

Principles Of Plant Biochemistry Part 1

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Food Biochemistry and Food Processing - Y. H. Hui 2008-02-15

The biochemistry of food is the foundation on which the research and development advances in food biotechnology are built. In *Food Biochemistry and Food Processing*, lead editor Y.H. Hui has assembled over fifty acclaimed academicians and industry professionals to create this indispensable reference and text on food biochemistry and the ever-increasing development in the biotechnology of food processing. While biochemistry may be covered in a chapter or two in standard reference books on the chemistry, enzymes, or fermentation of food, and may be addressed in greater depth by commodity-specific texts (e.g., the biotechnology of meat, seafood, or cereal), books on the general coverage of food biochemistry are not so common. *Food Biochemistry and Food Processing* effectively fills this void. Beginning with sections on the essential principles of food biochemistry, enzymology and food processing, the book then takes the reader on commodity-by-commodity discussions of biochemistry of raw materials and product processing. Later sections address the biochemistry and processing aspects of food fermentation, microbiology, and food safety. As an invaluable reference tool or as a state-of-the-industry text, *Food Biochemistry and Food Processing* fully develops and explains the biochemical aspects of food processing for scientist and student alike.

Principles Biochem 7e (International Ed) - David Nelson 2016-11-11

Plant Biochemistry - William Edward Tottingham 1937

Lehninger Principles of Biochemistry - Nelson David L. 2005

CD-ROM includes animations, living graphs, biochemistry in 3D structure tutorials. **Journal of the Royal Horticultural Society of London** - Royal Horticultural Society (Great Britain) 1932

Volumes for 1869-1952 include Extracts from the proceedings of the Royal Horticultural Society.

Principles of Plant Biochemistry - Václav Leonovich Kretovich 1966

Official Record - United States. Department of Agriculture 1931

Food Biochemistry and Food Processing - Benjamin K. Simpson 2012-04-11

The biochemistry of food is the foundation on which the research and development advances in food biotechnology are built. In *Food Biochemistry and Food Processing*, Second Edition, the editors have brought together more than fifty acclaimed academicians and industry professionals from around the world to create this fully revised and updated edition. This book is an indispensable reference and text on food biochemistry and the ever increasing developments in the biotechnology of food processing. Beginning with sections on the essential principles of food biochemistry, enzymology, and food processing, the book then takes the reader on commodity-by-commodity discussions of biochemistry of raw materials and product processing. Chapters in this second edition have been revised to include safety considerations and the chemical changes induced by processing in the biomolecules of the selected foodstuffs. This edition also includes a new section on health and functional foods, as well as ten new chapters including those on thermally and minimally processed foods, separation technology

in food processing, and food allergens. *Food Biochemistry and Food Processing*, second edition fully develops and explains the biochemical aspects of food processing, and brings together timely and relevant topics in food science and technology in one package. This book is an invaluable reference tool for professional food scientists, researchers and technologists in the food industry, as well as faculty and students in food science, food technology and food engineering programs. The Editor Dr. Benjamin K. Simpson, Department of Food Science and Agricultural Chemistry, McGill University, Quebec, Canada Associate Editors Professor Leo Nollet, Department of Applied Engineering Sciences, Hogeschool Ghent, Belgium Professor Fidel Toldrá, Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Valencia, Spain Professor Soottawat Benjakul, Department of Food Technology, Prince of Songkla University, Songkhla, Thailand Professor Gopinadhan Paliyath, Department of Plant Agriculture, University of Guelph, Ontario, Canada Dr. Y. H. Hui, Consultant to the Food Industry, West Sacramento, California, USA

Chemistry Was Their Life - Marelene F. Rayner-Canham 2008

British chemistry has traditionally been depicted as a solely male endeavour. However, this perspective is untrue: the allure of chemistry has attracted women since the earliest times. Despite the barriers placed in their path, women studied academic chemistry from the 1880s onwards and made interesting or significant contributions to their fields, yet they are virtually absent from historical records. Comprising a unique set of biographies of 141 of the 896 known women chemists from 1880 to 1949, this work attempts to address the imbalance by showcasing the determination of these women to survive and flourish in an environment dominated by men. Individual biographical accounts interspersed with contemporary quotes describe how women overcame the barriers of secondary and tertiary education, and of admission to professional societies. Although these women are lost to historical records, they are brought together here for the first time to show that a vibrant culture of female chemists did indeed exist in Britain during the late 19th and early 20th centuries.

