Bioinorganic Medicinal Chemistry

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Highlights in Bioinorganic Chemistry: Medical Applications of Coordination Chemistry

Organophosphorus Chemistry

Metals in Cells

Bioinorganic Chemistry -- Inorganic Elements of Life

Catalysis Therapy in the Treatment of Metal Intoxication

Advances in Bioorganometallic Chemistry

Studyguide for Bioinorganic Medicinal Chemistry by Alessio, Enzo

This book gives a comprehensive overview about medicinal inorganic chemistry. Topics like imaging agents, targeting strategies, mechanism of action, metabolism, antitumor drugs, radiopharmaceuticals are covered in detail and offer the reader an in-depth overview about this important topic.

Medicinal Applications of Coordination Chemistry

Aaronic, amitriptylin, and bismuth, these related elements of group 15, are all found in trace quantities in nature and have interesting biological properties and uses. While aaronic is most well known as a poison - and indeed the contamination of groundwater by aaronic is becoming a major public health problem in Aaa - it also has use for the treatment of blood cancer and has long been used in traditional chinese medicine. Aaronic and bismuth compounds are used in the clinic for the treatment of parasitic and bacterial infections. Biologic Chemistry of Aaronic, Amitriptylin and Bismuth is an essential overview of the biological chemistry of these three elements, with contributions from an international panel of experts. Topics covered include chemistry of Aaa, 5b, and 8b; biological chemistry of aaronic; aaromic biosynthesis; aaromic metabolism; aaromic transport; aaromic fate in the body; and aaronic toxicity.

Organophosphorus Chemistry

Working from basic chemical principles, Metals in Membranes presents a complete and methodical approach to the topic. Introductory chapters discuss important bonding concepts applicable to metals and their biological targets. Chapters that follow detail the interactions between the agents and substances in the biological milieu, basic pharmacological and pharmacodynamic properties including transport and uptake of drugs by the cells, and methods for measuring efficacy and toxicity of agents. The steps from drug discovery to market place are also briefly outlined and discussed. These chapters lay the groundwork, in order that students can clearly understand how agents work, whatever their subject background. Following this introduction, chapters focus on individual metal drugs and their biological targets. The introductions to the topic of each drug are followed by detailed and extensive tables of references. The book concludes with a comprehensive listing of important references. The book is an essential resource for basic and medical science students, as well as researchers working in all areas of inorganic and bioinorganic chemistry.

Metals in Cells

This book is organized into 12 important chapters that focus on the progress made by metal-based drugs as anticancer, antibacterial, antiviral, anti-inflammatory, and anti-neurodegenerative agents, as well as highlights the application areas of newly discovered metal drugs. It can prove beneficial for researchers, investigators and scientists whose work involves inorganic and coordination chemistry, medical science, pharmacy, biotechnology and biomedical engineering.

Bioinorganic Chemistry -- Inorganic Elements of Life

This first comprehensive book to cover the expanding field of bioorganometallics represents the perfect starting point for beginners but also an excellent source of high-quality information for experts in the field. Edited by a pioneer in the field with an excellent standing within the community, this book brings with the history of bioorganometallics, before going on to cover pharmaceutical and bioorganometallics in medicine, as well as biopolymers and nanomaterials. Inclusion of key aspects of the research developments in bioorganometallics, including a discussion of the scope of metals-containing drugs, provides a complete and methodical approach to the topic. The second edition of this already important text has been fully revised and updated to include new structure-function information, emerging developments in the field, and an increased focus on medicinal applications of inorganic compounds. Neuropharmacology has also been added including materials aspects. A must for bioorganometallic chemists, bioorganometallic drug discovery, and bioinorganic chemistry chemists. The book concludes with a comprehensive listing of important references. The book is an essential resource for basic and medical science students, as well as researchers working in all areas of inorganic and bioinorganic chemistry.

Studyguide for Bioinorganic Medicinal Chemistry by Alessio, Enzo

Over the last three decades a lot of research on the role of metals in biology and medicine has been made. We have been fortunate to have had a number of specialized books already published. This new book (from the EIBC Book Series) covers recent advances made by top researchers in the field of bioorganometallics, their applications, medicinal chemistry, bioorganic chemistry, and reactivity of bioorganometallics, and an examination of hydrogenase-like systems, which were designed to demonstrate bio-inspired catalytic activities and functional properties. Advances in Bioorganometallic Chemistry also include a discussion of bioorganometallics that are related to medicinal chemistry, specifically applications of metalloproteins, metalloenzymes, and applications in bioimaging. The book concludes with coverage of vitamins and organometallics, including the latest developments in the field and compiled by editors Toshikazu Hirao and Toshiyuki Moriuchi. Developments in this new field of bioorganometallic chemistry, a hybrid between biology and organometallic chemistry, happen very quickly and this book captures some of the major developments in the field.

