFTER MUCH EFFORT NEITHER HE NOR OTHER LATE NINETEENTH CENTURY PHYSICISTS WHO FOLLOWED HIM MANAGED TO PRODUCE A WORKABLE THEORY WHAT SURVIVED FROM THESE ATTEMPTS WERE MAXWELL S FOUR EQUATIONS OF ELECTRODYNAMICS TOGETHER WITH THE LORENTZ FORCE LAW FORMULAE THAT MADE NO ATTEMPT TO DESCRIBE AN UNDERLYING REALITY BUT STOOD ONLY AS A MATHEMATICAL DESCRIPTION OF THE OBSERVED PHENOMENA WHEN THE QUANTUM OF ACTION WAS INTRODUCED BY PLANCK IN 1900 THE DIFFICULTIES THAT HAD FACED MAXWELL S GENERATION WERE STILL UNRESOLVED SINCE THEN THEORIES OF INCREASING MATHEMATICAL COMPLEXITY HAVE BEEN CONSTRUCTED TO ATTEMPT TO BRING THE TOTALITY OF PHENOMENA INTO ORDER WITH LITTLE SUCCESS THIS WORK EXAMINES THE PROBLEMS THAT HAD BEEN ABANDONED LONG BEFORE QUANTUM MECHANICS WAS FORMULATED IN 1925 AND ARGUES THAT THESE ISSUES NEED TO BE REVISITED BEFORE REAL PROGRESS IN THE QUANTUM THEORY OF THE ELECTROMAGNETIC FIELD CAN BE MADE CONTENTS INTRODUCTIONTHE FARADAY MAXWELL FIELDSTHE ELECTRONBLACKBODY RADIATIONATOMIC STRUCTURELIGHT AND ACTIONMASS VORTEX RINGSTHE MAGNETIC VORTEX FIELD THE ELECTRIC VORTEX FIELD READERSHIP ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS INTERESTED IN QUANTUM PHYSICS

QUANTUM PUZZLE, THE: CRITIQUE OF QUANTUM THEORY AND ELECTRODYNAMICS

2017-04-27

THIS BOOK IS PRIMARILY INTENDED FOR GRADUATE CHEMISTS AND CHEMICAL PHYSICISTS INDEED IT IS BASED ON A GRADUATE COURSE THAT I GIVE IN THE CHEMISTRY DEPART MENT OF SOUTHAMPTON UNIVERSITY NOWADAYS UNDERGRADUATE CHEMISTRY COURSES USUALLY INCLUDE AN INTRODUCTION TO QUANTUM MECHANICS WITH PARTICULAR REFERENCE TO MOLECULAR PROPERTIES AND THERE ARE A NUMBER OF EXCELLENT TEXTBOOKS AIMED SPECIFICALLY AT UNDERGRADUATE CHEMISTS IN VALENCE THEORY AND MOLECULAR SPECTROSCOPY PHYSICAL CONCEPTS ARE OFTEN ENCOUNTERED THAT ARE NORMALLY TAKEN ON TRUST FOR EXAMPLE ELECTRON SPIN AND THE ANOMALOUS MAGNETIC MOMENT OF THE ELECTRON ARE USUALLY ACCEPTED AS POSTULATES ALTHOUGH THEY ARE WELL UNDERSTOOD BY PHYSICISTS IN ADDITION THE ADVENT OF NEW TECHNIQUES HAS LED TO EXPERIMENTAL SITUATIONS THAT CAN ONLY BE ACCOUNTED FOR ADEQUATELY BY RELATIVELY SOPHISTICATED PHYSICAL THEORY RELATIVIS TIC CORRECTIONS TO MOLECULAR ORBITAL ENERGIES ARE NEEDED TO EXPLAIN X RAY PHOTO ELECTRON SPECTRA WHILE THE USE OFLASERS CAN GIVE RISE TO MULTIPHOTON TRANSITIONS WHICH ARE NOT EASY TO UNDERSTAND USING THE CLASSICAL THEORY OF RADIATION OF COURSE THE RELEVANT EQUATIONS MAY BE EXTRACTED FROM THE LITERATURE BUT IF THE UNDERLYING PHYSICS IS NOT UNDERSTOOD THIS IS A PRACTICE THAT IS AT BEST DISSATISFY ING AND AT WORST DANGEROUS ONE INSTANCE WHERE GREAT CARE MUST BE TAKEN IS IN THE USE OF SPECTROSCOPICALLY DETERMINED PARAMETERS TO TEST THE ACCURACY OF ELEC TRONIC WAVE FUNCTIONS