Bulletin - Great Britain. Ministry of Agriculture, Fisheries and Food 1935

Plant Physiology - Frederick Campion Steward 1966

Introduction to Agricultural Biochemistry - Raymond Adam Dutcher 2007

This Book Is Divided Into 3 Parts. Part 1 Is Designed To Stimulate Interest By Introducing The Student To Some Of The Interesting And Significant Reasons For The Study Of Agricultural Biochemistry, To Review The Organic Chemistry Of Compounds Of Biological Importance, And To Introduce Definitions, Terms, And Mechanisms Which Will Help The Student Understand And Appreciate Material Presented In Subsequent Chapters. Part 2 (The Plant) Involves A Discussion Of The More Important Chemical Facts And Theories Relating To Plant Growth, From The Time The Seed Germinates Until It Becomes A Mature Plant. The Chapter On Farm Chemurgy Is Designed To Acquaint The Student With Actual And Potential Utilization Of Farm Crops For Industrial Purposes. Part 3 (The Animal) Has Been Written With The View Of Stressing, So Far As Possible, The Biochemical Phases Of Metabolism And Growth. Practical Applications Have Not Been Stressed Since This Can Be Done To Better Advantage In Subsequent Practical Courses Dealing With Livestock Feeds And

Feeding. Tables Of Recommended Nutrient Allowances For Humans And Domestic Animals And Tables Of Chemical Composition Of Some Selected Human Foods And Livestock Feeds Have Been Placed In The Appendix For Reference Purposes. The Book Has Been Written On The Assumption That It Will Be Suitable For Students With Sound Training In Inorganic And Organic Chemistry. It Is Hoped That The Present Volume Will Stimulate Interest In The Teaching Of Agricultural Biochemistry And That It Will Also Serve As A General Reference Book For Students Who Are Interested In The Underlying Chemical Principles Affecting Plant And Animal Growth. Contents Part I: General And Introductory; Chapter 1: The Development Of Agricultural Chemistry, The Influence Of Alchemy, The Beginning Of Genuine Chemistry, Search For The Principle Of Vegetation, The Beginning Of Modern Agricultural Science, The Beginnings Of Physiological Chemistry, Beginning Of Agricultural Science In America; Chapter 2: Chemistry Of Living Matter, Properties Of Living Things, The Cell, Protoplasm, Importance Of Water, Inorganic Salts; Chapter 3: Physical State Of Matter, Some Properties Of Solutions, Dissociation, Osmosis And Osmotic Pressure, Surface Tension, Acids And Bases, Dissociation Of Water, Hydronium Ion Concentration And Ph, Buffers, The Colloidal State; Chapter 4: Carbohydrates, General Characteristics Of Carbohydrates, Nomenclature, Classification Of Important Carbohydrates, Monosaccharides, Disaccharides, Polysaccharides, Compounds Allied To The Carbohydrates, Reactions Of Carbohydrates; Chapter 5: The Lipids, General Characteristics, Classification Of Lipids, Fatty Acids And Glycerol, Fats And Oils, Fat Analysis, Waxes, Sterols, Phospholipids, Glycolipids, Essential Or Volatile Oils; Chapter 6: Proteins, General Properties And Composition Of Proteins, Classification Of Proteins, Amino Acids, Peptide Formation, Molecular Weight Of Proteins, Structure Of Proteins, Chemical Tests, Nucleoproteins; Chapter 7: Enzymes, General Characteristics, Nomenclature, Occurrence And Distribution, Classification, Preparation And Crystallization, Factors Affecting Enzyme Activity, Esterases, Carbohydrates, Proteinases, Peptidases, Aminases, Amidases, Desmolases, Practical Applications Of Enzymes As Catalysts; Chapter 8: Biological Oxidations, Oxidation And Reduction, Theories Of Biological Oxidations, General Mechanism Of Biological Oxidation, Intermediary Steps In Carbohydrate Metabolism, The Krebs Citric Acid Cycle; Protein Metabolism, Fat Metabolism, Transfer Of Electrons And Protons, Coenzyme 1, Coenzyme 2, Flavoproteins, Cytochromes, Energy Transfer In Metabolism, Other Oxidizing Enzymes. Part Ii: The Plant; Chapter 9: Seed Germination, Chemical Composition Of Seeds, Factors Influencing The Process Of Seed Germination, Metabolism Of Germinating Seeds; Chapter 10: The Soil And Its Relation To Plant Growth, The Soil, Inorganic Matter In Soils, Soil Organic Matter, Humus, Soil Colloids, Base Exchange, The Soil Solution, Absorption Of Plant Nutrients, Soil Nutrients And Their Utilisation By Plants, Other Macronutrient Elements, Micronutrient Elements; Chapter 11: Fertilizers, Nitrogenous Fertilizers, Phosphate Fertilizers, Potash Fertilizers, Farm Manure, Effects Of Manure On Soil; Chapter 12: Plant Metabolism, Carbohydrate Metabolism, Photosynthesis, Protein Metabolism, Lipid Metabolism; Chapter 13: Pesticides, General Characteristics, Fungicides, Herbicides, Insecticides, Fumigants, Insecticides Obtained From Plants, Miscellaneous Pesticides, Spray Residues; Chapter 14: Farm Chemurgy, Origin Of Chemurgy, Industrial Products Made From Fats And Oils, Industrial Products Made From Carbohydrates, Fiber Products, Textile Products, Industrial Chemicals, Industrial Uses Of Protein, Industrial Uses Of Natural Chemical Products, Commercial Utilisation Of Packing-Plant Residues. Part Iii: The Animal; Chapter 15: Food And Feeding Stuffs, Chemical Composition, Feed Analysis, Stock Feeds Of Plant Origin, Stock Feeds Of Animal Origin; Chapter 16: Digestion Of Foods, Salivary Digestion, Stomachic Characteristics Of Birds And Ruminants, Gastric Digestion, Intestinal Digestion, Characteristics Of Digestive Juices, Absorption Of Nutrients, Detoxication; Chapter 17: The Chemistry Of Blood, Lymph, And Body Tissues, Characteristics And Composition Of Blood And Lymph, Supporting Tissues, Muscle Tissue, Nervous Tissue, Reserve Tissues, Glandular Tissues, Hormones; Chapter 18: The Vitamins, Dietary Deficiency Diseases And The Discovery Of Vitamins, Water-Soluble Vitamins (Deficiency Symptoms, Chemistry, Function, Requirements Of Humans

