THE NAMES AND STRUCTURES OF ORGANIC COMPOUNDS
by Otto Theodor Benfey
This text encompasses a programmed instruction approach to the nomenclature of organic compounds. Common names and systematic (IUPAC) names are correlated with structural formulas, and are presented in question and answer form in accordance with the linear programming method.

PHYSICAL CHEMISTRY OF LEATHER MAKING
by K.J. Bienkiewicz
The background of scientific principles involved in all leather-making processes, from rawhide to finished leather, is presented in this volume. In particular, the text describes and discusses the use of physical chemistry techniques in leather-making phenomena and establishing working principles upon which modern practice is based. The results of international research are also presented.

KINETIC SYSTEMS: Mathematical Description of Chemical Kinetics in Solution
by Christos Capellos & Benon H.J. Bielski
This book contains step-by-step developments of important mathematical equations used in solving chemical kinetic systems. There are ten different kinds of reactions described. Also discussed are miscellaneous systems such as electron transfer reactions in polar solvents, the effect of Coulombic interactions on reaction velocities, and the effect of ionic strength on the velocity of ionic reactions.

SURVEY OF INDUSTRIAL CHEMISTRY
by Philip J. Chenier
Here is a basic text of introductory material, sufficient to cover all important areas of the chemical industry, yet limited in scope so as to be a reasonable goal to complete in 40-45 hours of lecture. A list of important references and their abbreviations, an appendix, and an index are included.

SCENTS APPEAL: The Silent Persuasion of Aromatic Encounters
by Gabrielle J. Dorland
Foreword by Dr. Fred W. Stone
Whether your interest in the fragrance industry is in marketing, research, sales or management, your work will benefit when you identify and understand olfactive communication. Fragrance experts have long recognized that certain aromas communicate particular messages, but what many are not aware of is that these odor meanings may be cross-culturally universal, having been identified and elaborated on in the mythology and legend, folklore and history of essentially every society. In each chapter of this book the fragrance family associated with a specific theme is identified and described. Scents Appeal is one of the first attempts to explain the impact of odor from social and anthropological perspectives. This text consolidates reports and studies in olfactive communication carried out by anthropologists, historians, and researchers investigating related fields of interest.
Orig. Ed. 1993, 352 pp., ISBN 978-0-9603250-4-7, $46.00

TOPICS IN ATOMIC COLLISION THEORY
by Sydney Geltman
This volume provides a thorough, up-to-date treatment of the application of quantum scattering theory to low-energy atomic collision phenomena. The first unified expository approach to the subject in book form, it includes much new information reflecting the results of recent investigations. The material is divided into three main areas: static field scattering, electron-atom collisions and atom-atom collisions. Within these areas, individual topics are presented in a complete and self-contained manner, with emphasis placed on the understanding of the physics involved and the calculation of reliable cross sections. Intended primarily for researchers and graduate students in atomic physics, atmospheric physics, and astrophysics, this book will also prove a highly acces-

ESSENTIAL OILS (6 VOL. SET) MATCHED SET by Ernest Guenther
The first volume describes, from a general point of view, the history, chemistry, biological origin and functions of the essential oils, methods and analysis. The second volume deals with the chemical constituents of essential oils. Succeeding volumes are devoted to individual oils, their botanical and geographical origin, specific methods of production, physicochemical properties assay and use. Orig. Ed. 1952, Reprint Ed. 1992, 3894 pp., ISBN 978-0-89464-773-4, $868.50

RARE METALS HANDBOOK by Clifford Hampel
This book was designed to bring together available reference data on rare and uncommon metals — methods of production from ores or other raw materials, chemical and physical properties, fabrication techniques, and present and potential uses. 2nd Ed. 1961, Reprint Ed. 1971, 732 pp., ISBN 978-0-88275-024-8, $127.75

