

B D Khosla Practical Chemistry

A Textbook for B.Sc. (Part III and Hons.) and Postgraduate Courses of Indian Universities. In this edition, I have made major changes in the light of modern concepts introduced in syllabi at the undergraduate and postgraduate level as well. With matter has also been updated. The subject matter has been arranged systematically, in a lucid style and simple language. New Problems and exercises have also been introduced to acquaint the students with trend of questions they expect in the examinations.

In this book on quantitative analysis and reagent preparation, the authors adopt a novel approach-all the preparations have been given in the form of organic reactions in alphabetical order, with their respective reaction mechanisms. The procedures of some preparations are also discussed. Estimation of various compounds and functional groups is also included. A complete is devoted to chromatography, with exercises.

Progress in the application of machine learning (ML) to the physical and life sciences has been rapid. A decade ago, the method was mainly of interest to those in computer science departments, but more recently ML tools have been developed that show significant potential across wide areas of science. There is a growing consensus that ML software, and related areas of artificial intelligence, may, in due course, become as fundamental to scientific research as computers themselves. Yet a perception remains that ML is obscure or esoteric, that only computer scientists can really understand it, and that few meaningful applications in scientific research exist. This book challenges that view. With contributions from leading research groups, it presents in-depth examples to illustrate how ML can be applied to real chemical problems. Through these examples, the reader can both gain a feel for what ML can and cannot (so far) achieve, and also identify characteristics that might make a problem in physical science amenable to a ML approach. This text is a valuable resource for scientists who are intrigued by the power of machine learning and want to learn more about how it can be applied in their own field.

The Revised Edition Retains The Essential Theories Of Nuclear Structure And Stability, Radioactivity And The Principles Of Fission, Fusion And Breeder Reactors Of The Earlier Editions. The Preparation Of The More Commonly Used Radioisotopes And Their Uses As Tracers In Research, Medicine, Agriculture And Industry Are Described. The Book Also Covers The Elements Of Radiation And Radiochemistry Illustrated With Additional Examples. The Section On Mossbauer Effect Is Retained. The Chapter On The Detection And Measurement Of Radioactivity Is Revised To Include Thermo Luminescence And Cerenkov Detectors. New Additions In The Present Edition Include A Whole Chapter On The Separation And Uses Of Stable And Radioactive Isotopes Needed In Bulk Amounts In The Atomic Age. How An Extension Of Basic Principles Of Nuclear Magnetic Resonance (Nmr) Has Led To The Sophisticated Magnetic Resonance Imaging (Mri), The Latest Diagnostic Tool In Medicine Is Discussed Lucidly. Another Chapter Is Added Entitled A Roll-Call Of Elementary Particles , Wherein The Baffling Properties Of Quarks And Gluons, With Their Esoteric Flavours, Colours, Strangeness And Charm Are Reviewed Showing How Their Scientific Characteristics Tend To Merge In Philosophy. The Book Meets The Needs Of Honours And Post-Graduate Students Offering Nuclear, Radiation And Radiochemistry.

Presents a new nomenclature and covers recently discovered systems. Includes a detailed study of conformational analysis of acyclic and alicyclic compounds, the relation between conformation and reactivity, and other aspects of stereochemistry, such as substitution, addition and elimination reactions. Includes numerous examples and illustrations from the Natural Product Area.

For B.Sc 2nd year students of all Indian Universities. The book has been prepared keeping view the syllabi prepared by different universities on the basis of Model UGC Curriculum. A large number of illustrations, pictures and interesting examples have been provided to make the reading interesting and understandable. The question that have been provided in the Exercise are in tune with the latest pattern of examination.

B.Sc. Practical Physics

Senior Practical Physical Chemistry A Comprehensive Course of Experiments for Post-graduate Students College Practical Chemistry Universities Press Practical Chemistry Business Success Secrets Entrepreneurial Thinking That Works Leaders Press

Primarily intended for the undergraduate students of science, the book deals with the practical aspects of organic chemistry and discusses how experiments should be done in the laboratory. The book introduces the various types of components used in laboratories and describes basic techniques used for purification. It elaborates different methods of identification of organic compounds, their preparation, and analysis. In addition, it emphasizes qualitative analysis of organic compounds. The book contains essential experiments done in an organic lab and also explains the theoretical background of reactions involved. This book is an attempt to provide students with the often used methods in an easy to understand manner, including explanations of theory, procedures and interpretations of results of the experiments. Besides undergraduate students of science, this book is also useful for the postgraduate students of chemistry. KEY FEATURES : Includes reaction mechanism of each reaction Describes in Appendices safety measures to be taken in laboratory and how to prepare chemical reagents Contains self assessment questions at the end of each chapter.