And Domestic Animals, Distribution In Foods), Fat-Soluble Vitamins (Deficiency Symptoms, Chemistry, Function, Requirements Of Humans And Domestic Animals, Distribution In Foods), Vitamin Assay Methods; Chapter 19: Energy Metabolism, Gross Energy Of Foods, Measurement Of Heat Of Combustion, Digestible Nutrients, Oxidation Of Protein, Significance Of The Respiratory Quotient, Basal Metabolism, Factors Affecting Heat Production, Direct Calorimetry, Indirect Calorimetry, Metabolizable Energy, Energy Allowances For Humans And Domestic Animals; Chapter 20: Carbohydrate Metabolism, Phosphorylation, Glycogen, Di- And Tri-Phosphates Of Adenosine, Phosphocreatine, Blood Sugar, Glycogenesis, Glycogenolysis, Glucose Metabolism In Muscle, Abnormal Carbohydrate Metabolism; Chapter 21: Lipid Metabolism, Function Of The Liver, Fat Formed From Carbohydrates And Proteins, Food Fat And Body Fat, Oxidation Of Fats, Essential Fatty Acids, Cholesterol Metabolism; Chapter 22: Protein Metabolism, Nitrogenous Equilibrium, Fate Of Absorbed Protein, Protein Storage And Conservation, Deamination, Transamination, Urea Formation, Formation Of Ammonia, Fate Of Deaminized Residues, Creatine And Creatinine, Transmethylation, Conjugated Proteins, Purines, Pyrimidines; Chapter 23: Protein Nutrition, Protein Quality, Essential Amino Acids, Amino Acid Requirements Of The Rat, Amino Acid Requirements Of Man, Biological Value Of Proteins, Amino Acid Content Of Proteins, Protein Supplementation, Protein Hydrolyzates, Protein Allowances For Humans And Domestic Animals; Chapter 24: Mineral Metabolism, Functions Of Mineral Elements, Deficiency Diseases Caused By Lack Of Essential Mineral Elements, Utilisation And Excretion; Chapter 25: Mineral Nutrition, Mineral Elements Important In Normal Feeding Practice, Balance Experiments, Human Foods As Sources Of Minerals, Mineral Requirements Of Humans, Effect Of Inadequate Mineral Intakes, Mineral Requirements Of Domestic Animals.