MOLECULAR SPECTRA AND MOLECULAR STRUCTURE - 3 VOL. SET by Gerhard Herzberg
In contrast to diatomic molecules, the spectroscopic study of polyatomic molecules was for a long time carried out principally by work in the infrared region and by the study of the Raman effect. However, the considerable improvement in vacuum ultraviolet techniques and the development for the study of free radicals have made possible a rapid development of the study of electronic spectra. The object of this book is to present the results of this new development without neglecting the significant older work on the subject. 2nd Ed. 1966, Reprint Ed. 1991, 778 pp., ISBN 978-0-89464-270-8, $135.25

THEORY OF DISLOCATIONS by John Price Hirth & Jens Lothe
This book is a comprehensive treatment of the fundamentals of dislocations. Sufficient detail is provided to make the book useful as an undergraduate text, and extends the treatment of specific problems to stimulate the advanced graduate student. The book covers the elastic theory of straight and curved dislocations, including a chapter on elastic anisotropy. Applications to the theory of dislocation motion at low and high temperatures are presented. Finally, groups of dislocations, grain boundaries, pileups, barriers, and twins are considered. 2nd Ed. Ed. 1982, Reprint Ed. 1992, 872 pp., ISBN 978-0-89464-617-1, $214.25

ENANTIOMERS, RACEMATES, AND RESOLUTIONS by Jean Jacques, Andre Collet & Samuel H. Wilen
Presented here is a careful development of information dispensed into two parts. The first part of this text discusses racemic systems and enantiomers; explaining the nature of the crystals, enantiomer mixtures and their properties and energetics, and solution properties of enantiomer mixtures. Part two deals with the resolution of enantiomers by (1) direct crystallization, (2) formation and separation of diastereomer mixtures, and (3) experimental aspects of resolutions. While the examples in this book are virtually all organic, the principles are equally applicable to inorganic compounds. The chapters on resolution are also suggestive of approaches to the resolution of inorganic compounds. Orig. Ed. 1981, Reissue Ed. 1994, 464 pp., ISBN 978-0-89464-876-2, $103.75

PERFUME ALBUM by Jill Jessee
We’re going places! Faraway exotic places! Our tour will include vast continents and tiny jewel like islands. We’re going to climb staggering mountains and dare
A REVOLUTION IN THE PHYSIOLOGY OF THE LIVING CELL
by Gilbert N. Ling

The essence of a major revolution in cell physiology — the first since the cell was recognized as the basic unit of life a century and a half ago — is presented and alternative theories are discussed in this text. Although the conventional membrane-pump theory is still being taught, another theory of the living cell, called the association-induction hypothesis, has been proposed. It has successfully withstood twenty-five years of worldwide testing and has already generated an enhancing diagnostic tool of great power, magnetic resonance imaging (MRI). This volume is intended for teachers, students and researchers of biology and medicine.


HANDBOOK OF SOLVENT EXTRACTION
Edited by Teh C. Lo, Malcolm H.I. Baird, & Carl Hanson

More than 70 authors from many countries, with different experience and academic training, have contributed to this handbook. Because of this and the very rapid rate of advance of knowledge of extraction, the different chapters do not always show the same approach and outlook. The editors have made every reasonable effort to present each particular viewpoint. This handbook should be helpful to people involved in processing, equipment selection and design, and research and academic study of solvent extraction.


FATTY ACIDS: Their Chemistry, Properties, Production, and Uses - 5 PART SET
Edited by Klare S. Markley

Outstanding specialists have contributed to the present volumes on the chemistry, properties, production, and uses of fatty acids. The result is the most comprehensive work devoted to this subject. The industrial production and utilization of fatty acids are stressed throughout and also are subjects of specific chapters.


PREPARATION AND ANALYSIS OF PROTEIN CRYSTALS
by Alexander McPherson

A concise, comprehensive guide to the preparation of proteins used in crystallographic studies, this text describes methods for protein crystallization, formation of isomorphous heavy atoms, X-ray diffraction and analysis, photographic and computer-based data, and a collection of methods and instrumentation. Over 150 drawings and photographs illustrate methods, techniques, and results. Also included is an extensive table of over 200 examples of biochemical information for protein preparation, and extensive references and bibliography.