THE QUANTUM THEORY OF LIGHT

2000

OVER THE PAST FIVE DE ADES RESEARCHERS HAVE SOUGHT TO DEVELOP A NEW FRAMEWORK THAT WOULD RESOLVE THE ANOMALIES ATTRIBUTABLE TO A PATCHWORK FORMULATION OF RELATIVISTIC QUANTUM MECHANICS THIS BOOK CHRONICLES THE DEVELOPMENT OF A NEW PARADIGM FOR DESCRIBING RELATIVISTIC QUANTUM PHENOMENA WHAT MAKES THE NEW PARADIGM UNIQUE IS ITS INCLUSION OF A PHYSICALLY MEASURABLE INVARIANT EVOLUTION PARAMETER THE RESULTING THEORY HAS BEEN SUFFICIENTLY WELL DEVELOPED IN THE REFEREED LITERATURE THAT IT IS NOW POSSIBLE TO PRESENT A SYNTHESIS OF ITS IDEAS AND TECHNIQUES MY SYNTHESIS IS INTENDED TO ENCOURAGE AND ENHANCE FUTURE RESEARCH AND IS PRESENTED IN SIX PARTS THE ENVIRONMENT WITHIN WHICH THE CONVENTIONAL PARADIGM EXISTS IS DESCRIBED IN THE INTRODUCTION PART I EASES THE MAINSTREAM READER INTO THE IDEAS OF THE NEW PARADIGM BY PROVIDING THE READER WITH A DISCUSSION THAT SHOULD LOOK VERY FAMILIAR BUT CONTAINS SUBTLE NUANCES INDEED I TRY TO PROVIDE THE MAINSTREAM READER WITH FAMILIAR LANDMARKS THROUGHOUT THE TEXT THIS IS POSSIBLE BECAUSE THE NEW PARADIGM CONTAINS THE CONVENTIONAL PARADIGM AS A SUBSET THE FOUNDATION OF THE NEW PARADIGM IS PRESENTED IN PART II FOL OWED BY NUMEROUS APPLICATIONS IN THE REMAINING THREE PARTS THE READER SHOULD NOTICE THAT THE NEW PARADIGM HANDLES NOT ONLY THE BROAD CLASS OF PROBLEMS TYPICALLY DEALT WITH IN CONVENTIONAL RELATIVISTIC QUANTUM THEORY BUT ALSO CONTAINS FERTILE RESEARCH AREAS FOR BOTH EXPERIMENTALISTS AND THEORISTS TO AVOID DEVELOPING A THEORETICAL FRAMEWORK WITHOUT PHYSICAL VALIDITY NUMEROUS COMPARISONS BETWEEN THEORY AND EXPERIMENT ARE PROVIDED AND SEVERAL PREDICTIONS ARE MADE

Advanced Molecular Quantum Mechanics

2012-12-06

THE TREATMENT OF TIME IN QUANTUM MECHANICS IS STILL AN IMPORTANT AND CHALLENGING OPEN QUESTION IN THE FOUNDATION OF THE QUANTUM THEORY THIS MULTI AUTHORED BOOK WRITTEN AS AN INTRODUCTORY GUIDE FOR NEWCOMERS TO THE SUBJECT AS WELL AS A USEFUL SOURCE OF INFORMATION FOR THE EXPERT COVERS MANY OF THE OPEN QUESTIONS THE BOOK DESCRIBES THE PROBLEMS AND THE ATTEMPTS AND ACHIEVEMENTS IN DEFINING FORMALIZING AND MEASURING DIFFERENT TIME QUANTITIES IN QUANTUM THEORY

PARAMETRIZED RELATIVISTIC QUANTUM THEORY

2012-10-02

QUANTUM THEORY OF CHEMICAL REACTIVITY MAY BE READ WITHOUT REFERENCE TO THE FACT THAT IT IS ACTUALLY THE THIRD OF THREE VOLUMES OF A TREATISE ON QUANTUM CHEMISTRY THE SCIENCE RESULTING FROM THE IMPLEMENTATION OF MATHEMATICAL LAWS IN THE REALM OF MOLECULAR POPULATIONS THE FIRST TWO VOLUMES OF THE TREATISE FONDEMENT DE LA CHIMIE TBEORIQUE AND STRUCTURE ELECTRIQUE DES MOLECULES WERE LIKE THIS THIRD VOLUME ORIGINALLY PUBLISHED BY GAUTHIER VILLARS PERGAMON PUBLISHED THE ENGLISH TRANSLATIONS OF THESE TWO VOLUMES I AM GRATEFUL TO D REIDEL PUBLISHING COMPANY FOR TRANSLATING THE THIRD VOLUME OF THE TREATISE INTO ENGLISH READERS FAMILIAR WITH ENGLISH RATHER THAN FRENCH NOW HAVE ACCESS TO THE COMPLETE SERIES THIS TREATISE IS A REFLECTION OF THE COURSES I TAUGHT AT THE SORBONNE FROM 1950 UNTIL 1967 TO STUDENTS IN THEIR SECOND CYCLE 3RD AND 4TH YEAR AND THIRD CYCLE 5TH AND 6TH YEAR WORKING TOWARDS A DOCTORATE IN THIS PARTICULAR FIELD IT IS BASED ON THE READING OF OVER A THOUSAND ARTICLES AND IS INTENDED FOR STUDENTS AS WELL AS FOR PHYSICAL CHEMISTS AND CHEMISTS RESEARCH WORKERS AND ENGINEERS TAKING AN INTEREST IN QUANTUM CHEMISTRY FOR ITS OWN SAKE OR FOR ITS APPLICATION IN INDUSTRY PHARMACOLOGY AND THE LIFE SCIENCES REIDEL S INITIATIVE IS PARTICULARLY VALUABLE BECAUSE IN MY OPINION QUANTUM THEORY OF CHEMICAL REACTIVITY IS THE MOST IMPORTANT OF THE THREE VOLUMES OF THE TREATISE DOUBTLESS FOR THIS REASON ONLY THE THIRD VOLUME WAS PUBLISHED IN JAPANESE BY BAIFUKAN THANKS TO PROFESSORS HAYASHI AND SOHMA