Principles of Plant Nutrition - Konrad Mengel 2012-12-06

This is the 5th edition of a well-established book Principles of Plant Nutrition which was first published in 1978. The same format is maintained as in previous editions with the primary aim of the authors to consider major processes in soils and plants that are of relevance to plant nutrition. This new edition gives an up-to-date account of the scientific advances of the subject by making reference to about 2000 publications. An outstanding feature of the book, which distinguishes it from others, is its wide approach encompassing not only basic nutrition and physiology, but also practical aspects of plant nutrition involving fertilizer usage and crop production of direct importance to human nutrition. Recognizing the international readership of the book, the authors, as in previous editions, have attempted to write in a clear concise style of English for the benefit of the many readers for whom English is not their mother tongue. The book will be of use to undergraduates and postgraduates in Agriculture, Horticulture, Forestry and Ecology as well as those researching in Plant Nutrition.

Secondary Metabolism in Microorganisms, Plants and Animals - M. Luckner 2013-12-11
Many of the reactions and compounds involved in metabolism are almost identical in the different groups of living organisms. They are known as primary metabolic reactions and primary metabolic products. In addition, however, a wide variety of biochemical pathways are characteristic of only a few species of organisms, of single "chemical races" or even of a certain stage of differentiation of specialized cells. Such pathways are collectively referred to as "secondary metabolism", and the compounds formed are called "secondary products". Secondary products are frequently revealed by their color, smell, or taste. They are responsible for the flavor of most foodstuffs and beverages and for the color and fragrance of flowers and fruits. Many of them are part of the materia medica, e. g. , alkaloids, cardiac glycosides, antibiotics, or compounds acting as hormones. Others are used by industry, e. g. , rubber, tannins, and cellulose. This book treats the organization and significance of biosynthesis, storage, transformation, and degradation of the most important groups of secondary products in microorganisms, plants, and animals. It shows that the formation of secondary products is a common characteristic of specialized cells brought about by the action of special enzymes encoded by specific genetic material. It demonstrates that the biosynthesis of secondary products is typically without significance for the individual producer

cell, but may play a decisive role in the development and function of the producer organism as a whole.

Guide to Biochemistry - James C. Blackstock 2014-06-28

Guide to Biochemistry provides a comprehensive account of the essential aspects of biochemistry. This book discusses a variety of topics, including biological molecules, enzymes, amino acids, nucleic acids, and eukaryotic cellular organizations. Organized into 19 chapters, this book begins with an overview of the construction of macromolecules from building-block molecules. This text then discusses the strengths of some weak acids and bases and explains the interaction of acids and bases involving the transfer of a proton from an acid to a base. Other chapters consider the effectiveness of enzymes, which can be appreciated through the comparison of spontaneous chemical reactions and enzyme-catalyzed reactions. This book discusses as well structure and function of lipids. The final chapter deals with the importance and applications of gene cloning in the fundamental biological research, which lies in the preparation of DNA fragments containing a specific gene. This book is a valuable resource for biochemists and students.

