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Fluorine Chemistry Jul 13 2020 Fluorine Chemistry, Volume IV provides an extensive survey and discussion on the physiological properties of fluoride ion and substances capable of producing it in aqueous solution. This book elaborates the detrimental effects of excessive fluoride ingestion, through the beneficial effects of optimal amounts, to recognized detrimental effects, such as dental caries accompanied by suboptimal fluoride intake. Fluoride metabolism is discussed in detail, including the capacity for storage of fluoride by the bones and rates of excretion of fluoride from the body. This text also covers the relation of fluoride ion to the health of teeth and bones. This publication is a good source for chemists and clinicians intending to acquire knowledge of the biological effects of fluoride.

Physical Constants of Hydrocarbon and Non-hydrocarbon Compounds Oct 08 2022 The letter symbols for the concepts most widely used in chemical engineering are listed on the following pages.

Basic Principles of Organic Chemistry Oct 16 2020 Introduction what is organic chemistry all about?; Structural organic chemistry the shapes of molecules functional groups; Organic nomenclature; Alkanes; Stereoisomerism of organic molecules; Bonding in organic molecules atomic-orbital models; More on nomenclature compounds other than hydrocarbons; Nucleophilic substitution and elimination reactions; Separation and purification identification of organic compounds by spectroscopic techniques; Alkenes and alkynes. Ionic and radical addition reactions; Alkenes and alkynes; Oxidation and reduction reactions; Acidity or alkynes.

Chemistry of Hydrocarbon Combustion Jul 05 2022 The scientific and economic importance of the high-temperature reactions of hydrocarbons in both the presence and absence of oxygen cannot be overemphasized. A vast chemical industry exists based on feedstocks produced by the controlled pyrolysis of hydrocarbons, while uncontrolled combustion in air is still among the most important sources of heat and mechanical energy. The detonation and explosion of hydrocarbon-oxidant mixtures can however, be a highly dangerous phenomenon which destroys lives and equipment. In order that control can be exerted over combustion processes, a complete description of hydrocarbon oxidation and pyrolysis is required. A major contribution to this is an understanding of the unstable intermediates involved and their reactions. The aim of this book is to review our knowledge of the chemistry of hydrocarbon combustion and to consider the data which are available for relevant reactions. Chapter 1 describes early studies in which the apparent complexity of the chemistry was established and the type of information required for a better understanding was defined. Experimental studies of the overall process which were carried out with the aim of establishing the sequence of stable chemical intermediates and some of the unstable species are described in Chapter 2. The limited nature of the information thus obtained showed that independent studies of individual reactions involving the unstable species were required. In Chapter 3 investigations specifically aimed at the determination of the kinetics of elementary reactions are discussed.

Nomenclature of Organic Chemistry Aug 06 2022 Detailing the latest rules and international practice, this new volume can be considered a guide to the essential organic chemical nomenclature, commonly described as the "Blue Book".

Polycyclic Aromatic Hydrocarbons Apr 21 2021 Polycyclic aromatic hydrocarbons, many of which have been identified as potent human carcinogens, occur widely in the environment as a result of incomplete combustion of fossil fuels and other organic matter. Major sources of emissions are wood and coal burning, automobiles, heat and power plants, and refuse burning. This volume reviews the chemistry of polycyclic aromatic hydrocarbons and their active metabolites, providing up-to-date information on their chemical and physical properties, methods of synthesis, environmental occurrence, and chemical reactions. It also surveys their biological properties, metabolism and metabolic activation, and current concepts concerning their mechanisms of carcinogenesis. The emphasis throughout is on recent findings and newer methods and techniques. This book provides a comprehensive overview of this currently active field of research, bringing together in a single volume a large amount of information previously scattered throughout the scientific literature. It may be read with profit by anyone with an interest in the chemistry and metabolism of polycyclic aromatic hydrocarbons, environmental chemistry and chemical carcinogenesis.