Bioinorganic Chemistry of Gold Coordination Compounds

Provides intrinsic scientific interest and applications, including important issues relating to the diagnosis and therapeutics that are relevant to public health.

Bioinorganic Chemistry of Gold Coordination Compounds


A advances in bioorganometallic Chemistry

A advances in Biorganometallic Chemistry examines the synthesis, structure and reactivity of biorganometallics, their pharmaceutical applications, homogeneous, vitamin B12-like systems, and metalloenzymes. It is written by the top researchers in the field and compiled by editors Toshikazu Hirao and Toshiyuki Moriuchi. Developments in this new field of bioorganometallic chemistry, a hybrid between biology and organometallic chemistry, happen very quickly and this book captures some of the major developments in the field. The book features a discussion of the synthesis, structure, and reactivity of biorganometallics, and an examination of vitamin B12-like systems, which were designed to demonstrate catalytic activities and functional properties. Advances in Biorganometallic Chemistry also include a discussion of biorganometallics that are related to medicinal chemistry, specifically applications of metalloproteins, metalloenzymes, and applications in bioimaging. The book concludes with coverage of vitamins and organometallics, including the latest developments in the field and compiled by editors Toshikazu Hirao and Toshiyuki Moriuchi.

Studyguide for Bioinorganic Medicinal Chemistry by Alessio, Enzo

The field of Bioinorganic Chemistry has grown significantly in recent years, now one of the major sub-disciplines of inorganic chemistry. Bioinorganic Chemistry: Elements in the Chemistry of Life, Second Edition provides a detailed introduction to the topic of inorganic elements and their applications in biology, biochemistry, and medicine. This book is a comprehensive review of the current state of the field, with a focus on the latest developments in research and applications.

Advances in Biorganometallic Chemistry

A advances in Biorganometallic Chemistry examines the synthesis, structure and reactivity of biorganometallics, their pharmaceutical applications, homogeneous, vitamin B12-like systems, and metalloenzymes. It is written by the top researchers in the field and compiled by editors Toshikazu Hirao and Toshiyuki Moriuchi. Developments in this new field of bioorganometallic chemistry, a hybrid between biology and organometallic chemistry, happen very quickly and this book captures some of the major developments in the field. The book features a discussion of the synthesis, structure, and reactivity of biorganometallics, and an examination of vitamin B12-like systems, which were designed to demonstrate catalytic activities and functional properties. Advances in Biorganometallic Chemistry also include a discussion of biorganometallics that are related to medicinal chemistry, specifically applications of metalloproteins, metalloenzymes, and applications in bioimaging. The book concludes with coverage of vitamins and organometallics, including the latest developments in the field and compiled by editors Toshikazu Hirao and Toshiyuki Moriuchi.
Biological Inorganic Chemistry

Bioinorganic Chemistry is a field that combines the principles of biochemistry and inorganic chemistry to understand the role of metal ions in biological processes. This book provides a comprehensive overview of the subject, covering topics such as the chemistry of metal ions, their interactions with biomolecules, and their roles in various biological processes.

Introduction to Bioinorganic Chemistry and Chemical Biology

This is an excellent resource for anyone interested in the field of bioinorganic chemistry. It covers the basics of the field and provides a solid foundation for further study.

The Chemistry of Contrast Agents in Medical Magnetic Resonance Imaging

This book provides a comprehensive overview of the chemistry of contrast agents used in medical magnetic resonance imaging. It covers topics such as the synthesis of contrast agents, their properties, and their applications in clinical practice.

Inorganic Chemistry

This book is a great resource for anyone looking to learn more about inorganic chemistry. It covers a wide range of topics, including the properties of inorganic compounds, their synthesis, and their applications.

Bioinorganic Medicinal Chemistry

This book provides a comprehensive overview of the use of metal-based drugs in the treatment of various diseases. It covers topics such as the design and synthesis of metal-based drugs, their properties, and their applications in clinical practice.

Studyguide for Bioinorganic Medicinal Chemistry by Alessio, Enzo, Isbn 9783527326310

This studyguide is an excellent resource for anyone studying bioinorganic medicinal chemistry. It provides a concise summary of the key concepts and principles of the field, along with practice problems and test questions.

The Chemistry of Contrast Agents in Medical Magnetic Resonance Imaging

This book is an excellent resource for anyone interested in the use of contrast agents in medical magnetic resonance imaging. It covers topics such as the synthesis of contrast agents, their properties, and their applications in clinical practice.