The Language of Chemistry or Chemical Equations

This Book Is Organized Into Thirteen Sections, Each Dealing With A Particular Area In Physical Chemistry. Each Section Starts Off With A Short Biography Of A Famous Scientist Associated With That Field. The Theory Behind The Experimental Work Is Then Covered, Followed By The Experimental Procedures Themselves. A Few Review Questions Help You To Gauge Your Understanding Of The Topics Covered. Each Section Has Its Own Appendix That Contains Useful Data, Hints To Solve The Review Questions And The Expected Experimental Results. Each Section Is Designed To Be A Self-Sufficient Unit Found In One Place In The Book. The Book Would Serve As An Excellent Text-Cum-Reference For Students Pursuing Post-Graduate Degree In Chemistry. Under Graduate Students Of Chemistry (Hons) Would Also Find It Extremely Rewarding And Inspiring.

This book presents all the aspects of Reaction Mechanism in an exhaustive and systematic manner. Taking a contemporary approach to the subject, it thrives on worked out mechanisms and solved examples for the students to understand and practice various categories of chemical reactions. Designed to meet the growing needs of undergraduate and postgraduate students, this book would also be useful as a reference text to the aspirants appearing for various national-level entrance examinations.

Inorganic Chemistry provides vivid, clarifying information in this dynamic and fascinating area of chemistry. Presenting the subject in an easy-to-understand manner, the text provides

comprehensive indepth coverage along with tools for enhanced learning, thereby helping students appreciate and understand the fundamentals clearly. Salient Features : • Emphasis given to the theoretical aspects of the subject • Excellent coverage on Coordination Chemistry and Organometallics • Application and case studies provided throughout for better comprehension
A Clear And Reliable Guide To Students Of Practical Organic Chemistry At The Undergraduate And Postgraduate Levels. This Edition S Special Emphasis Is On Semi Micro Methods And Modern Techniques And Reactions.

Every Warren Buffet, Bill Gates and Steve Jobs started out as nothing more than a person with an idea – and ideas are a dime a dozen. The mindset, processes, and teams that you build are where the real magic happens. Leverage the wisdom within Business Success Secrets from Tamara Nall, et al, and discover your own success story! BEYOND THE HIGHLIGHT REEL: AN HONEST, RAW AND REAL LOOK AT SOME OF THE BEST KEPT ENTREPRENEURIAL SECRETS! Buried beneath the impressive awards and accolades of each successful entrepreneur lies the hard-knocks story of the grit, determination, and resourcefulness it took to mount the summit of a dream. What you don't know is just how much they learned along the way.... Business Success Secrets is a book written for entrepreneurs by entrepreneurs. Forget the flashing banners, false promises of overnight success, and the phony internet gurus – this is business insight straight from the source. Laying it all on the line, each author in the anthology has come together for one singular purpose: to bring you the undiluted truth of what it takes to make your business dream a reality. The only question now is, what's standing in your way? Start reading now to: embody some of the best kept secrets to successful navigation and leadership learn sustainable methodologies for scalable growth develop a mindset that welcomes challenges and adversity via constant and renewed goal setting and metrics analysis explore the various iterations of the entrepreneurial mindset and how to tailor each one to your own personal brand avoid some of the most common pitfalls and traps for business owners in today's professional landscape learn how entrepreneurialism is a market open to anyone regardless of age, race, gender, or nationality discover how CEOs, presidents, and founders narrowly avoided major disasters to come out on top learn vicariously from the mistakes of those that have gone before you and propel yourself into the life you've always wanted to live! There's no need to reinvent the wheel! Start your entrepreneurial journey off on the right foot: grab your copy of Business Success Secrets today!

Essentials of Physical Chemistry is a classic textbook on the subject explaining fundamentals concepts with discussions, illustrations and exercises. With clear explanation, systematic presentation, and scientific accuracy, the book not only helps the students clear misconceptions about the basic concepts but also enhances students' ability to analyse and systematically solve problems. This bestseller is primarily designed for B.Sc. students and would equally be useful for the aspirants of medical and engineering entrance examinations.