Constructed Wetlands for Industrial Wastewater Treatment Aug 14 2020 A groundbreaking book on the application of the economic and environmentally effective treatment of industrial wastewater Constructed Wetlands for Industrial Wastewater Treatment contains a review of the state-of-the-art applications of constructed wetland technology for industrial wastewater treatment. This green technology offers many economic, environmental, and societal advantages. The text examines the many unique uses and the effectiveness of constructed wetlands for the treatment of complex and heavily polluted wastewater from various industrial sources. The editor — a noted expert in the field — and the international author team (93 authors from 22 countries) present vivid examples of the current state of constructed wetlands in the industrial sector. The text is filled with international case studies and research outcomes and covers a wide range of applications of these sustainable systems including facilities such as the oil and gas industry, agro-industries, paper mills, pharmaceutical industry, textile industry, winery, brewery, sludge treatment and much more. The book reviews the many system setups, examines the different removal and/or transformational processes of the various pollutants and explores the overall effectiveness of this burgeoning technology. This important resource: Offers the first, groundbreaking text on constructed wetlands use for industrial wastewater treatment Provides a single reference with summarized information and the state-of-the-art knowledge of the use of Constructed Wetlands in the industrial sector through case studies, research outcomes and review chapters Covers a range of industrial applications such as hydrocarbons/oil and gas industry, food and beverage, wood and leather processing, agro-industries, pharmaceuticals and many others Includes best practices drawn by a collection of international case studies Presents the latest technological developments in the industry Written for civil and environmental engineers, sustainable wastewater/water managers in industry and government, Constructed Wetlands for Industrial Wastewater Treatment is the first book to offer a comprehensive review of the set-up and effectiveness of constructed wetlands for a wide range of industrial applications to highlight the diverse economic and environmental benefits this technology brings to the industry.

Carbon-Rich Compounds Sep 07 2022 This is the only up-to-date book on the market to focus on the synthesis of these compounds in this particularly suitable way. A team of excellent international authors guarantees high-quality content, covering such topics as monodisperse carbon-rich oligomers, molecular electronic wires, polyaromatic hydrocarbons, nonconjugated small molecules, nanotubes, fullerenes, polyynes, macrocycles, dendrimers, phenylenes and diamondoid structures. The result is a must-have for everyone working in this expanding and interdisciplinary field, including organic and polymer chemists, materials scientists, and chemists working in industry.

Insect Hydrocarbons Aug 26 2021 A unique and critical analysis of the wealth of research conducted on the biology, biochemistry and chemical ecology of the rapidly growing field of insect cuticular hydrocarbons. Authored by leading experts in their respective fields, the twenty chapters show the complexity that has been discovered in the nature and role of hydrocarbons in entomology. Covers, in great depth, aspects of chemistry (structures, qualitative and quantitative analysis), biochemistry (biosynthesis, molecular biology, genetics, evolution), physiology, taxonomy, and ecology. Clearly presents to the reader the array of data, ideas, insights and historical disagreements that have been accumulated during the past half century. An emphasis is placed on the role of insect hydrocarbons in chemical communication, especially among the social insects. Includes the first review on the chemical synthesis of insect hydrocarbons. The material presented is a major resource for current researchers and a source of ideas for new researchers.

Organic Chemistry Quiz Questions and Answers May 23 2021 "Organic Chemistry Quiz Questions and Answers" book is a part of the series "What is High School Chemistry & Problems Book" and this series includes a complete book 1 with all chapters, and with each main chapter from grade 10 high school chemistry course. "Organic Chemistry Quiz Questions and Answers" pdf includes multiple choice questions and answers (MCQs) for 10th-grade competitive exams. It helps students for a quick study review with quizzes for conceptual based exams. "Organic Chemistry Questions and Answers" pdf provides problems and solutions for class 10 competitive exams. It helps students to attempt objective type questions and compare answers with the answer key for assessment. This helps students with e-learning for online degree courses and certification exam preparation. The chapter "Organic Chemistry Quiz" provides quiz questions on topics: What is organic chemistry, organic compounds, alcohols, sources of organic compounds, classification of organic compounds, uses of organic compounds, alkane and alkyl radicals, and functional groups. The list of books in High School Chemistry Series for 10th-grade students is as: - Grade 10 Chemistry Multiple Choice Questions and Answers (MCQs) (Book 1) - Organic Chemistry Quiz Questions and Answers (Book 2) - Biochemistry Quiz Questions and Answers (Book 3) - Environmental Chemistry Quiz Questions and Answers (Book 4) - Acids, Bases and Salts Quiz Questions and Answers (Book 5) - Hydrocarbons Quiz Questions and Answers (Book 6) "Organic Chemistry Quiz Questions and Answers" provides students a complete resource to learn organic chemistry definition, organic chemistry course terms, theoretical and conceptual problems with the answer key at end of book.