Plant Biochemistry - Hans-Walter Heldt 2005

1 A Leaf Cell Consists of Several Metabolic Compartments 2 The Use of Energy from Sunlight by Photosynthesis is the Basis of Life on Earth 3 Photosynthesis is an Electron Transport Process 4 ATP is Generated by Photosynthesis 5 Mitochondria are the Power Station of the Cell 6 The Calvin Cycle Catalyzes Photosynthetic CO₂ Assimilation 7 In the Photorespiratory Pathway Phosphoglycolate Formed by the Oxygenase Activity of RubisCo is Recycled 8 Photosynthesis Implies the Consumption of Water 9 Polysaccharides are Storage and Transport Forms of Carbohydrates Produced by Photosynthesis 10 Nitrate Assimilation is Essential for the Synthesis of Organic Matter 11 Nitrogen Fixation Enables the Nitrogen in the Air to be Used for Plant Growth 12 Sulfate Assimilation Enables the Synthesis of Sulfur Containing Substances 13 Phloem Transport Distributes Photoassimilates to the Various Sites of Consumption and Storage 14 Products of Nitrate Assimilation are Deposited in Plants as Storage Proteins 15 Glycerolipids are Membrane Constituents and Function as Carbon Stores 16 Secondary Metabolites Fulfill Specific Ecological Functions in Plants 17 Large Diversity of Isoprenoids has Multiple Functions in Plant Metabolism 18 Phenylpropanoids Comprise a Multitude of Plant Secondary Metabolites and Cell Wall Components 19 Multiple Signals Regulate the Growth and Development of Plant Organs and Enable Their Adaptation to Environmental Conditions 20 A Plant Cell has Three Different Genomes 21 Protein Biosynthesis Occurs at Different Sites of a Cell 22 Gene Technology Makes it Possible to Alter Plants to Meet Requirements of Agriculture, Nutrition, and Industry.

Principles of Life - David M. Hillis 2012

For sample chapters, a video interview with David Hillis, and more information, visit www.whfreeman.com/hillispreview. Sinauer Associates and W.H. Freeman are proud to introduce *Principles of Life*. Written in the spirit of the reform movement that is reinvigorating the introductory majors course, *Principles of Life* cuts through the thicket of excessive detail and factual minutiae to focus on what matters most in the study of biology today. Students explore the most essential biological ideas and information in the context of the field's defining experiments, and are actively engaged in analyzing research data. The result is a textbook that is hundreds of pages shorter (and significantly less expensive) than the current majors introductory books.

Journal of Botany - Berthold Seemann 1931

Introduction to Ecological Biochemistry - J. B. Harborne 2014-06-28

Ecological biochemistry concerns the biochemistry of interactions between animals, plants and the environment, and includes such diverse subjects as plant adaptations to soil pollutants and the effects of plant toxins on herbivores. The intriguing dependence of the Monarch butterfly on its host plants is chosen as an example of plant-animal coevolution in action. The ability to isolate trace amounts of a substance from plant tissues has led to a wealth of new research, and

the fourth edition of this well-known text has consequently been extensively revised. New sections have been provided on the cost of chemical defence and on the release of predator-attracting volatiles from plants. New information has been included on cyanogenesis, the protective role of tannins in plants and the phenomenon of induced defence in plant leaves following herbivory. Advanced level students and research workers alike will find much of value in this comprehensive text, written by an acknowledged expert on this fascinating subject. The book covers the biochemistry of interactions between animals, plants and the environment, and includes such diverse subjects as plant adaptations to soil pollutants and the effects of plant toxins on herbivores. The intriguing dependence of the Monarch butterfly on its host plants is chosen as an example of plant-animal coevolution in action. New sections have been added on the cost of chemical defence and on the release of predators attracting volatiles from plants. New information has been included on cyanogenesis, the protective role of tannins in plants and the phenomenon of induced defence in plant leaves following herbivory. *Journal of the Royal Horticultural Society ...* - Royal Horticultural Society (Great Britain) 1931

Plant Biotechnology and Genetics - C. Neal Stewart, Jr. 2012-12-13

Designed to inform and inspire the next generation of plant biotechnologists *Plant Biotechnology and Genetics* explores contemporary techniques and applications of plant biotechnology, illustrating the tremendous potential this technology has to change our world by improving the food supply. As an introductory text, its focus is on basic science and processes. It guides students from plant biology and genetics to breeding to principles and applications of plant biotechnology. Next, the text examines the critical issues of patents and intellectual property and then tackles the many controversies and consumer concerns over transgenic plants. The final chapter of the book provides an expert forecast of the future of plant biotechnology. Each chapter has been written by one or more leading practitioners in the field and then carefully edited to ensure thoroughness and consistency. The chapters are organized so that each one progressively builds upon the previous chapters. Questions set forth in each chapter help students deepen their understanding and facilitate classroom discussions. Inspirational autobiographical essays, written by pioneers and eminent scientists in the field today, are interspersed throughout the text. Authors explain how they became involved in the field and offer a personal perspective on their contributions and the future of the field. The text's accompanying CD-ROM offers full-color figures that can be used in classroom presentations with other teaching aids available online. This text is recommended for junior- and senior-level courses in plant biotechnology or plant genetics and for courses devoted to special topics at both the undergraduate and graduate levels. It is also an ideal reference for practitioners.

