The Lipid Handbook With Cd Rom Third Edition

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Dictionary of Food Compounds with CD-ROM - Shmuel Yannai 2012-10-23
The increasing world population, competition for arable land and rich fishing grounds, and environmental concerns mandate that we exploit in a sustainable way the earth's available plant and animal resources for human consumption. To that end, food chemists, technologists, and nutritionists engage in a vast number of tasks related to food availabil

The Chemistry of Oils and Fats - Frank Gunstone 2009-02-12
The three major macronutrients are proteins, carbohydrates, andlipids (oils and fats). This book is devoted to lipids, which arean important part of life for all of us. What are these materialsin molecular terms? Where do

they come from? What happens to thembetween the harvesting of crops and the appearance of the oils andfats in different products in the supermarket? How does natureproduce these molecules and can we act on nature to modify thematerials to increase their beneficial properties? How importantare the minor products present in the fats that we consume? Sinceoils and fats vary, how can we analyse them? What are theirphysical, chemical and nutritional properties? How do the fats thatwe consume affect our health and well-being in both quantitativeand qualitative terms? What are their major food and non-fooduses? This book provides a broad source of reference on oils and fatschemistry for graduates entering the food and oleochemicalindustries, postgraduate researchers and nutritionists. It offers apoint of entry to the detailed literature.
Recent Advances in Edible Fats and Oils Technology - Yee-Ying Lee

Fatty Acid and Lipid Chemistry - F.D. Gunstone 2012-12-06
This book has a pedigree. It has developed from earlier publications by the author and from his experience over 50 years in reading, writing, thinking, and working with lipids and fatty acids. The earlier publications are: (i) An Introduction to the Chemistry of Fats and Fatty Acids, Chapman and Hall, 1958. (ii) An Introduction to the Chemistry and Biochemistry of Fatty Acids and their Glycerides, Chapman and Hall, 1967. (iii) Lipids in Foods: Chemistry, Biochemistry, and Technology (with F. A. Norris), Pergamon Press, 1983. (iv) The Lipid Handbook (with J. L. Harwood and F. B. Padley), Chapman and Hall, first edition 1986, second edition 1994. (v) A Lipid Glossary (with B. G. Herslof), The Oily Press, Dundee, 1992. (vi) Lecture notes for a course on Fatty Acids and Lipids designed for those entering the oil and fat industry and given on over 20 occasions since 1977. The book is dedicated to the next generation of lipid scientists.

The study of lipids now involves many disciplines, all of which require a basic knowledge of the chemical nature and properties of these molecules, which is what this book is about. It is written particularly for those who, with some knowledge of chemistry or biochemistry, need to know more about the nature of lipids and fatty acids.

Structure and Properties of Fat Crystal Networks - Alejandro G. Marangoni 2012-09-25

Lipid science and technology has grown exponentially since the turn of the millennium. The replacement of unhealthy fats in the foods we eat, and of petroleum-based ingredients in the cosmetics we use, is a top priority for consumers, government, and industry alike. Particularly for the food industry, removing trans fats and reducing saturated fat

Green Chemistry for Sustainable Biofuel Production - Veera Gnaneswar Gude 2018-05-24

Renewable fuel research and process development requires interdisciplinary approaches involving chemists and physicists from both scientific and engineering backgrounds. Here is an important volume that emphasizes green chemistry and green engineering principles for sustainable process development from an interdisciplinary point of view. It creates an enriching knowledge base on green chemistry of biofuel production, sustainable process development, and green engineering principles for renewable fuel production. This book includes chapters contributed by both research scientists and research engineers with significant experience in biofuel chemistry and processes. The book offers an abundance of scientific experimental methods and analytical procedures and interpretation of the results that capture the state-of-the-art knowledge in this field. The wide range of topics make this book a valuable resource for academicians, researchers, industrial practitioners and scientists, and engineers in

various renewable energy fields. Key features: • Emphasizes green chemistry and green engineering principles for sustainable process development for biofuel production • Discusses a wide array of biofuels from algal biomass to waste-to-energy technologies and wastewater treatment and activated sludge processes • Presents advances and developments in biofuel green chemistry and green engineering, including process intensification (microwaves/ultrasound), ionic liquids, and green catalysis • Looks at environmental assessment and economic impact of biofuel production

Diet and Health - National Research Council 1989-01-01

Diet and Health examines the many complex issues concerning diet and its role in increasing or decreasing the risk of chronic disease. It proposes dietary recommendations for reducing the risk of the major diseases and causes of death today: atherosclerotic cardiovascular diseases (including heart attack and stroke), cancer, high blood pressure, obesity, osteoporosis, diabetes mellitus, liver disease, and dental caries.