TIME IN QUANTUM MECHANICS

2007-11-30

MEDICAL SCIENTISTS USE THE WORD IATROGENIC TO REFER TO DISABILITIES THAT ARE THE CONSEQUENCE OF MEDICAL TREATMENT WE BELIEVE THAT SOME SUCH WORD MIGHT BE COINED TO REFER TO PHILOSOPHICAL DIFFICULTIES FOR WHICH PHILOSOPHERS THEMSELVES ARE RESPONSIBLE SIR PETER MEDAWAR ARGUING THAT QUANTUM THEORY AS IT STANDS IS PERHAPS THE MOST COMPREHENSIVE WELL VERIFIED AND SUCCESSFUL THEORY IN THE HISTORY OF SCIENCE THE AUTHOR CLEARS AWAY THE IMPRESSION THAT IT IS AN INCOMPLETE PHILOSOPHICALLY FLAWED AND SELF CONTRADICTORY THEORY IN SIMPLE TERMS ACCESSIBLE TO ANYONE WITH A LITTLE PRIOR KNOWLEDGE OF SCIENCE WALLACE EXAMINES THE NUMEROUS PARADOXES AND DIFFICULTIES CLAIMED FOR QUANTUM MECHANICS AND SHOWS THAT THEY ARE DUE TO EXCESSES OF INTERPRETATION THAT HAVE BEEN IMPOSED ON THE THEORY

QUANTUM THEORY OF CHEMICAL REACTIVITY

2012-12-06

WHILE THERE ARE MANY GOOD BOOKS IN PARTICLE PHYSICS VERY SELDOM IF EVER A NON SPECIALIST COMPREHENSIVE DESCRIPTION OF QUANTUM FIELD THEORY HAS APPEARED THE INTENTION OF THIS SHORT BOOK IS TO OFFER A GUIDED TOUR OF THAT INNERMOST TOPIC OF THEORETICAL PHYSICS IN PLAIN WORDS AND AVOIDING THE MATHEMATICAL APPARATUS BUT STILL DESCRIBING ITS VARIOUS FACETS UP TO THE RESEARCH FRONTIER WITH THE AIM TO GIVE A GLIMPSE OF WHAT THE HUMAN MIND HAS BEEN CAPABLE OF IMAGINING FOR DEALING WITH THE BEHAVIOR OF NATURE AT THE MOST FUNDAMENTAL LEVEL

TIME, CAUSALITY, AND THE QUANTUM THEORY

2012-12-06

AN ORGANIZED DETAILED APPROACH TO QUANTUM MECHANICS IDEAL FOR A TWO SEMESTER GRADUATE COURSE ON THE SUBJECT

QUANTUM THEORY

1961

THIS TEXTBOOK PRESENTS QUANTUM MECHANICS AT THE JUNIOR SENIOR UNDERGRADUATE LEVEL IT IS UNIQUE IN THAT IT DESCRIBES NOT ONLY QUANTUM THEORY BUT ALSO PRESENTS FIVE LABORATORIES THAT EXPLORE TRULY MODERN ASPECTS OF QUANTUM MECHANICS THE BOOK ALSO INCLUDES DISCUSSIONS OF QUANTUM MEASUREMENT ENTANGLEMENT QUANTUM FIELD THEORY AND QUANTUM INFORMATION

Paradox Lost

2012-12-06

THE SPECTRAL THEORY OF LINEAR OPERATORS PLAYS A KEY ROLE IN THE MATHEMATICAL FORMULATION OF QUANTUM THEORY THIS TEXTBOOK PROVIDES A CONCISE AND COMPREHENSIBLE INTRODUCTION TO THE SPECTRAL THEORY OF UNBOUNDED SELF ADJOINT OPERATORS AND ITS APPLICATION IN QUANTUM DYNAMICS MANY EXAMPLES AND EXERCISES ARE INCLUDED THAT FOCUS ON QUANTUM MECHANICS

QUANTUM FIELD THEORY

2018-07-10

QUANTUM MECHANICS I THE FUNDAMENTALS PROVIDES A GRADUATE LEVEL ACCOUNT OF THE BEHAVIOR OF MATTER AND ENERGY AT THE MOLECULAR ATOMIC NUCLEAR AND SUB NUCLEAR LEVELS IT COVERS BASIC CONCEPTS MATHEMATICAL FORMALISM AND APPLICATIONS TO PHYSICALLY IMPORTANT SYSTEMS THE TEXT ADDRESSES MANY TOPICS NOT TYPICALLY FOUND IN BOOKS AT THIS LEVEL INCLUDIN