Advanced Organic Chemistry Jul 01 2019 The two-part, fifth edition of Advanced Organic Chemistry has been substantially revised and reorganized for greater clarity. The material has been updated to reflect advances in the field since the previous edition, especially in computational chemistry. Part A covers fundamental structural topics and basic mechanistic types. It can stand-alone; together, with Part B: Reaction and Synthesis, the two volumes provide a comprehensive foundation for the study in organic chemistry. Companion websites provide digital models for study of structure, reaction and selectivity for students and exercise solutions for instructors.

Thermophysical Properties of Chemicals and Hydrocarbons Jul 25 2021 Compiled by an expert in the field, the book provides an engineer with data they can trust. Spanning gases, liquids, and solids, all critical properties (including viscosity, thermal conductivity, and diffusion coefficient) are covered. From C1 to C100 organics and Ac to Zr inorganics, the data in this handbook is a perfect quick reference for field, lab or classroom usage. By collecting a large – but relevant – amount of information in one source, the handbook enables engineers to spend more time developing new designs and processes, and less time collecting vital properties data. This is not a theoretical treatise, but an aid to the practicing engineer in the field, on day-to-day operations and long range projects. Simplifies research and significantly reduces the amount of time spent collecting properties data Compiled by an expert in the field, the book provides an engineer with data they can trust in design, research, development and manufacturing A single, easy reference for critical temperature dependent properties for a wide range of hydrocarbons, including C1 to ClOO organics and Ac to Zr inorganics

Activation and Catalytic Reactions of Saturated Hydrocarbons in the Presence of Metal Complexes Nov 28 2021 hemistry is the science about breaking and forming of bonds between atoms. One of the most important processes for organic chemistry is breaking bonds C–H, as well as C–C in various compounds, and primarily, in hydrocarbons. Among hydrocarbons, saturated hydrocarbons, alkanes (methane, ethane, propane, hexane etc.), are especially attractive as substrates for chemical transformations. This is because, on the one hand, alkanes are the main

constituents of oil and natural gas, and consequently are the principal feedstocks for chemical industry. On the other hand, these substances are known to be the less reactive organic compounds. Saturated hydrocarbons may be called the “noble gases of organic chemistry” and, if so, the first representative of their family – methane – may be compared with extremely inert helium. As in all comparisons, this parallel between noble gases and alkanes is not fully accurate. Indeed the transformations of alkanes, including methane, have been known for a long time. These reactions involve the interaction with molecular oxygen from air (burning – the main source of energy!), as well as some mutual interconversions of saturated and unsaturated hydrocarbons. However, all these transformations occur at elevated temperatures (higher than 300–500 °C) and are usually characterized by a lack of selectivity. The conversion of alkanes into carbon dioxide and water during burning is an extremely valuable process – but not from a chemist viewpoint.

Nitration of Hydrocarbons and Other Organic Compounds Jun 04 2022 Nitration of Hydrocarbons and Other Organic Compounds tackles various concerns in the process of substituting hydrogen atoms in the aromatic or heterocyclic nucleus, or in saturated hydrocarbon, by nitro groups. The title first covers the nitration of aromatic and heterocyclic compounds with nitric acid and nitrating mixture, and then proceeds to discussing the mechanism of the nitration of aromatic compounds with nitric acid and nitrating mixture. Next, the selection deals with the nitration of saturated, aromatic-aliphatic and unsaturated hydrocarbons with nitric acid. The text also talks about the nitration with nitrogen oxides, along with the nitration of amines. The last chapter details the nitration of organic compounds with organic and inorganic nitrates and nitroxy. The book will be of great interest to students, researchers, and practitioners of organic chemistry.