DHEW Health Research Principles: [pt.1.] Documents relating to the development of draft health research principles for the Department of Health, Education, and Welfare - National Institutes of Health (U.S.) 1979

Recent Advances in Plant Physiology - Eustace Cecil Barton-Wright 1933

Absorption of water and transpiration. Carbon assimilation. Nitrogen metabolism. The raw materials of plant nutrition. Translocation. Respiration. Growth. Light and growth. Accessory growth factors and related problems.

Principles of Medical Biochemistry E-Book - Gerhard Meisenberg 2016-09-28

For nearly 30 years, *Principles of Medical Biochemistry* has integrated medical biochemistry with molecular genetics, cell biology, and genetics to provide complete yet concise coverage that links biochemistry with clinical medicine. The 4th Edition of this award-winning text by Drs. Gerhard Meisenberg and William H. Simmons has been fully updated with new clinical examples, expanded coverage of recent changes in the field, and many new case studies online. A highly visual format helps readers retain complex information, and USMLE-style questions (in print and online) assist with exam preparation. Just the right amount of detail on biochemistry, cell biology, and genetics - in one easy-to-digest textbook. Full-

color illustrations and tables throughout help students master challenging concepts more easily. Online case studies serve as a self-assessment and review tool before exams. Online access includes nearly 150 USMLE-style questions in addition to the questions that are in the book. Glossary of technical terms. Clinical Boxes and Clinical Content demonstrate the integration of basic sciences and clinical applications, helping readers make connections between the two. New clinical examples have been added throughout the text.

Lehninger Principles of Biochemistry, Fourth Edition + Lecture Notebook - David L. Nelson 2004-05-28

The Pakistan Review - 1959

Remote Sensing of Plant Biodiversity - Jeannine Cavender-Bares 2020-01-01

This Open Access volume aims to methodologically improve our understanding of biodiversity by linking disciplines that incorporate remote sensing, and uniting data and perspectives in the fields of biology, landscape ecology, and geography. The book provides a framework for how biodiversity can be detected and evaluated--focusing particularly on plants--using proximal and remotely sensed hyperspectral data and other tools such as LiDAR. The volume, whose chapters bring together a large cross-section of the biodiversity community engaged in these methods, attempts to establish a common language across disciplines for understanding and implementing remote sensing of biodiversity across scales. The first part of the book offers a potential basis for remote detection of biodiversity. An overview of the nature of biodiversity is described, along with ways for determining traits of plant biodiversity through spectral analyses across spatial scales and linking spectral data to the tree of life. The second part details what can be detected spectrally and remotely. Specific instrumentation and technologies are described, as well as the technical challenges of detection and data synthesis, collection and processing. The third part discusses spatial resolution and integration across scales and ends with a vision for developing a global biodiversity monitoring system. Topics include spectral and functional variation across habitats and biomes, biodiversity variables for global scale assessment, and the prospects and pitfalls in remote sensing of biodiversity at the global scale.

Food Science Abstracts - Great Britain. Department of Scientific and Industrial Research 1932

Principles of Plant Biochemistry - V. L. Kretovich 2013-10-22

Principles of Plant Biochemistry focuses on the methodologies, approaches, and techniques employed in plant biochemistry, including analysis of proteins, carbohydrates, vitamins, and metabolism. The publication first takes a look at proteins and carbohydrates. Discussions focus on general properties and structure of proteins, amino acid composition of proteins and properties of the protein molecule, isolation of proteins and the establishment of their homogeneity, monosaccharides, polysaccharides, and steroids. The text then elaborates on vitamins and secondary plant compounds, including aliphatic organic acids, glycosides, tannins, essential oils and resins, herbicides, antibiotics, and phytonicides. The manuscript examines enzymes and the role of metabolism in living organisms, as well as general properties and classification of enzymes and oxidases. The book then ponders on photosynthesis and chemosynthesis, interconversion of carbohydrates, and fermentation and respiration. The inter-relationship of metabolic processes and amino acid and protein metabolism are also discussed. The publication is a dependable reference for readers interested in plant biochemistry.