ADVANCED COMPOSITE MOLD MAKING
by John J. Morena
All the design, design engineering, materials, processes and manufacturing engineering tools needed to produce patterns, molds and tools that yield quality, trouble free advanced-composite structures and components are in this book. The book exceeds all other available works in scope and new-method coverage. This all-in-one resource guides you through the manufacture of both nonmetallic and metallic molds and tools used to form, mold or bond small to very large advanced composite parts and assemblies. It provides detailed instructions on how to use each kind of mold-making material and execute each mold-making process. This updated edition contains leading edge state of the art information that takes the reader step by step through the mold design, tooling and molding processes of light RTM, vacuum assisted and low pressure injection including other resin system infusion systems.

MOLECULAR AND CELL BIOLOGY OF MARINE MAMMALS
Edited by Carl J. Pfeiffer
Marine mammals comprise some of the most highly adapted mammals, many with unbelievable diving capabilities, high intelligence, and complex social behavior, and some with brains larger than that of humans. Many possess echolocating and communication skills that we are only beginning to understand. This book brings together for the first time in marine mammalogy, a group of 76 experts focused upon cell and molecular biology of aquatic mammals. Methods currently being used to explore marine mammal biology are discussed, such as genetic tracing of subpopulations of whales and seals by DNA fingerprinting, use of immune system molecular markers, cell culture and ELISA techniques, and electron microscopy.

WATER SCIENCE AND ENGINEERING
by S.L. Polevoy
Water Science and Engineering is an introductory text that cuts across various disciplines to provide an integrated view of the fundamental concepts of water. The book emphasizes water’s properties and behavior as well as the natural global processes related to water (hydrologic cycle). It covers a wide range of issues including water’s molecular structure, speculations on the origin of the World Ocean, fluid mechanics, water’s role in the evolution of life and many other concepts and theories. Discussions on groundwater hydrology aid the reader in understanding environmental concerns. Significant attention in the book is paid to the practical application of knowledge on water. Throughout the text, theories and concepts are explained in language suitable for nonspecialists. Plus, numerous, original illustrations by the author help visualize various concepts within the book.

DYNAMICS
by S. Neil Rasband
Here is a text that presents classical dynamics from a modern geometrical viewpoint, uniting this new perspective with the totality of knowledge in the field and introducing mathematical techniques gradually as the reader studies the standard topics. The concepts of differential geometry are developed as a calculation tool, with emphasis on applications and not rigor. While Dynamics treats traditional topics in a general way, it frequently adds a nontraditional approach through the new geometrical method, for instance, recent developments in the variance of mechanical systems under perturbation and Lie algebra techniques are introduced for the first time in any textbook. Topics covered include phase flows, Lagrangian dynamics, rigid bodies, small oscillations, invariants, Hamiltonian dynamics on the cotangent bundle, dynamics on phase space, action-angle variables, and invariant tori.

ENERGETICS AND TRANSPORT IN AQUATIC PLANTS
by John A. Raven
Researchers in plant biophysics are making rapid progress in understanding the essential processes of photosynthesis, energy and resource acquisition, and transport. Although much work has been done with plants, there has not been a comprehensive treatment of their biophysical functions in a single text. This volume provides a more detailed and up-to-date overview of a number of interrelated aspects of aquatic plants than available elsewhere in the literature. The text should be of interest to researchers, university professors, postdoctoral fellows, and graduate students in plant biophysics, biochemistry, physiology, ecology, oceanography, and limnology.

HANDBOOK OF CORROSION RESISTANT PIPING
by Philip A. Schweitzer
Here, in a single reference, are timesaving answers to the questions that face an engineer whenever he designs a piping system for other than the normal steam, water, or air service. The book deals with pertinent design, installation, corrosion resistance, and economic factors necessary to determine the optimum system to handle specific corrodents. Each of the materials, both metallic and nonmetallic, is discussed individually. Suitable construction materials are indicated for over 500 corrodents. Available sizes, weights, and types of fittings are given for each material. Tables of permissible working pressures based on the Petroleum Refinery Piping Code, USAS B31.3, have been calculated for each alloy. Complete service ratings are included.
CHLORINE: Its Manufacture, Properties and Uses
Edited by J.S. Seonce
These monographs serve two principal purposes: to make available to chemists a thorough treatment of a selected area, in a form usable by persons working in more or less unrelated fields to correlate their own work with a larger area of physical science discipline; and to stimulate further research in the specific field treatment.