QUANTUM MECHANICS WITH BASIC FIELD THEORY

2010

THIS GRADUATE LEVEL TEXT IS INTENDED FOR ANY STUDENT OF PHYSICS WHO REQUIRES A THOROUGH GROUNDING IN THE QUANTUM THEORY OF NONRELATIVISTIC SCATTERING IT IS DESIGNED FOR READERS WHO ARE ALREADY FAMILIAR WITH THE GENERAL PRINCIPLES OF QUANTUM MECHANICS AND WHO HAVE SOME SMALL ACQUAINTANCE WITH SCATTERING THEORY STUDY OF THIS TEXT WILL ALLOW STUDENTS OF ATOMIC OR NUCLEAR PHYSICS TO BEGIN READING THE LITERATURE AND TACKLING REAL PROBLEMS WITH A COMPLETE GRASP OF THE UNDERLYING PRINCIPLES FOR STUDENTS OF HIGH ENERGY PHYSICS IT PROVIDES THE NECESSARY BACKGROUND FOR LATER STUDY OF RELATIVISTIC PROBLEMS TOPICS ARE PRESENTED IN TERMS OF THE SIMPLEST RELEVANT EXAMPLE SO THAT SCATTERING THEORY CAN BE LEARNED BY BECOMING FAMILIAR WITH ALL OF THE BASIC CONCEPTS THE S OPERATOR CROSS SECTIONS THE T MATRIX AND SO FORTH IN THEIR SIMPLEST CONTEXT THE TIME DEPENDENT APPROACH TO THE SUBJECT IS EMPHASIZED STARTING WITH THE USE OF TIME DEPENDENT FORMALISM TO DEFINE ALL OF THE BASIC CONCEPTS AND THE SUBSEQUENT INTRODUCTION OF THE TIME INDEPENDENT THEORY AS A TOOL FOR COMPUTATION AND FOR ESTABLISHING CERTAIN GENERAL PROPERTIES PROBLEMS AT THE END OF EACH CHAPTER IMPROVE AND SUPPLEMENT READERS GRASP OF THE MATERIAL

QUANTUM MECHANICS

2012-06-28

THIS GRADUATE LEVEL TEXT IS BASED ON A COURSE IN ADVANCED QUANTUM MECHANICS TAUGHT MANY TIMES AT THE UNIVERSITY OF MASSACHUSETTS AMHERST TOPICS INCLUDE PROPAGATOR METHODS SCATTERING THEORY CHARGED PARTICLE INTERACTIONS ALTERNATE APPROXIMATE METHODS AND KLEIN GORDON AND DIRAC EQUATIONS PROBLEMS APPEAR IN THE FLOW OF THE DISCUSSION RATHER THAN AT THE END OF CHAPTERS 1992 EDITION

INTERMEDIATE SPECTRAL THEORY AND QUANTUM DYNAMICS

2008-12-30

STARTING FROM FIRST PRINCIPLES THIS REFERENCE TREATS THE THEORETICAL ASPECTS OF QUANTUM OPTICS IT DEVELOPS A UNIFIED APPROACH FOR DETERMINING THE DYNAMICS OF A TWO LEVEL AND THREE LEVEL ATOM IN COMBINATIONS OF QUANTIZED FIELD UNDER CERTAIN CONDITIONS

QUANTUM MECHANICS I

2014-12-11

THE AIM OF THIS BOOK IS TO PROVIDE SUPPORT FOR LECTURE COURSES ON GENERAL QUANTUM PHYSICS FOR UNIVERSITY UNDERGRADUATES IN THE FINAL YEAR S OF A PHYSICS DEGREE PROGRAMME THE FIRST CHAPTER IS A REVIEW OF THE BASIC QUANTUM MECHANICS NEEDED FOR GETTING THE BEST OUT OF THE TEXT INSTRUCTORS ARE THEN FREE TO CONCENTRATE ON A GROUP OF CHAPTERS OR SELECT COMPONENTS FROM ALL CHAPTERS WHICHEVER SUITS THEIR NEEDS THE TEXT COVERS KEY THEMES OF QUANTUM PHYSICS TAKING THE PERSPECTIVE ACHIEVED AFTER MORE THAN A CENTURY OF RESEARCH AND EMPHASISING THE EFFECTIVENESS AND THE SUBTLETY OF QUANTUM CONCEPTS IN EXPLAINING DIVERSE PHYSICAL PHENOMENA THE BOOK IS USED TO BRING OUT THESE UNIFYING IDEAS AND ILLUSTRATE THEM WITH IMPORTANT EXAMPLES FROM MODERN EXPERIMENTS AND APPLICATIONS CARE HAS BEEN TAKEN TO MAINTAIN A LEVEL OF PRESENTATION ACCESSIBLE TO UNDERGRADUATES AND TO PROVIDE EXERCISES AND SOLUTIONS TO REINFORCE THE LEARNING PROCESS SOLUTIONS TO THE EXERCISES ARE AVAILABLE VIA THE OUP WEBPAGE LINK FOR THE BOOK

SCATTERING THEORY

2006-05-26

THIS GRADUATE LEVEL TEXT SURVEYS THE FUNDAMENTALS OF QUANTUM OPTICS INCLUDING THE QUANTUM THEORY OF PARTIAL COHERENCE AND THE NATURE OF THE RELATIONS BETWEEN CLASSICAL AND QUANTUM THEORIES OF COHERENCE 1968 EDITION