Achieving Nutritional Security and Food Safety Through Genomics-Based Breeding of Crops - Reyazul Rouf Mir 2021-03-22

Introduction to Lipidomics - Claude Leray 2012-09-19

Lipidomics is the study of the lipid molecules that are found in animal, plant, and bacterial cells. Recent research in this field has been driven by the development of sensitive new mass spectrometric tools and protocols, leading to the identification and quantification of thousands of lipids and their roles in metabolic processes. Designed for students of biochemistry, cell biology, pharmacology, nutrition, cosmetics, and medicine, Introduction to Lipidomics: From Bacteria to Man organizes the vast diversity of lipid molecules around simple analytical concepts, which are also

understandable to students and readers from other scientific fields. It describes the structure, history, and function of lipids that play a key role in energy metabolism, cell signaling, and the formation of membranes of living cells. Each lipid section in the book contains a brief account of its discovery, biological functions, and possible pharmacological properties. An appendix is devoted to the chronology of lipid discoveries and associated techniques, supplemented by a bibliography of the major lipid groups and a review of lipid Web sites. The first comprehensive book on lipidomics, this long-awaited work inventories the huge variety of lipid molecules from animal, plant, and bacterial cells. It includes marine ecosystems, little-known structures from bibliographic data, cultural references, and context. A true text rather than just a catalog, it is highly informative and educational while simultaneously being anecdotal and interesting.

Levin and O'Neal's The Diabetic Foot with CD-ROM E-Book - John H. Bowker 2007-10-09

Fully updated, now in full color, this latest edition of Levin and O'Neal's The Diabetic Foot continues the work's proud tradition of providing the best diagnostic and management information for the challenging problems faced by patients with diabetic foot problems. With tips and pearls in every chapter, expansive color photographs, and its focus on team care, this classic reference is a must-have for anyone who cares for diabetic patients! Provide balanced, coordinated "team" care with multidisciplinary perspectives from diverse health professionals who care for diabetic patients with foot problems, including orthopedists, endocrinologists, vascular surgeons, podiatrists and wound care nurses. Use the exclusive Tips and Pearls in every chapter for quick review. Enjoy fresh takes on many topics with 50% new contributors. Find information more easily with a new full-

color page design. Meet diagnostic challenges with color photographs of the clinical problems discussed in the book.

Biofuels - Ram Sarup Singh 2016-11-10

This will be a comprehensive multi-contributed reference work, with the Editors being highly regarded alternative fuels experts from India and Switzerland. There will be a strong orientation toward production of biofuels covering such topics as biodiesel from renewable sources, biofuels from biomass, vegetable based feedstocks from biofuel production, global demand for biofuels and economic aspects of biofuel production. Book covers the latest advances in all product areas relative to biofuels. Discusses coverage of public opinion related to biofuels. Chapters will be authored by world class researchers and practitioners in various aspects of biofuels. Provides good comprehensive coverage of biofuels for algae. Presents extensive discussion of future prospects in biofuels.

Specialty Oils and Fats in Food and Nutrition - Geoff Talbot 2015-06-29

Specialty Oils and Fats in Food and Nutrition: Properties, Processing and Applications examines the main specialty oils and fats currently in use in food processing, as well as those with significant potential. Specialty oils and fats have an increasing number of applications in the food industry, due to growing consumer interest in “clean label functional foods and the emerging markets in “free-from and specialist foods. Part One of this book covers the properties and processing of specialty oils and fats, with a focus on the chemistry, extraction, and quality of different fats and oils, including chapters on shea butter, tropical exotic oils, and structured triglycerides. Part Two looks at the applications of specialty oils and fats in different food and nutraceutical products, such as confectionary, ice cream, and margarine. Specialty Oils and Fats in Food and Nutrition is a

key text for R&D managers and product development personnel working in the dairy, baking, and dairy analogue sectors, or any sector using fats and oils. It is a particularly useful reference point for companies reformulating their products or developing new products to alter fat content, as well as academics with a research interest in the area, such as lipid scientists or food scientists. Authored by an industry expert with 35 years of experience working for Unilever and Loders Croklaan Broad coverage encompasses tropical exotic oils, tree nut oils, algal oils, GM vegetable oils, and more Addresses growing application areas including nutraceuticals, infant formula, and ice cream and confectionery