HANDBOOK ON CELLULOSE INSULATION
by Sarfraz A. Siddiqui
Designed to bring together information on cellulose insulation for engineers, architects, cellulosic insulation manufacturers, fire officials, and students, this handbook discusses the various factors that may affect the fire performance, the corrosiveness, and the thermal conductivity of cellulosic insulation. The initial chapters discuss basic concepts of thermal insulation product; subsequent chapters report on fundamental physical constants, history, chemistry, and types of cellulosic insulation, state and federal standards, and fire retardants with their health and safety data sheets.

DIFFUSIONAL MASS TRANSFER
by A.H.P. Skelland
This book presents an integrated treatment of those processes by which mass is transferred either by molecular diffusion alone, or by molecular diffusion plus convection with known and unknown velocity fields, respectively. Both steady and unsteady-state diffusion are considered, as are external and internal flows under laminar and turbulent regimes. Column design procedures are described for a variety of operations, including the simultaneous transfer of heat and mass. The approach throughout is from the rate process point of view and many worked and unworked problems are provided. This book should prove helpful to senior and graduate students as well as to practicing engineers.

MECHANICS OF SECONDARY OIL RECOVERY
by C.R. Smith
This is a comprehensive treatment of the economical extraction of valuable hydrocarbons from porous media. Major subjects include determination of oil-in-place, permeability concepts, flood patterns and coverage, immiscible fluid displacement mechanisms, injection rates and pressures, gas injection-immiscible displacement, miscible fluid displacement, in situ combustion, and heat injection methods. The book is ideally suited for petroleum engineers, geologists, geophysicists, and schools giving courses in petroleum recovery and reservoir engineering.

CHEMISTRY OF PIGMENTS AND FILLERS
by D.H. Solomon & D.G. Hawthorne
A critical review of the chemistry of mineral-organic systems is provided, with special reference to the chemistry of clay mineral and titania pigments and fillers. It has been written with the specific aim of providing an understanding of the nature of mineral surfaces, methods for their modification, and the effects that the surface activity of modifying treatments could have on the properties of commercial formulations. The book should be of interest to students, scientists, and technologists in the fields of surface coatings, inks, plastics and rubber, paper, petroleum, and soils, and to those who use minerals as additives in commercial formulations.

PRACTICAL LEATHER TECHNOLOGY
by Thomas C. Thorstensen
In the search for quality and efficiency, the same machinery and advanced technology can be seen in tanneries the world over. This fourth edition includes information gathered from sources of the industry on five continents and covers the industrial development in these nations, the environmental aspects of the industry, and the continuing search for quality of the product and efficiency of production.

COAL COMBUSTION
by Jerzy Tomeczek
The aim of this book is to present a deep understanding of the combustion phenomena of a single coal particle and of pulverized coal particles in flames and in fluidized beds. The knowledge regarding the combustion mechanism is reviewed as well as the implications on the combustion equipment design and the environment. Presented data and mathematical models were examined over a period of twenty years by a large research group, and verified through designing procedures and university lecturers in fuel engineering. The text provides sufficient detail to enable the design of combustion equipment.

APPLICATIONS OF DISCRETE AND CONTINUOUS FOURIER ANALYSIS
by H. Joseph Weaver
This text presents a comprehensive, yet easily understandable, introduction to applied Fourier analysis. The first five chapters present the definition and properties of the three main elements of Fourier analysis: The Fourier Series, Fourier Transform, and the Discrete Fourier Transform. The remaining six chapters build upon the material presented in the first five chapters and
demonstrate the power and applications of Fourier analysis to such areas as mechanical systems, electrical systems, optical systems, wave propagation, heat transfer, numerical analysis, sampling theory, and stochastic analysis.

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