TOPICS IN ADVANCED QUANTUM MECHANICS

2014-06-18

IN THE NEW EDITION SUPPLEMENTS ADDITIONAL EXPLANATIONS AND CROSS REFERENCES HAVE BEEN ADDED AT NUMEROUS PLACES INCLUDING NEW FORMULATIONS OF SOME OF THE PROBLEMS IN ALL THESE ADDITIONS I HAVE ATTEMPTED NOT TO CHANGE THE COMPACT CHARACTER OF THE BOOK THE PRESENT THIRD ENGLISH EDITION IS IDENTICAL TO THE CURRENT GERMAN SIXTH EDITION THE PROOFS WERE READ BY D BADEL E BAUER E JORG MILLER S WEINFURTNER A JURISCH AND T WOLLENWEBER SPECIAL THANKS GO TO THEM AND TO PROF U C TAUBER AND DR R HILTON FOR COMMENTS ON SOME OF THE FORMULATIONS I WOULD LIKE TO THANK ALL COLLEAGUES AND STUDENTS WHO HAVE MADE SUGGESTIONS TO IMPROVE THE BOOK AS WELL AS THE PUBLISHER MUNICH JANUARY 2002 F SCHWABL PREFACE TO THE FIRST EDITION THIS IS A TEXTBOOK ON QUANTUM MECHANICS IN AN INTRODUCTORY CHAPTER THE BASIC POSTULATES ARE ESTABLISHED BEGINNING WITH THE HISTORICAL DEVELOPMENT BY THE ANALYSIS OF AN INTERFERENCE EXPERIMENT FROM THEN ON THE ORGANIZATION IS PURELY DEDUCTIVE IN ADDITION TO THE BASIC IDEAS AND NUMEROUS APPLICA TIONS NEW ASPECTS OF QUANTUM MECHANICS AND THEIR EXPERIMENTAL TESTS ARE PRESENTED IN THE TEXT EMPHASIS IS PLACED ON A CONCISE YET SELF CONTAINED PRESENTATION THE COMPREHENSIBILITY IS GUARANTEED BY GIVING ALL MATHEMATI CAL STEPS AND BY CARRYING OUT THE INTERMEDIATE CALCULATIONS COMPLETELY AND THOROUGHLY

MATHEMATICAL METHODS OF QUANTUM OPTICS

2012-11-02

FRONTIERS IN QUANTUM PHYSICS IS THE PROCEEDINGS OF THE INTERNATIONAL CONFERENCE HELD IN KUALA LUMPUR MALAYSIA JULY 1997 THE CONFERENCE BROUGHT TOGETHER DISTINGUISHED RESEARCHERS FROM 24 COUNTRIES TO DISCUSS THE RECENT DEVELOPMENTS IN THIS FIELD THE TOPICS COVERED RANGE FROM QUANTUM MEASUREMENTS AND QUANTUM COMPUTERS TO QUANTUM DEVICES INVOLVING A SINGLE ATOM AND SINGLE ELECTRON THE PAPERS REPORTED IN THIS FIELD HIGHLIGHTED THE NEW CHALLENGES POSED FOR BOTH THEORETICAL AND EXPERIMENTAL PHYSICISTS ALIKE THESE PROCEEDINGS WILL BE OF SPECIAL INTEREST TO PHYSICISTS MATHEMATICIANS ENGINEERS GRADUATE STUDENTS AND PHILOSOPHERS LOOKING TO REVIEW THE LATEST DEVELOPMENTS IN THE FIELD OF QUANTUM PHYSICS

Quantum 20/20

2019-09-04

THIS ADVANCED UNDERGRADUATE LEVEL TEXT PRESENTS THE QUANTUM THEORY IN TERMS OF QUALITATIVE AND IMAGINATIVE CONCEPTS FOLLOWED BY SPECIFIC APPLICATIONS WORKED OUT IN MATHEMATICAL DETAIL

FUNDAMENTALS OF QUANTUM OPTICS

2006-01-01

ADVANCES IN QUANTUM CHEMISTRY LOWDIN VOLUME PRESENTS A SERIES OF ARTICLES EXPLORING ASPECTS OF THE APPLICATION OF QUANTUM MECHANICS TO ATOMS MOLECULES AND SOLIDS CELEBRATES PER OLOV LOWDIN WHO WOULD HAVE BEEN 100 IN 2016 CONTAINS PAPERS BY MANY WHO USE HIS IDEAS IN THEORETICAL CHEMISTRY AND PHYSICS TODAY

QUANTUM MECHANICS

2014-03-12

OVER THE PAST YEARS THE AUTHOR HAS DEVELOPED A QUANTUM LANGUAGE GOING BEYOND THE CONCEPTS USED BY BOHR AND HEISENBERG THE SIMPLE FORMAL ALGEBRAIC LANGUAGE IS DESIGNED TO BE CONSISTENT WITH QUANTUM THEORY IT DIFFERS FROM NATURAL LANGUAGES IN ITS EPISTEMOLOGY MODAL STRUCTURE LOGICAL CONNECTIONS AND COPULATIVES STARTING FROM IDEAS OF JOHN VON NEUMANN AND IN PART ALSO AS A RESPONSE TO HIS FUNDAMENTAL WORK THE AUTHOR BASES HIS APPROACH ON WHAT ONE REALLY OBSERVES WHEN STUDYING QUANTUM PROCESSES THIS WAY THE NEW LANGUAGE CAN BE SEEN AS A CLUE TO A DEEPER UNDERSTANDING OF THE CONCEPTS OF QUANTUM PHYSICS AT THE SAME TIME AVOIDING THOSE PARADOXES WHICH ARISE WHEN USING NATURAL LANGUAGES THE WORK IS ORGANIZED DIDACTICALLY THE READER LEARNS IN FAIRLY CONCRETE FORM ABOUT THE LANGUAGE AND ITS STRUCTURE AS WELL AS ABOUT ITS USE FOR PHYSICS