Processing Contaminants in Edible Oils - 2015-08-15

This book discusses the current research on monochloropropanediol (MCPD) and glycidyl esters in edible oils. These potentially harmful contaminants are formed during the industrial processing of food oils during deodorization. The mechanisms of formation for these contaminants, as well as research identifying possible precursor molecules are reviewed. Strategies which have been used successfully to decrease the concentrations of these contaminants in edible oils are discussed, including the removal of precursor molecules before processing, modifications of deodorization protocol, and approaches for the removal of these contaminants after the completion of processing. Analytical strategies for accurate detection and quantitation of MCPD and glycidyl esters are covered, along with current information on their toxicological properties. This book serves as a single point of reference for the significant research related to these contaminants. Details the mechanisms of formation for these contaminants and research identifying possible precursor molecules Presents successful strategies to decrease the concentrations of

these contaminants in edible oils Includes the analytical strategies for accurate detection and quantitation of the contaminants along with their toxicological properties.

Handbook of Functional Lipids - Casimir C. Akoh 2005-07-18

Consumer demand is creating rapid growth in the functional foods market - a market soon to reach $20 billion worldwide. As a result, the food industry has stepped up the development of functional lipids. These lipids impart health benefits when consumed and also impact food product functionalities. While many books have touched on the correlation b

Industrial Hemp - Milica Pojic 2022-06-24

Industrial Hemp: Food and Nutraceutical Applications is a comprehensive overview of different value chains for the industrial hemp industry. This excellent reference supports multi-disciplines and presents industrial hemp as a multi-purpose crop, with special attention paid to its food and nutraceutical applications. By combining and presenting multidisciplinary knowledge, readers will be introduced to recent progress in hemp production, processing, utilization and marketing. The book provides a systematic overview of alternative hemp applications, but also serves as a guide to the challenges needed for hemp revitalization to reach its fullness. Provides information on the biological activity of hemp extracts, their roles in disease prevention, and potential applications in the functional food and nutraceutical sectors Discusses hemp as an alternative protein source used to create innovative hemp-based foods Presents case studies that describe opportunities in hemp research, hemp agriculture and hemp processing

Molecular Biology of the Cell - Bruce Alberts 2004

Cold Pressed Oils - Mohamed Fawzy Ramadan 2020-07-23

Cold Pressed Oils: Green Technology, Bioactive Compounds, Functionality, and Applications creates a multidisciplinary forum of

discussion on recent advances in chemistry and the functionality of bioactive phytochemicals in lipids found in cold pressed oils. Chapters explore different cold pressed oil, focusing on cold press extraction and processing, composition, physicochemical characteristics, organoleptic attributes, nutritional quality, oxidative stability, food applications, and functional and health-promoting traits. Edited by a team of experts, the book brings a diversity of developments in food science to scientists, chemists, nutritionists, and students in nutrition, lipids chemistry and technology, agricultural science, pharmaceuticals, cosmetics, nutraceuticals and many other fields. Thoroughly explores novel and functional applications of cold pressed oils Shows the difference between bioactive compounds in cold pressed oils and oils extracted with other traditional methods Elucidates the stability of cold pressed oils in comparison with oils extracted using other traditional methods

Nutraceuticals and Health Care - Jasmeet Kour 2021-11-26

Nutraceuticals and Health Care explores the role of plant-based nutraceuticals as food ingredients and as therapeutic agents for preventing various diseases. The book assesses the role of nutraceuticals in addressing cardiovascular disease, cancer, diabetes, and obesity by highlighting the derivatives, extraction, chemistry, mechanism of action, pharmacology, bioavailability, and safety of specific nutraceuticals. It analyzes twenty one nutraceuticals in a systematic way, providing a welcomed reference for nutrition researchers, nutritionists and dieticians, as well as other scientists studying related areas in food science, technology or agriculture. Students studying related topics will also benefit from this material. Serves as a foundation for analyzing the efficiency and validity of various plant-derived nutraceuticals Explores the use

of nutraceuticals as a therapeutic tool in the prevention of chronic and degenerative diseases Highlights the derivatives, extraction, chemistry, mechanism of action, pharmacology, bioavailability, and safety of specific nutraceuticals