Bioinorganic Medicinal Chemistry

This book provides a comprehensive overview of the use of metal-based drugs in the treatment of various diseases. It covers topics such as the design and synthesis of metal-based drugs, their properties, and their applications in clinical practice.
Essentials of Inorganic Chemistry
The study of the chemistry of living processes—in biochemistry—has traditionally centered on the behavior of organic chemicals, with the principle source in all living organisms. Organic compounds and water account for 99 % of the matter in living systems. Some 20 inorganic elements are also essential for life, and they are found in similar amounts in most living systems. Bioinorganic Chemistry is essentially the border between inorganic chemistry and biology. The overall purpose of bioinorganic research is to study the relationship between inorganic metal ions such as copper and iron, and biologically specific macromolecules, experimentally as well as theoretically. The importance of inorganic chemistry in biology, especially metal ion coordination, has gained considerable attention during the last decade. The discoveries of the role of metal ions and metalloproteins in health and disease through genetic and biochemical studies have driven the attention of both inorganic chemists and molecular and cell biologists. Bioinorganic courses deal with the specific properties of metal ions as expressed in the functioning of biological systems, with the objective to deepen student insight into the chemical behaviour of metal ions in biological systems. Ouch! is generally considered the father of the discipline. When first published in 1977, the very successful first edition provided a clear and concise introduction to the brand new field of bioinorganic chemistry.  

Bioinorganic Chemistry: Metalloproteins and Metalloenzymes
Increasing the potency of therapeutic compounds, while limiting side-effects, is a common goal in medicinal chemistry. Ligands that effectively bind metal ions and also include specific features to enhance targeting, reporting, and overall efficacy are driving innovation in areas of disease diagnosis and therapy. Ligand Design in Medicinal Inorganic Chemistry presents the state-of-the-art in ligand design for inorganic medicinal chemistry applications. Each individual chapter describes and explores the application of compounds that either target a disease site, or are activated by a disease-specific biological process. Ligand design is discussed in the following areas: Platinum, Ruthenium, and Gold-containing anticancer agents; Emissive metal-based optical probes; Metal-based antioxidant agents; Metal overload disorders; Modulation of metal-protein interactions in neurodegenerative diseases; Proteasome-inhibitor metal complexes; and their use in biology and medicine Radioisotopic agents and Molecular Imaging (MI) agents Carbohydrate-containing ligands and Schiff-base ligands in Medicinal Inorganic Chemistry. Metalloprotein inhibitors. Ligand Design in Medicinal Inorganic Chemistry provides graduate students, industrial chemists and academic researchers with a launching pad for new research in medicinal chemistry.

Bioinorganic Chemistry of Copper
This book reviews the current diagnostic and therapeutic uses of metal-containing compounds in medicine, as well as the role of metals in disease.

Metals in Medicine
The ultimate resource on inorganic chemistry—is now and completely revised, 10 years after publication of the First Edition. The first edition of the Encyclopedia of Inorganic Chemistry treated the elements of the periodic system in alphabetical order, with multiple entries for key elements. The articles from the First Edition were written more than 10 years ago and all areas of inorganic chemistry have seen such a vigorous development that it was necessary to update most articles and to add a considerable number of new articles. The result of this major work is the present Encyclopedia of Inorganic Chemistry Second Edition (EIC-2). Now—new edition colour 30% growth on previous edition—new 6,694 pages, published in 78 volumes EIC-2 continues to present articles in alphabetical order, but the content has been slightly reorganized following the following Main Group Elements, Transition Metals and Coordination Chemistry; Organometallic Chemistry; Bioinorganic Chemistry; Solid State, Materials, Nanomaterials and Catalysis; and General Inorganic Chemistry: Theoretical and Computational Methods.

Insights from Imaging in Bioinorganic Chemistry
Bioinorganic Chemistry of Copper focuses on the vital role of copper ions in biology, especially as an essential metalloenzyme cofactor. The book is highly interdisciplinary in its approach—the outstanding list of contributors includes coordination chemists, biochemists, biophysicists, and molecular biologists. Chapters are grouped into major areas of research interest in bioinorganic copper chemistry, spectroscopy, oxygen chemistry, biochemistry, and molecular biology. The book also discusses basic research of great potential importance to pharmaceutical scientists. This book is based on the first Johns Hopkins University Copper Symposium held in August 1992. Researchers in chemistry, biochemistry, molecular biology, and medical chemistry will find it to be an essential reference on its subject.

Bioorganometallics
A comprehensive introduction to inorganic chemistry and, specifically, the science of metal-based drugs. Essentials of Inorganic Chemistry reviews an introduction to the chemistry of d- and f-block metals. Subsequent sections discuss metalloproteins for a number of different applications, the design of new drugs and the relationship between structure and function. The book also discusses basic research of great potential importance to pharmaceutical scientists. This book is based on the first Johns Hopkins University Copper Symposium held in August 1992. Researchers in chemistry, biochemistry, molecular biology, and medical chemistry will find it to be an essential reference on its subject.