FRONTIERS OF QUANTUM PHYSICS

1998-05

QUANTUM MECHANICS II ADVANCED TOPICS OFFERS A COMPREHENSIVE EXPLORATION OF THE STATE OF THE ART IN VARIOUS ADVANCED TOPICS OF CURRENT RESEARCH INTEREST A FOLLOW UP TO THE AUTHORS INTRODUCTORY BOOK QUANTUM MECHANICS I THE FUNDAMENTALS THIS BOOK EXPOUNDS BASIC PRINCIPLES THEORETICAL TREATMENT CASE STUDIES WORKED OUT EXAMPLES AND APPLICATIONS OF ADVANCED TOPICS INCLUDING QUANTUM TECHNOLOGIES A THOROUGHLY REVISED AND UPDATED THIS UNIQUE VOLUME PRESENTS AN IN DEPTH AND UP TO DATE PROGRESS ON THE GROWING TOPICS INCLUDING LATEST ACHIEVEMENTS ON QUANTUM TECHNOLOGY IN THE SECOND EDITION SIX NEW CHAPTERS ARE INCLUDED AND THE OTHER TEN CHAPTERS ARE EXTENSIVELY REVISED FEATURES COVERS CLASSICAL AND QUANTUM FIELD THEORIES PATH INTEGRAL FORMALISM AND SUPERSYMMETRIC QUANTUM MECHANICS HIGHLIGHTS COHERENT AND SQUEEZED STATES BERRY S PHASE AHARONOV BOHM EFFECT AND WIGNER FUNCTION EXPLORES SALIENT FEATURES OF QUANTUM ENTANGLEMENT AND QUANTUM CRYPTOGRAPHY PRESENTS BASIC CONCEPTS OF QUANTUM COMPUTERS AND THE FEATURES OF NO CLONING THEOREM AND QUANTUM CLONING MACHINES DESCRIBES THE THEORY AND TECHNIQUES OF QUANTUM TOMOGRAPHY QUANTUM SIMULATION AND QUANTUM ERROR CORRECTION INTRODUCES OTHER NOVEL TOPICS INCLUDING QUANTUM VERSIONS OF THEORY OF GRAVITY COSMOLOGY ZENO EFFECT TELEPORTATION GAMES CHAOS AND STEERING OUTLINES THE QUANTUM TECHNOLOGIES OF GHOST IMAGING DETECTION OF WEAK AMPLITUDES AND DISPLACEMENTS LITHOGRAPHY METROLOGY TELEPORTATION OF OPTICAL IMAGES SENSORS BATTERIES AND INTERNET CONTAINS SEVERAL WORKED OUT PROBLEMS AND EXERCISES IN EACH CHAPTER QUANTUM MECHANICS II ADVANCED TOPICS ADDRESSES VARIOUS CURRENTLY EMERGING EXCITING TOPICS OF QUANTUM MECHANICS IT EMPHASIZES THE FUNDAMENTALS BEHIND THE LATEST CUTTING EDGE DEVELOPMENTS TO HELP EXPLAIN THE MOTIVATION FOR DEEPER EXPLORATION THE BOOK IS A VALUABLE RESOURCE FOR GRADUATE STUDENTS IN PHYSICS AND ENGINEERING WISHING TO PURSUE RESEARCH IN QUANTUM MECHANICS

QUANTUM THEORY

1989-05-01

IN THE LAST FIVE DECADES VARIOUS ATTEMPTS TO FORMULATE THEORIES OF QUANTUM GRAVITY HAVE BEEN MADE BUT NONE HAS FULLY SUCCEEDED IN BECOMING THE QUANTUM THEORY OF GRAVITY ONE POSSIBLE EXPLANATION FOR THIS FAILURE MIGHT BE THE UNRESOLVED FUNDAMENTAL ISSUES IN QUANTUM THEORY AS IT STANDS NOW INDEED MOST APPROACHES TO QUANTUM GRAVITY ADOPT STANDARD QUANTUM THEORY AS THEIR STARTING POINT WITH THE HOPE THAT THE THEORY S UNRESOLVED ISSUES WILL GET SOLVED ALONG THE WAY HOWEVER THESE FUNDAMENTAL ISSUES MAY NEED TO BE SOLVED BEFORE ATTEMPTING TO DEFINE A QUANTUM THEORY OF GRAVITY THE PRESENT TEXT ADOPTS THIS POINT OF VIEW ADDRESSING THE FOLLOWING BASIC QUESTIONS WHAT ARE THE MAIN CONCEPTUAL ISSUES IN QUANTUM THEORY HOW CAN THESE ISSUES BE SOLVED WITHIN A NEW THEORETICAL FRAMEWORK OF QUANTUM THEORY A POSSIBLE WAY TO OVERCOME CRITICAL ISSUES IN PRESENT DAY QUANTUM PHYSICS SUCH AS A PRIORI ASSUMPTIONS ABOUT SPACE AND TIME THAT ARE NOT COMPATIBLE WITH A THEORY OF QUANTUM GRAVITY AND THE IMPOSSIBILITY OF TALKING ABOUT SYSTEMS WITHOUT REFERENCE TO AN EXTERNAL OBSERVER IS THROUGH A REFORMULATION OF QUANTUM THEORY IN TERMS OF A DIFFERENT MATHEMATICAL FRAMEWORK CALLED TOPOS THEORY THIS COURSE TESTED PRIMER SETS OUT TO EXPLAIN TO GRADUATE STUDENTS AND NEWCOMERS TO THE FIELD ALIKE THE REASONS FOR CHOOSING TOPOS THEORY TO RESOLVE THE ABOVE MENTIONED ISSUES AND HOW IT BRINGS QUANTUM PHYSICS BACK TO LOOKING MORE LIKE A NEO REALIST CLASSICAL PHYSICS THEORY AGAIN