Natural Medicines - Dilip Ghosh 2019-07-18

Globally, natural medicine has been considered as an important alternative to modern allopathic medicine. Although natural medicines are popular in society, only limited medicinal herbs have been scientifically evaluated for their potential in medical treatment. This book connects various aspects of the complex journey from traditional medicine to modern medicine. It provides information on topics including global regulations and regulatory hurdles, diverse nutritional challenges and potential health benefits, novel food innovations especially seed-to-clinic approaches, and future trends. FEATURES • Provides information on sustainable use of natural products in the development of new drugs and clinically validated herbal remedies • Discusses issues on evaluation and clinical aspects of herbal medicine, promotion and development, safety evaluation, metabolite profiling, biomarker analysis, formulation, and stability testing • Describes traditional uses of natural medicine through identification, isolation and structural characterization of their active components • Elucidates mechanisms of biological action, adverse effects and identification of their molecular targets of natural medicine • Multidisciplinary appeal including chemistry, pharmacology, pharmacognosy and cell and molecular biology, as well as integration with clinical medicine This book serves as an essential guide for individuals researching natural medicines, and industry employees in areas including drug development, pharmacology, natural products chemistry, clinical

efficacy, ethnopharmacology, pharmacognosy, phytotherapy, phyto-technology and herbal science.

Biomass Valorization to Bioenergy - R. Praveen Kumar 2019-10-11

This book covers topics related to bioenergy production from various biomass sources, including agricultural residues and waste biomass from both domestic and industrial use. It includes useful data, illustrations, and case studies of bioenergy production facilities. The contents of this book will be of interest to readers looking to scale up production and evaluate the selection and optimization of resources in order to overcome the current limitations of biomass to bioenergy conversions. The book will be of interest to researchers and industry professional alike.

Supercritical Fluid Chromatography - Gérard Rossé 2018-12-17

Supercritical Fluid Chromatography (SFC) provides a timely overview of SFC application areas which were unimaginable just a decade ago. This two-volume series opens with an overview of the history and expectant future of SFC and continues with recent applications in the pharmaceutical industry and other fascinating areas of science. SFC has found its place in the pharmaceutical industry with an increasing body of applications for chiral and achiral molecules in both the research and development phases of the drug discovery process. As illustrated in this two-volume series, the current interest in SFC extends well beyond the pharmaceutical industry. Chapters encompassing applications for polar and non-polar mixtures of importance are covering widely disparate areas in substance abuse, natural products including cannabinoids, bioactive lipids, flavor and fragrance. With its broad balance and coverage, this two-volume book constitutes a unique educational platform to students and scientists for many years to come. The major objective of this book editions

is to inspire and stimulate readers to continue exploring the possibilities of exploiting supercritical fluids as a particular media for analysis, purifications and synthesis

Modern Techniques and Solvents for the Extraction of Microbial Oils - Alice Meullemiestre 2015-08-07

A valuable reference presenting many processes that facilitate lipid extraction from micro-organisms. Amongst the techniques included are Folch, Bligh and Dyer methods, and the Soxhlet technique as well as intensified green processes (ultrasound, microwave, supercritical fluid extraction, agro-solvent, accelerated solvent extraction, enzyme-assisted extraction, instant controlled pressure drop, pulse electric field). In addition to a section featuring the analysis of fatty acids by Gas Chromatography and lipids by High-Performance Thin-Layer Chromatography (HPTLC), this brief contains a valuable bibliography on microorganisms (classes, structures) and their applications as a source of value added oils and compounds for food and non-food applications such as biojet fuel.