Modern Methods of Plant Analysis/Moderne Methoden der Pflanzenanalyse - K. Paech 2012-12-06

General Principles of Biochemistry of the Elements - Ei-Ichiro Ochiai 1987-09-30

The present book might be regarded as a sequel to my previous work, *Bioinorganic Chemistry: An Introduction* (Allyn and Bacon, 1977). The latter is essentially a

collection of chemical and physical data pertinent to an understanding of the biological functions of the various elements and the proteins dependent on them. The ten years since its publication have seen an enormous increase in research activity in this area, hence of research papers. A number of monographs and review series on specific topics have also appeared, including the volumes in the series of which the present volume is a part. Nevertheless, a gap has developed between the flood of information available at a detailed level (papers and reviews) and a general description of the underlying principles of biofunctions of the elements as presently conceived. It is hoped that this book will help bridge this gap and at the same time provide an overview of the entire Biochemistry of the Elements series. Specifically, the work attempts to focus on "why" questions, especially, "Why has an element been chosen by organisms for a specific biofunction?" and "Why does an element behave the way it does in biological systems?" It therefore complements my 1977 book and, together with *Laboratory Introduction to Bio-Inorganic Chemistry* (E. -I. Ochiai and D. R. Williams, Macmillan, 1979), completes a trilogy on the topic of bioinorganic chemistry. This book consists of five parts. Two chapters constitute Part I.

Lehninger Principles of Biochemistry - David L. Nelson 2008-02

Authors Dave Nelson and Mike Cox combine the best of the laboratory and best of the classroom, introducing exciting new developments while communicating basic principles of biochemistry.

From Medical Chemistry to Biochemistry - Robert E. Kohler 1982-05-31

This penetrating case study of institution building and entrepreneurship in science shows how a minor medical speciality evolved into a large and powerful academic discipline. Drawing extensively on little-used archival sources, the author analyses in detail how biomedical science became a central part of medical training and practice. The book shows how biochemistry was defined as a distinct discipline by the programmatic vision of individual biochemists and of patrons and competitors in related disciplines. It shows how discipline builders used research programmes as strategies that they adapted to the opportunities offered by changing educational markets and national medical reform movements in the United States, Britain and Germany. The author argues that the priorities and styles of various departments and schools of biochemistry reflect systematic social relationships between that discipline and biology, chemistry and medicine. Science is shaped by its service roles in particular local contexts: This is the central theme. The author's view of the political economy of modern science will be of interest to historians and social scientists, scientific and medical practitioners, and anyone interested in the ecology of knowledge in scientific institutions and professions.

National Library of Medicine Current Catalog - National Library of Medicine (U.S.) 1965

Catalogue - B.H. Blackwell Ltd 1936

Advances in Food Research - 1963-01-01

Advances in Food Research

The Publishers' Trade List Annual - 1976

Plant Biotechnology, Volume 2 - Sangita Sahni 2017-12-22

This volume is the second of the new two-volume *Plant Biotechnology* set. This volume covers many recent advances in the development of transgenic plants that have revolutionized our concepts of sustainable food production, cost-effective alternative energy strategies, microbial biofertilizers and biopesticides, and disease diagnostics through plant biotechnology. With the advancements in plant biotechnology, many of the customary approaches are out of date, and an understanding of new updated approaches is needed. This volume presents information related to recent methods of genetic transformation, gene silencing, development of transgenic crops, biosafety issues, microbial biotechnology, oxidative stress, and plant disease diagnostics and management. Key features:

Provides an in-depth knowledge of various techniques of genetic transformation of plants, chloroplast, and fungus Describes advances in gene silencing in plants Discusses transgenic plants for various traits and their application in crop improvement Looks at genetically modified foods and biodiesel production Describes biotechnological approaches in horticultural and ornamental plants Explores the biosafety aspect associated with transgenic crops Considers the role of microbes in sustainable agriculture

Principles of Plant Pathology - J. G. Manners 1993-03-04

A comprehensive study of the causes of plant disease, the processes involved in plant-pathogen interaction, the genetics of pathogenesis, and the epidemiology of plant disease. Includes an assessment of the application of our knowledge to practical plant disease control.

Plant Physiology: Metabolism. A. Organic nutrition and nitrogen metabolism. B. Intermediary metabolism and pathology. 2 v - Frederick Campion Steward 1966