Advances in Quantum Chemistry: Lowdin Volume

2017-02-12

THIS BOOK PRESENTS A COMPREHENSIVE ACCOUNT OF MOLECULAR QUANTUM ELECTRODYNAMICS FROM THE PERSPECTIVES OF PHYSICS AND THEORETICAL CHEMISTRY THE FIRST PART OF THE BOOK ESTABLISHES THE ESSENTIAL CONCEPTS UNDERLYING CLASSICAL ELECTRODYNAMICS USING THE TOOLS OF LAGRANGIAN AND HAMILTONIAN MECHANICS THE SECOND PART FOCUSES ON THE FUNDAMENTALS OF QUANTUM MECHANICS PARTICULARLY HOW THEY RELATE TO AND INFLUENCE CHEMICAL AND MOLECULAR PROCESSES THE SPECIAL CASE OF THE COULOMB HAMILTONIAN INCLUDING THE CELEBRATED BORN OPPENHEIMER APPROXIMATION IS GIVEN A MODERN TREATMENT THE FINAL PART OF THE BOOK IS DEVOTED TO NON RELATIVISTIC QUANTUM ELECTRODYNAMICS AND DESCRIBES IN DETAIL ITS IMPACT UPON OUR UNDERSTANDING OF ATOMS AND MOLECULES AND THEIR INTERACTION WITH LIGHT PARTICULAR ATTENTION IS PAID TO THE POWER ZIENAU WOOLLEY PZW REPRESENTATIONS AND BOTH PERTURBATIVE AND NON PERTURBATIVE APPROACHES TO QED CALCULATION ARE DISCUSSED THIS BOOK IS IDEAL FOR GRADUATE STUDENTS AND RESEARCHERS IN CHEMICAL AND MOLECULAR PHYSICS QUANTUM CHEMISTRY AND THEORETICAL CHEMISTRY

QUANTUM RELATIVITY

2012-12-06

THIS TREATISE IS DEVOTED TO AN ANALYSIS OF THE PRESENT STATE OF THE QUANTUM THEORY OF CHEMICAL REACTIONS IT WILL BE DIVIDED INTO THREE VOLUMES AND WILL CONTAIN THE CONTRIBUTIONS TO AN INTERNATIONAL SEMINAR ORGANIZED BY THE EDITORS THE FIRST ONE IS CONCERNED WITH THE FUNDAMENTAL PROBLEMS WHICH OCCUR WHEN STUDYING A GAS PHASE REACTION OR A REACTION FOR WHICH THE SOLVENT EFFECT IS NOT TAKEN INTO ACCOUNT THE TWO FIRST PAPERS SHOW HOW THE COLLISION THEORY CAN BE USED TO PREDICT THE BEHAVIOUR OF INTERACTING SMALL MOLECULES FOR LARGE MOLECULES THE COMPLETE CALCULATIONS ARE NOT POSSIBLE WE CAN ONLY ESTIMATE THE REACTION PATH BY CALCULATING IMPORTANT AREAS OF THE POTENTIAL SURFACES FOUR PAPERS ARE CONCERNED WITH THIS IMPORTANT PRO CESS FURTHERMORE IN ONE OF THESE THE ELECTRONIC REORGANIZATION WHICH OCCURS ALONG THE REACTION PATH IS CAREFULLY ANALYZED O PAPERS ARE DEVOTED TO THE DISCUSSION OF GENERAL RULES AS AROMATICITY RULES SYMMETRY RULES THE LAST TWO PAPERS ARE CONCERNED WITH THE ELECTROSTATIC MOLECULAR POTEN TIAL METHOD WHICH IS THE MODERN WAY OF USING STATIC INDICES TO ESTABLISH RELATIONS BETWEEN STRUCTURE AND CHEMICAL REACTIVITY VOLUME II WILL BE DEVOTED TO A DETAILED ANALYSIS OF THE ROLE OF THE SOLVENT AND VOLUME III WILL PRESENT IMPORTANT APPLICATIONS AS REACTION MECHANISMS PHOTOCHEMISTRY CATALYSIS BIOCHEMICAL REACTIONS AND DRUG DESIGN SOME RECENT DEVELOPMENTS IN THE MOLECULAR TREATMENT OF ATOM ATOM COLLISIONS

QUANTUM MECHANICS II

2022-11-24

AN EMINENT PHYSICIST DISCUSSES AND EXPLAINS THE CORE CONCEPTS OF PHYSICS WITHOUT RESORTING TO COMPLICATED MATHEMATICS CAN BE READ BY ANYONE I HEARTILY RECOMMEND IT NEW YORK TIMES BOOK REVIEW 1982 EDITION