Processing Contaminants in Edible Oils - Shaun Macmahon 2022-01-25

Fully revised and updated, Processing Contaminants in Edible Oils, 2nd edition, presents the latest research on monochloropropanediol (MCPD) and glycidyl esters in edible oils. These potentially harmful contaminants are formed during the industrial processing of food oils during deodorization. A number of advancements in understanding these have been made since the publication of the first edition. These important changes, which impact industrial mitigation, analytical methods, toxicology and regulation, are highlighted for up-to-date reference. The mechanisms of formation for MCPD and glycidyl ester contaminants, as well as research identifying possible precursor molecules are reviewed, as are strategies

which have been used successfully to decrease the concentrations of these contaminants. From the removal of precursor molecules before processing, modifications of deodorization protocol, to approaches for the removal of these contaminants after the completion of processing, methods of mitigating and eliminating contaminants are presented. Include a new chapter on methods for MCPD and glycidyl esters in food Details the mechanisms of formation for these contaminants and research identifying possible precursor molecules Presents successful strategies to decrease the concentrations of these contaminants in edible oils Includes analytical strategies for accurate detection and quantitation of the contaminants along with their toxicological properties

Fatty Acids - Moghis U. Ahmad 2017-07-21

Fatty Acids: Chemistry, Synthesis and Applications is a comprehensive source of information about a wide range of industrially important fatty acids. This practical resource provides key insights into the chemistry, synthesis, industrial applications, derivatives, and analysis of fatty acids, and the chemical modifications that transform them for use in products from biodiesel fuels to pharmaceuticals. Written by a team of industry experts, Fatty Acids includes detailed descriptions of fatty acid crystallization, enzymatic synthesis, and microbial production. This book focuses heavily on the chemistry of trans fatty acids, with extensive explanations of their synthesis and measurement. Further, the book addresses advances in the analytical methodology, including mass spectrometry, of fatty acids as well as their derivatives. This book serves as a reference manual to a new generation of lipid scientists and researchers; a useful resource for oleochemical industries; and a valuable teaching aid for undergraduate and graduate students who are interested in fields related to the chemistry

of oils, fats, and food. Includes recent developments in the synthesis of fatty acid derivatives, as renewable raw materials for the chemical industry Presents efficient synthetic methods for the dietary trans fatty acids in multi-gram scale allowing scientists and researchers to study dietary effects of individual trans fatty acids on human health Addresses uses of fats and fatty acids in foods and nutrition Identifies the roles of fatty acids and derivatives in cosmetic technology

Handbook of Lipids in Human Nutrition - Gene A. Spiller 2020-08-12

The Handbook of Lipids in Human Nutrition is a concise reference for professionals and students interested in the role of lipids in nutrition. Over 100 tables and illustrations provide quick access to the most current data available.

The Lipid Handbook, Second Edition - Frank D. Gunstone 1994-07-21

A great deal of research has been carried out on this important class of compounds in the last ten years. To ensure that scientists are kept up to date, the editors of the First Edition of The Lipid Handbook have completely reviewed and extensively revised their highly successful original work. The Lipid Handbook: Second Edition is an indispensable resource for anyone working with oils, fats, and related substances.

History of Soybean Crushing: Soy Oil and Soybean Meal (980-2016): - William Shurtleff; Akiko Aoyagi 2016-10-30

The world's most comprehensive, well documented, and well illustrated book on this subject. With extensive subject and geographical index. 378 photographs and illustrations - mostly color. Free of charge in digital PDF format on Google Books.

Dictionary of Marine Natural Products with CD-ROM - John W. Blunt 2007-09-19

Driven by the vast, yet largely unexplored, potential of bioactive organisms in the

ocean and improvements in analytical techniques to facilitate their research, natural products scientists face an increasing need for single-source reference cataloging the current knowledge and state-of-the-science regarding marine natural products. Dictionary of Marine Natural Products with CD-ROM presents a comprehensive resource for more than 25,000 known natural products drawn from marine organisms. Following a similar format to the Chapman and Hall Chemical Database, this dictionary indexes each product by chemical name, CAS registry number, and compound type. Documenting all known marine natural products, each entry includes the biological source, chemical structure, physical properties, biological activity, and literature references for each compound. An accompanying CD-ROM is fully text and structure-searchable and enables unique access to this valuable resource. The editors, John Blunt and Murray Munro, both pioneers in the field, also provide an introductory monograph that describes structural compound types and marine organisms. Marine organisms offer a delicate, yet plentiful source for a vast array of novel products whose unique structural features make them suitable drug candidates, pesticides, marine anti-fouling agents, and more. The Dictionary of Marine Natural Products Web Version gives researchers a new tool for developing pharmaceutical and chemical applications of marine natural products.