Meteorites and the Early Solar System II Aug 02 2019 They range in size from microscopic particles to masses of many tons. The geologic diversity of asteroids and other rocky bodies of the solar system are displayed in the enormous variety of textures and mineralogies observed in meteorites. The composition, chemistry, and mineralogy of primitive meteorites collectively provide evidence for a wide variety of chemical and physical processes. This book synthesizes our current understanding of the early solar system, summarizing information about processes that occurred before its formation. It will be valuable as a textbook for graduate education in planetary science and as a reference for meteoritists and researchers in allied fields worldwide.

Modern Cyclophane Chemistry Jun 11 2020 Here, the editors Rolf Gleiter and Henning Hopf present an excellent overview of all the important aspects and latest results in cyclophane chemistry. Clearly structured and covering the entire range, the book introduces readers to the most recent research in the field. Twenty chapters, written by well-known scientists, cover in particular: - synthesis of carbo- and heterocyclic cyclophanes and metallocenophanes, - structural and spectroscopic properties of cyclophanes, - current and future applications in synthesis and material science, - novel reactions of cyclophanes, - use of cyclophanes as building blocks in supramolecular chemistry for this fascinating class of compounds. Thus, this is not only an extremely valuable source of information for synthetic organic chemists, but also a ready reference for scientists working in related fields of arene chemistry, stereoselective synthesis, material science, and bioorganic chemistry.

A Life of Magic Chemistry Apr 09 2020 The autobiography of a Nobel Prize winner, this book tells us about George Olah's fascinating research into extremely strong superacids and how it yielded the common term "magic acids." Olah guides us through his long and remarkable journey, from Budapest to Cleveland to Los Angeles, with a stopover in Stockholm. This updated autobiography of a Nobel Prize winner George A. Olah: Chronicles the distinguished career of a chemist whose work in a broad range of chemistry areas, and most notably that in methane chemistry, led to technologies that impact the processing and utility of alternative fuels Is based on Olah's work on extremely strong superacids and how they yielded the common term, "magic acids" Details events since the publication of the first edition in 2000 Inspires readers with details on Dr. Olah's successful recent research on methanol, intended to help provide a solution to "the oil problem"

Fluorine in Organic Chemistry Sep 26 2021 The introduction of carbon-fluorine bonds into organic compounds can profoundly influence their chemical and physical properties when compared to their non-fluorine-containing analogues, leading to a range of man-made materials with highly desirable properties. These molecules are of interest across the wide spectrum of industrial and academic organic chemistry, from pharmaceuticals, through fine and specialty chemicals to polymers. From Prozac to Teflon, many of the most important products of the chemical and life-science industries rely on organic fluorine chemistry for their useful properties. This book covers both the preparative methodologies and chemical properties of partially and highly fluorinated organic systems.

Halogenated Hydrocarbons Nov 04 2019 This book promotes a basic understanding of the concept of solubility and miscibility between halogenated hydrocarbons and water. It points out the regularities existing between solubility and physical properties of solute and solvent. The book is valuable to chemists and chemical engineers.

Toxicological Profile for Polycyclic Aromatic Hydrocarbons Dec 30 2021

Chemistry for Today Jan 31 2022 Distinguished by its superior allied health focus and integration of technology, Seager and Slabaugh's CHEMISTRY FOR TODAY: GENERAL, ORGANIC, and BIOCHEMISTRY, Fifth Edition continues to lead the market on both fronts through numerous allied health-related applications, examples, boxes, and a new Companion Web Site, GOB ChemistryNow(tm). In addition to the many resources found in GOB ChemistryNow, this powerful new Web site contains questions modeled after the "Nursing School and Allied Health Entrance Exams" and NCLEX-LPN "Certification Exams." The authors strive to dispel users' inherent fear of chemistry and to instill an appreciation for the role chemistry plays in our daily lives through a rich pedagogical structure and an accessible writing style that provides lucid explanations. In addition, Seager and Slabaugh's CHEMISTRY FOR TODAY, Fifth Edition, provides greater support in both problem-solving and critical-thinking skills. By demonstrating how this information will be important to a reader's future career and providing important career information online, the authors not only help readers to set goals but also to focus on achieving them.