A FIRST COURSE IN TOPOS QUANTUM THEORY

2013-03-27

THE PRESENT TEXT IS A RATIONAL ANALYSIS OF THE CONCEPT OF THE CHEMICAL BOND BY MEANS OF THE PRINCIPLES OF WAVE MECHANICS THE DISCUSSION OF THE MATERIAL HAS BEEN ARRANGED SO AS TO RENDER ITS MAIN CONTENT COMPREHENSIBLE FOR READERS WHO MAY NOT HAVE HAD PRE IOUS TRAINING IN QUANTUM MECHANICS THE TEXT COMPRISES THREE MAJOR PARTS IT BEGINS WITH AN EXPOSITION OF THE FUNDAMENTAL IDEAS IN THIS SECTION THE PRINCIPLES ARE REVIEWED FROM WHICH DE BROGLIE DEVELOPED HIS MECHANICS THIS ALLOWS THE BOOK TO BE READ BY CHEMISTRY MAJORS AND FRESHMEN ALIKE HOWEVER WE BELIEVE THAT IT MAY ALSO BE OF INTEREST TO UNIVERSITY AND COLLEGE TEACHERS WHO MUST INCLUDE CERTAIN ASPECTS OF QUANTUM CHEMISTRY INTO THEIR COURSES WHILE BEING INSUFFICIENTLY FAMILIAR WITH THE SUBJECT IT MAY EVEN BE OF INTEREST TO SCIENCE TEACHERS IN SECONDARY SCHOOLS FINALLY HAVING BEEN A WITNESS TO THE EVOLUTION OF THESE NOTIONS FOR OVER A QUARTER OF A CENTURY WE PRESENT CERTAIN CONCEPTS FROM A PARTICULAR POINT OF VIEW WHICH MIGHT PROVE ATTRACTIVE TO CHEMISTS OF ALL KINDS PERHAPS EVEN QUANTUM CHEMISTS THE SECOND MORE TECHNICAL PART SUMMARIZES THE METHODS OF CONSTRUCTING WAVE FUNCTIONS THAT DESCRIBE THE ELECTRONS IN MOLECULES THIS SECTION CAN ONLY BE FULLY APPRECIATED BY THOSE READERS WHO ARE FAMILIAR WITH SOME ASPECTS OF THE ALGORITHMS USED IN QUANTUM MECHANICS

Foundations of Molecular Quantum Electrodynamics

2022-09-15

THIS BOOK IS INTENDED FOR PHYSICISTS AND CHEMISTS WHO NEED TO UNDERSTAND THE THEORY OF ATOMIC AND MOLECULAR STRUCTURE AND PROCESSES AND WHO WISH TO APPLY THE THEORY TO PRACTICAL PROBLEMS AS FAR AS PRACTICABLE THE BOOK PROVIDES A SELF CONTAINED ACCOUNT OF THE THEORY OF RELATIVISTIC ATOMIC AND MOLECULAR STRUCTURE BASED ON THE ACCEPTED FORMALISM OF BOUND STATE QUANTUM ELECTRODYNAMICS THE AUTHOR WAS ELECTED A FELLOW OF THE ROYAL SOCIETY OF LONDON IN 1992

QUANTUM THEORY OF CHEMICAL REACTIONS

2012-12-06

INTRODUCES PRINCIPLES DRAWN FROM QUANTUM THEORY TO PRESENT A NEW FRAMEWORK FOR MODELING HUMAN COGNITION AND DECISION

THE COSMIC CODE

2012-11-01

SYMMETRIES IN QUANTUM MECHANICS FROM ANGULAR MOMENTUM TO SUPERSYMMETRY PBK PROVIDES A THOROUGH DIDACTIC EXPOSITION OF THE ROLE OF SYMMETRY PARTICULARLY ROTATIONAL SYMMETRY IN QUANTUM MECHANICS THE BULK OF THE BOOK COVERS THE DESCRIPTION OF ROTATIONS GEOMETRICALLY AND GROUP THEORETICALLY AND THEIR REPRESENTATIONS AND THE QUANTUM THEORY OF ANGULAR MOMENTUM LATER CHAPTERS INTRODUCE MORE ADVANCED TOPICS SUCH AS RELATIVISTIC THEORY SUPERSYMMETRY ANYONS FRACTIONAL SPIN AND STATISTICS WITH CLEAR IN DEPTH EXPLANATIONS THE BOOK IS IDEAL FOR USE AS A COURSE TEXT FOR POSTGRADUATE AND ADVANCED UNDERGRADUATE STUDENTS IN PHYSICS AND THOSE SPECIALIZING IN THEORETICAL PHYSICS IT IS ALSO USEFUL FOR RESEARCHERS LOOKING FOR AN ACCESSIBLE INTRODUCTION TO THIS IMPORTANT AREA OF QUANTUM THEORY

QUANTUM THEORY OF THE CHEMICAL BOND

2012-12-06

RELATIVISTIC QUANTUM THEORY OF ATOMS AND MOLECULES

2007-04-15

QUANTUM MODELS OF COGNITION AND DECISION

2012-07-26

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2023-07-21

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