Comprehensive Pediatric Nephrology E-Book - Denis F. Geary 2008-05-16

This new clinical resource brings you a state-of-the-art comprehensive review on every clinical condition encountered in pediatric nephrology in one concise, clinically focused text. International experts provide you with the latest on epidemiology, diagnosis, investigations, management, and prognosis for a full range of pediatric kidney disorders. A full-color, highly visual,

meticulously crafted format, makes this material remarkably easy for you to access and apply. Comprehensive Pediatric Nephrology also serves as an ideal resource for board review study for the ABP subspecialty boards in pediatric nephrology. Just the right amount of "need-to-know" basic science coupled with practical clinical guidance for every disorder helps you make efficient, informed decisions. The book provides a much needed update on the genetic origins of pediatric kidney disorders. Chapters about glomerulonephritis, nephrotic syndrome, and tubular disorders provide an orientation in the pathophysiology, differential diagnosis, and treatment of these heterogeneous disease entities. Disease specific chapters include diagnostic work-up, laboratory evaluation, and management of disorders and complications, making this necessary information readily accessible. The prevention and management of pediatric chronic renal failure and its complications are comprehensively covered in many detailed chapters. Four chapters devoted to childhood hypertension offer you insights into an increasingly prevalent condition among pediatric patients so you can treat them more effectively. A chapter on the role of the interventional radiologist in pediatric nephrology keeps you apprised of the latest advances in a key area in the field. The function of complementary and alternative medicine in patients with renal disease is reviewed for the first time in a standard pediatric nephrology textbook. A consistent organization throughout and a full-color layout lets you find diagnostic guidance quickly.

Walford's Guide to Reference Material: Science and technology - Albert John Walford 1993

Cette bibliographie commentee touche tous les domaines du savoir humain, soit de l'Art a la Zoologie;elle signale les ouvrages les plus importants soit des bibliographies, des index, des encyclopedies, des

dictionnaires, des guides, des revues etc dont le support ed'information est soit du papier, soit un cd-rom, soit une base de donnees en ligne directe, soit un microforme ect. L'objectif du guide Walford est de devenir La source d'information sur tout type de reference, nonobstant le support technique.

Membrane Systems in the Food Production - Alfredo Cassano 2021-07-19

The two-volume work presents applications of integrated membrane operations in agro-food productions with significant focus on product quality, recovery of high added-value compounds, reduction of energy consumption and environmental impact. Volume 1. Dairy, Wine and Oil Processing. Volume 2. Wellness Ingredients and Juice Processing.

Liquid Chromatography - Salvatore Fanali 2017-06-23

Liquid Chromatography: Applications, Second Edition,is a single source of authoritative information on all aspects of the practice of modern liquid chromatography. It gives those working in both academia and industry the opportunity to learn, refresh, and deepen their knowledge of the wide variety of applications in the field. In the years since the first edition was published, thousands of papers have been released on new achievements in liquid chromatography, including the development of new stationary phases, improvement of instrumentation, development of theory, and new applications in biomedicine, metabolomics, proteomics, foodomics, pharmaceuticals, and more. This second edition addresses these new developments with updated chapters from the most expert researchers in the field. Emphasizes the integration of chromatographic methods and sample preparation Explains how liquid chromatography is used in different industrial sectors Covers the most interesting and valuable applications in different fields, e.g., proteomic, metabolomics, foodomics, pollutants and contaminants,

and drug analysis (forensic, toxicological, pharmaceutical, biomedical) Includes references and tables with commonly used data to facilitate research, practical work, comparison of results, and decision-making

Organic Chemist's Desk Reference - Caroline Cooper 2017-08-04

Launched in 1995 as a companion to the Dictionary of Organic Compounds, the Organic Chemist's Desk Reference has been essential reading for laboratory chemists who need a succinct guide to the 'nuts and bolts' of organic chemistry — the literature, nomenclature, stereochemistry, spectroscopy, hazard information, and laboratory data. This third edition reflects changes in the dissemination of chemical information, revisions to chemical nomenclature, and the adoption of new techniques in NMR spectroscopy, which have taken place since publication of the last edition in 2011. Organic chemistry embraces many other disciplines — from material sciences to molecular biology — whose practitioners will benefit from the comprehensive but concise information brought together in this book. Extensively revised and updated, this new edition contains the very latest data that chemists need access to for experimentation and research.