This manual for practical qualitative analysis covers the use of spectroscopic methods for identification of various functional groups, Comprehensive tables giving methods for the systematic identification of pure specimens, separation of mixtures and compounds, and procedures for preparation of derivatives are some of the salient features of the book.

Organic chemistry has played a vital role in the development of diverse molecules which are used in medicines, agrochemicals and polymers. Most of the chemicals are produced on an industrial scale. The industrial houses adopt a synthesis for a particular molecule which should be cost-effective. No attention is paid to avoid the release of harmful chemicals in the atmosphere, land and sea. During the past decade special emphasis has been made towards green synthesis which circumvents the above problems. Prof. V. K. Ahluwalia and Dr. M. Kidwai have made a sincere effort in this direction. This book discusses the basic principles of green chemistry incorporating the use of green reagents, green catalysts, phase transfer catalysis, green synthesis using microwaves, ultrasound and biocatalysis in detail. Special emphasis is given to liquid phase reactions and organic synthesis in the solid phase. I must congratulate both the authors for their pioneering efforts to write this book. Careful selection of various topics in the book will serve the rightful purpose for the chemistry community and the industrial houses at all levels. PROF. JAVED IQBAL, PhD, FNA Distinguished Research Scientist & Head Discovery Research Dr. Reddy's Laboratories Ltd.

The authors have examined carefully a number of Indian Universities and evolved a common minimum laboratory programme and the result is this compilation. The experiments chosen are the minimum required for undergraduate programmes. Some experiments have been purposely included so that they can be covered at demonstration level and can be given as exercises at the post graduate level. The authors have attempted to assemble the list of experiments from their experience and also have drawn upon the experience of the students who have undergone these laboratory courses and felt the inadequacy of the existing curriculum.

This book is specially designed for B.Sc. Chemistry Honours Degree students. However, it is believed to be helpful to post-graduate students also. It covers by and large physical chemistry part of the Chemistry Honours syllabus taught in different Indian Universities. Elaborate and lucid discussion of each chapter is the strength of this book. Questions and numerical problems are also included at the end of almost every chapter. Strenuous effort has been given to derive different mathematical equations as well as to handle quantum mechanics using mathematics taught in undergraduate level. The book contains 20 chapters, covering the following topics: - Thermodynamics is thoroughly discussed in this book, covering 1st law, 2nd law and 3rd law of thermodynamics, their applications, thermochemistry and its applications. Applications of thermodynamics in different areas like refrigerators, compressors, power plants, IC engines etc. are also discussed. Statistical thermodynamics is also discussed elaborately. - Chemical kinetics is another important part of chemistry since it covers reaction rate, order of a reaction, theory behind the reaction rate etc. Catalyst is also an important aspect since it has profound influence on reaction rate. Type of catalyst and mechanism of different catalyzed reactions are discussed in detail. A chemical reaction reaches an equilibrium state if carried out in a closed container. However, the equilibrium is sufficiently influenced by other parameters, like pressure, temperature etc. - Different physical states of matter (gaseous state, liquid state and solid state). In the solid state behavior of conductors and semiconductors are discussed thoroughly using quantum mechanics. - Detailed discussion of electrochemistry, electrochemical cell and ionic equilibria is another important aspect of this book. Application of thermodynamics in electrochemical cell is also discussed. Concept of buffer solutions, pH and indicators are discussed in detail. - Phase equilibria is another important part of physical chemistry. The chapter includes details of phase rule, phase diagram, applications, different types of heterogeneous equilibrium system etc. - Colligative properties of dilute solutions are well documented, covering, Henry's law, Raoult's law of lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure etc. - Surface chemistry and properties of colloidal solutions are very much important in different chemical industries. These two sections are well discussed in this book. It includes details of derivation of different laws, theories behind the adsorption,

stability of colloidal solutions etc. - Nuclear reactions are different from chemical reactions and energy, related to nuclear reactions is enormous, much higher than any chemical reaction. Study of different nuclear reactions including natural radioactivity, artificial radioactivity etc. and kinetics of nuclear reactions are well discussed in this book. Different areas of applications of nuclear reactions are also covered in this book. - Another important aspect of chemical reactions is chemical bonding. The book covers details of covalent bonding including quantum numbers, overlapping of atomic orbitals, molecular orbitals. Besides that ionic bonding and other types of bonding are also discussed in detail. - Photochemical reactions are different from chemical reactions. Light energy is the main source of photochemical reactions. Details of it including photochemical laws, mechanism etc. are well documented in this book.

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