Hydrocarbons for Fuel--75 Years of Materials Research at NBS Feb 06 2020

Hydrocarbons Quiz Questions and Answers Mar 01 2022 "Hydrocarbons Quiz Questions and Answers" book is a part of the series "What is High School Chemistry & Problems Book" and this series includes a complete book 1 with all chapters, and with each main chapter from grade 10 high school chemistry course. "Hydrocarbons Quiz Questions and Answers" pdf includes multiple choice questions and answers (MCQs) for 10th-grade competitive exams. It helps students for a quick study review with quizzes for conceptual based exams. "Hydrocarbons Questions and Answers" pdf provides problems and solutions for class 10 competitive exams. It helps students to attempt objective type questions and compare answers with the answer key for assessment. This helps students with e-learning for online degree courses and certification exam preparation. The chapter "Hydrocarbons Quiz" provides quiz questions on topics: What is hydrocarbon, alkanes, alkenes, and alkynes. The list of books in High School Chemistry Series for 10th-grade students is as: - Grade 10 Chemistry Multiple Choice Questions and Answers (MCQs) (Book 1) - Organic Chemistry Quiz Questions and Answers (Book 2) - Biochemistry Quiz Questions and Answers (Book 3) - Environmental Chemistry Quiz Questions and Answers (Book 4) - Acids, Bases and Salts Quiz Questions and Answers (Book 5) - Hydrocarbons Quiz Questions and Answers (Book 6) "Hydrocarbons Quiz Questions and Answers" provides students a complete resource to learn hydrocarbon definition, hydrocarbons course terms, theoretical and conceptual problems with the answer key at end of book.

C4-Hydrocarbons and Derivatives Feb 17 2021 The book treats the C -hydrocarbons and their secondary products as a contribution 4 to chemical engineering economics, applying this field of teaching and research to the technical processes for making and processing this group of products, so important to the chemical industry. As early as the 1950s the then director of the Institute for Technical Chemistry of the Berlin Technical University, Professor Herbert Kolbel, took the initiative in the domain of Chemical Engineering Economics and began systematic studies of Project Engineering and Cost Estimation in connection with chemical plants. He also started a course on technical chemical processes in 1966. Properties, production procedures, plant equipment, and also the uses of technically interesting products are the central features of Chemical Technology. The information is to be found in the large encyclopedias of Technical Chemistry. On the other hand, Chemical Engineering Economics deals with all the economic conditions of usage of the raw materials, possibilities of utilizing co-products, and the integration of these products into definite production programmes, from the stand point of the chemical and technical fundamentals of the processes. Further important viewpoints are the costs of the products, taking into consideration important and variable influences on these costs, the situation and development of the market for the products and, of increasing significance, also the ecological global conditions for procuring raw materials and the production and marketing of the particular products.

Oil in the Sea III May 11 2020 Since the early 1970s, experts have recognized that petroleum pollutants were being discharged in marine waters worldwide, from oil spills, vessel operations, and land-based sources. Public attention to oil spills has forced improvements. Still, a considerable amount of oil is discharged yearly into sensitive coastal environments. Oil in the Sea provides the best available estimate of oil pollutant discharge into marine waters, including an evaluation of the methods for assessing petroleum load and a discussion about the concerns these loads represent. Featuring close-up looks at the Exxon Valdez spill and other notable events, the book identifies important research questions and makes recommendations for better analysis of and more effective measures against pollutant discharge. The book discusses: Input where the discharges come from, including the role of two-stroke engines used on recreational craft. Behavior or fate how oil is affected by processes such as evaporation as it moves through the marine environment. Effects what we know about the effects of petroleum hydrocarbons on marine organisms and ecosystems. Providing a needed update on a problem of international importance, this book will be of interest to energy policy makers, industry officials and managers, engineers and researchers, and advocates for the marine environment.