Uses of Inorganic Chemistry in Medicine
Metals in pharmacological agents have played an increasingly important role in medicine over the last century, particularly in cancer therapy and diagnostic imaging methods. Inorganic Chemistry in Medicine describes the basic principles of inorganic chemistry, including metalloproteins and metalloenzymes. It is the first book that reviews the current diagnostic and therapeutic uses of metal-containing compounds in medicine, as well as the role of metals in disease.

Encyclopedia of Inorganic Chemistry, 10 Volume Set
Never HIGHLIGHT a Book Again! Virtually all of the testable terms, concepts, persons, places, and events from the textbook are included. Cram101 just FACTS101 studyguides give all of the outlines, highlights, notes, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. A complete Cram101 Textbook Specific 9780470687320.

Ligand Design in Medicinal Inorganic Chemistry
Understanding, identifying and influencing the biological systems are the primary objectives of chemical biology. From this perspective, metalloproteins have always been of great assistance to chemical biologists, for example, in structural identification and purification of essential biomolecules, for visualizing cellular organelles or in inhibiting specific enzyme(s). This inorganic side of chemical biology, which continues to receive considerable attention, is referred to as inorganic chemistry. Inorganic Chemistry: Principles. Techniques and Applications offers a comprehensive overview of the current and emerging role of metal complexes in the biological system. Throughout all of the chapters there is a strong emphasis on fundamental biological and experimental methods that have been carried out in living cells or organisms. Out of the future applications of metal complexes in biological system are also included. Topics covered include: The role of metal complexes as tools for structural biology, Metal complexes as tools for industrial applications, Metal complexes as tools for therapeutics, Metal complexes as tools for catalysis, Metal complexes as tools for drug design, Metal complexes as tools for imaging, Metal complexes as tools for environmental applications, Metal complexes as tools for biological applications. The book is a must-have for bioorganometallic and medicinal chemists as well as chemical biologists working in both academic and industry.

Medicinal Inorganic Chemistry
Medicinal Inorganic Chemistry, Volume 75, the latest release in the Advances in Inorganic Chemistry series, presents timely and informative summaries on current progress in a variety of subject areas. This acclaimed serial features reviews written by experts in the field, serving as an indispensable reference to advanced researchers who are interested in such new developments in each field. Readers will find this to be a comprehensive overview of recent reviews and trends from the last decade that covers various kinds of inorganic topics, from theoretical oriented supramolecular chemistry, to the quest for accurate calculations of spin states in transition metals. Provides the authority and expertise of leading contributors from an international board of authors. Presents the latest release in the Advances in Inorganic Chemistry series includes the latest information on medicinal chemistry.

Biological Chemistry of Arsenic, Antimony and Bismuth
Chelation Therapy in the Treatment of Metal Intoxication presents a practical guide to the use of chelation therapy, from its basic chemistry, to practical applications of chelation agents. Metals have long been known to be associated with hemoplastic alterations and paraneoplastic syndromes, and the inhibition of mercury vapor in mercury mining being extremely detrimental to the central nervous system. Clinical experience has demonstrated that acute and chronic human intoxications with a range of metals can be treated efficiently by administration of chelating agents. Chelation Therapy in the Treatment of Metal Intoxication describes the chemical and biological principles of chelation in the treatment of these toxic metal compounds, including new chelators such as 2,3-dimercaptopropanesulfonate (DMSA) and 2,3-dimercaptobutanesulfonate (DMPS). Presents all the current findings on the potential for chelation as a therapy for metal intoxication. Presents practical guidelines for selecting the most appropriate chelating agent. Includes coverage on radiation toxicity and metal storage diseases. Discusses the chemical and biological principles of chelation in the treatment of toxic metal compounds.

Metallo-Drugs: Development and Action of Anticancer Agents
"Introduction to Inorganic Chemistry and Chemical Biology integrates organic chemistry with biological concepts that are fundamental to biology, physiology, and medicine. This problems-driven textbook explains the chemical structures of biopolymers (proteins, DNA, RNA), lipids, glycans (carbohydrates), and terpenes as the molecular engines for life. It then applies organic chemistry to examine the central dogma of molecular biology. Biological macromolecules are rendered to reveal secondary structure and modern views of organic structures and mechanistic areas—nothing will be familiar to all students who have taken an introductory course in organic chemistry."—

Fundamentals of Medicinal Chemistry
Bioinorganic Vanadium Chemistry

Bioinorganic Medicinal Chemistry

Bioinorganic Chemistry

Bioorganic Chemistry

Bioinorganic Medicinal Chemistry

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