Lipids in Plant and Algae Development - Yuki Nakamura 2016-03-29

This book summarizes recent advances in understanding the functions of plant and algal lipids in photosynthesis, in development and signaling, and in industrial applications. As readers will discover, biochemistry, enzymology and analytical chemistry, as well as gene knock-out studies have all contributed to our rapidly increasing understanding of the functions of lipids. In the past few decades, distinct physical and biochemical properties of specific lipid classes were revealed in plant and algal lipids and the functional aspects of lipids in modulating critical biological

processes have been uncovered. These chapters from international authors across relevant research fields highlight the underlying evolutionary context of lipid function in photosynthetic unicellular and multicellular organisms. The book goes on to encompass what lipids can do for industrial applications at a time of fascination with plants and algae in carbon fixation and as sources for production of food, energy and novel chemicals. The developmental context is a part of the fresh and engaging perspective that is presented in this work which graduate students and scientists will find both illuminating and useful.

The Writers Directory - 2013

Chemistry and Biochemistry of Food - Jose Perez-Castineira 2020-09-07

This book provides an excellent platform for understanding the chemical processes involved in food transformation. Starting with the examination of major food components, such as water, carbohydrates, lipids, proteins and minerals, the author further introduces the biochemistry of digestion and energy metabolism of food ingredients. The last section of the book is devoted to modern food technologies and their future perspectives.

Lipid Oxidation in Health and Disease - Corinne M. Spickett 2015-03-03

Oxidative modification of lipids and phospholipids—including radical damage, halogenation, and nitration—result in significant changes to the chemical properties of the molecules, which in turn have a major effect on their biochemical functions. Lipid oxidation has long been regarded as a deleterious process responsible for lipid rancidity, loss of function, and generation of toxic products. However in recent years, research has also focused on the non-detrimental physiological and pathological effects of these chemical reactions. Lipid Oxidation in Health and Disease provides an up-to-date review of the role of oxidized lipid products in

physiological and pathophysiological processes. Covering the diverse topics that contribute to research in this important field, this book explores: The mechanisms of lipid oxidation, both enzymatic and non-enzymatic Antioxidant defenses and lipid oxidation Lipid oxidation products and cell signaling The roles of oxidized lipids in specific diseases—including cardiovascular, neurodegenerative, and metabolic disorders, as well as in cancer Drug targeting and the therapeutic potential of oxidized lipids Accurate measurement of the formation of lipid oxidation products and investigation of their biological effects and roles in disease are critical to biomedical science and new targeted therapeutics. Written by acknowledged experts in the field, this book provides a broad survey of both established knowledge and recent findings on the action of oxidized lipid products on cell signaling and gene expression in health and disease.

Essentials of Glycobiology - Ajit Varki 1999

Sugar chains (glycans) are often attached to proteins and lipids and have multiple roles in the organization and function of all organisms. "Essentials of Glycobiology" describes their biogenesis and function and offers a useful gateway to the understanding of glycans.

The Lipid Handbook with CD-ROM, Third Edition - Frank D. Gunstone 2007-03-13

Extensively revised, reorganized, and expanded, the third edition of the industry standard, The Lipid Handbook reflects many of the changes in lipid science and technology that have occurred in the last decade. All chapters have been rewritten, many by new authors, to match the updated thinking and practice of modern lipid science and bring a fresh perspective to twenty years of tradition. Retaining the general structure of the previous editions, The Lipid Handbook with CD-ROM, Third Edition collates a wide range of information into a single volume. New contributions

highlight the latest technologies utilized in today's lipid science such as chromatographic analysis and nuclear magnetic resonance spectroscopy. An entirely new chapter is devoted to non-food uses such as lipids as surfactants, cosmetics, and biofuels. Expanded sections illustrate a growing emphasis on lipid metabolism and the nutritional, medical, and agricultural aspects including human dietary requirements and disorders of lipid metabolism. The dictionary section is vastly expanded to cover chemical structure, physical properties, and references to thousands of lipid and lipid related molecules. The handbook now includes a CD-ROM that allows instant access to tabulated and referenced information and can be searched either as the full text or by structure or substructure. Drawing from the best minds in the field, The Lipid Handbook with CD-ROM, Third Edition presents the latest technological developments and the current and future directions and applications of lipid science to the next generation of researchers.

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