Polycyclic Hydrocarbons Jan 07 2020 Polycyclic hydrocarbons are of interest in many fields of science: theoretical chemistry, physical chemistry, organic chemistry, dyestuff chemistry and biology. With regard to the latter, I am indebted to Dr. Regina Schoental of the Medical Research Council for the review in this present work of carcinogenesis by polycyclic hydrocarbons. This book is designed to present the facts in a simple and clear order and to derive empirical rules from them, but it does not present a comprehensive theory about polycyclic hydrocarbons. An attempt is made instead to extend classical symbolism into modern structural chemistry. Thus extensive use is made of Robinson's aromatic sextet, which is applied in an uncompromising and strict way. This quasi-classical attempt is encouraged further by such completely unexpected discoveries as those of Dewar benzene and of the electronic asymmetry of formally symmetric hydrocarbons. How difficult it is to break away from any established way of thinking has been admirably expressed by Kekule ("Organische Chemie", 1861, Part 1, page 4, translated from the German): "All our ideas are based, to an extent much greater than we ordinarily believe, on those of our predecessors. Our accumulated experience, the notions of which our training has accustomed us to, of whatever kind they have been, influence the course of our thoughts far more than we are willing to admit; only too frequently the following of our regularly used, well trodden way of thinking leads us to overlook the simplest of correlations.

Handbook of Hydrocarbons Apr 02 2022 Handbook of Hydrocarbons presents tables giving the most important physical properties of all hydrocarbons whose boiling points have been recorded, in such form that all compounds boiling at or near a given value are listed together and a specific hydrocarbon can be promptly located. These ends can be best accomplished by listing each hydrocarbon in each of two tables. The order in Table A is that of the boiling points at 760 mm Hg, and other properties are also given. In Table B, the compounds are in groups of the same empirical formula and same type and are arranged within groups alphabetically by parent compound. Table C lists alternate names, including common and trivial names, and Table D gives the numbering of representative cyclic hydrocarbons. The Handbook should offer real help to any investigator who wishes either to locate the properties of a specific hydrocarbon, or to obtain a quick summary of the indications which the literature affords as to what compounds may be present in a cut of known boiling point or range. Such investigators should include academic, institutional, government and industrial workers, not only in the predominantly hydrocarbon fields such as petroleum, natural gas, shale oil, coal, and rubber, but also in the chemical, "petrochemical," and plastics fields.

Organic Chemistry May 03 2022

Strained Hydrocarbons Oct 28 2021 In clearly structured chapters, this book covers the fascinating world of hydrocarbons, providing an insight into the fundamental principles of chemistry. The monograph covers modern aspects of the topic, such as carbon nanotubes, molecular flask inclusion, and fullerenes, with new synthetic procedures for the build up of the structural lattice included.

WHO Guidelines for Indoor Air Quality Dec 18 2020 This book presents WHO guidelines for the protection of public health from risks due to a number of chemicals commonly present in indoor air. The substances considered in this review, i.e. benzene, carbon monoxide, formaldehyde, naphthalene, nitrogen dioxide, polycyclic aromatic hydrocarbons (especially benzo[a]pyrene), radon, trichloroethylene and tetrachloroethylene, have indoor sources, are known in respect of their hazardousness to health and are often found indoors in concentrations of health concern. The guidelines are targeted at public health professionals involved in preventing health risks of environmental exposures, as well as specialists and authorities involved in the design and use of buildings, indoor materials and products. They provide a scientific basis for legally enforceable

standards.

Chemistry Data Book Jun 23 2021 This text is a standard reference book for A Level and equivalent examinations.

Introductory Organic Chemistry and Hydrocarbons Nov 09 2022 A novel proposal for teaching organic chemistry based on a broader and simplified use of quantum chemistry theories and notions of some statistical thermodynamic concepts aiming to enrich the learning process of the organic molecular properties and organic reactions. A detailed physical chemistry approach to teach organic chemistry for undergraduate students is the main aim of this book. A secondary objective is to familiarize undergraduate students with computational chemistry since most of illustrations of optimized geometries (plus some topological graphs) and information is from quantum chemistry outputs which will also enable students to obtain a deeper understanding of organic chemistry.

Vinyl Chloride (chloroethene) Mar 21 2021

The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals Dec 06 2019 "Written by the most lauded and respected author on chemical compounds in the field of chemical engineering, this volume is simply the most comprehensive collection of data on chemical compounds ever compiled. A compendium of over 41,000 organic and inorganic chemicals, this broad, ambitious and invaluable work covers c1to c100 organics and Ac to Zr inorganics, with useful applications for the following audiences: Chemists Chemical engineers Chemistry students Chemical engineering students Process engineers For use in the field, in the lab or in the classroom there is no other work that comes close to the research compiled in this handy reference. Collected in one volume, the data on these 41,000 compounds is the most useful in the industry for the engineer and the chemist alike."--Publisher's website.

Radiation Chemistry of Hydrocarbons Sep 02 2019

Principles of Chemical Nomenclature Nov 16 2020 Aimed at pre-university and undergraduate students, this volume surveys the current IUPAC nomenclature recommendations in organic, inorganic and macromolecular chemistry.

Handbook of Industrial Hydrocarbon Processes Oct 04 2019 Written by an author with over 38 years of experience in the chemical and petrochemical process industry, this handbook will present an analysis of the process steps used to produce industrial hydrocarbons from various raw materials. It is the first book to offer a thorough analysis of external factors effecting production such as: cost, availability and environmental legislation. An A-Z list of raw materials and their properties are presented along with a commentary regarding their cost and availability. Specific processing operations described in the book include: distillation, thermal cracking and coking, catalytic methods, hydroprocesses, thermal and catalytic reforming, isomerization, alkylation processes, polymerization processes, solvent processes, water removal, fractionation and acid gas removal. Flow diagrams and descriptions of more than 250 leading-edge process technologies An analysis of chemical reactions and process steps that are required to produce chemicals from various raw materials Properties, availability and environmental impact of various raw materials used in hydrocarbon processing

Organic Geochemistry Jan 19 2021 For many years, the subject matter encompassed by the title of this book was largely limited to those who were interested in the two most economically important organic materials found buried in the Earth, namely, coal and petroleum. The point of view of any discussions which might occur, either in scientific meetings or in books that have been written, was, therefore, dominated largely by these interests. A great change has occurred in the last decade. This change had as its prime mover our growing knowledge of the molecular architecture of biological systems which, in turn, gave rise to a more legitimate asking of the question: "How did life come to be on the surface of the Earth?" A second motivation arose when the possibilities for the exploration of planets other than the Earth-the moon, Mars, and other parts of the solar system-became a reality. Thus the question of the possible existence of life elsewhere than on Earth conceivably could be answered.

Addition and Elimination Reactions of Aliphatic Compounds Sep 14 2020 Addition and Elimination Reactions of Aliphatic Compounds

Quantities, Units and Symbols in Physical Chemistry Mar 09 2020 Quantities, Units and Symbols in Physical Chemistry Third Edition The first IUPAC Manual of Symbols and Terminology for Physicochemical Quantities and Units (the Green Book) of which this is a successor, was published in 1969, with the objective of 'securing clarity and precision, and wider agreement in the use of symbols, by chemists in different countries, among physicists, chemists and engineers, and by editors of scientific journals'. Subsequent revisions have taken account of many developments in the field, culminating in the major extension and revision represented by the 1988 edition under the title Quantities, Units and Symbols in Physical Chemistry. This third edition (2007) is a further revision of the material which reflects the experience of the contributors and users with the previous editions. The book has been systematically brought up to date and new sections have been added. It strives to improve the exchange of scientific information between different disciplines in the international pursuit of scientific research. In a rapidly expanding scientific literature where each discipline has a tendency to retreat into its own jargon, this book attempts to provide a compilation of widely used terms and symbols from many sources together with brief understandable definitions and explanations of best practice. Tables of important fundamental constants and conversion factors are included. Precise scientific language encoded by appropriate definitions of quantities, units and symbols is crucial for the international exchange in science and technology, with important consequences for modern industrial economy. This is the definitive guide for scientists, science publishers and organizations working across a multitude of disciplines requiring internationally approved nomenclature in the area of Physical Chemistry.