p4s7 compound name

p4s7 compound name is a topic of significant interest within the fields of inorganic chemistry and materials science. This article provides an in-depth look at the nomenclature, structure, synthesis, properties, applications, and safety considerations surrounding the P4S7 compound. Readers will gain a clear understanding of how chemists determine its name, its chemical characteristics, practical uses, and the best practices for handling it. Whether you're a student, researcher, or industry professional, this comprehensive guide delivers authoritative insights into every key aspect of the p4s7 compound, using keyword-rich sections for optimal SEO. Continue reading to discover the essential facts about the P4S7 compound name and its relevance in modern science.

Understanding the p4s7 Compound Name

The p4s7 compound name refers to a chemical substance composed of four phosphorus atoms and seven sulfur atoms. In chemical notation, P4S7 represents a distinct molecular formula that belongs to the family of phosphorus sulfides. The naming of such compounds follows strict conventions outlined by IUPAC and other regulatory bodies. Recognizing the correct name is crucial for communicating accurately in scientific literature, research reports, and industrial documentation. The compound is notable for its unique stoichiometry and structural features, which will be explored further in this article.

Chemical Structure and Composition of P4S7

Molecular Formula and Atomic Arrangement

P4S7 is an inorganic compound with the molecular formula P4S7. It consists of four phosphorus atoms covalently bonded to seven sulfur atoms, forming a complex cage-like structure. This arrangement gives the compound distinctive chemical and physical properties compared to other phosphorus sulfides. The geometry of P4S7 is important for understanding its reactivity and applications in various fields.

Structural Classification of P4S7

P4S7 belongs to the group of phosphorus sulfides, which includes several compounds with different ratios of phosphorus to sulfur. Its structure is often compared to other members such as P4S3 and P4S10. The crystalline structure of P4S7 exhibits a tetrahedral configuration of phosphorus atoms with bridging and terminal sulfur atoms, resulting in a stable compound under normal conditions.

- P4S7: Four phosphorus atoms, seven sulfur atoms
- Cage-like molecular structure
- Part of the phosphorus sulfide family
- Distinct from P4S3 (phosphorus trisulfide) and P4S10 (phosphorus pentasulfide)

Nomenclature and Naming Conventions

IUPAC Name of P4S7 Compound

The official IUPAC name for P4S7 compound is tetraphosphorus heptasulfide. This nomenclature is derived from the number of phosphorus and sulfur atoms present in the molecule. The prefix "tetra-" denotes four phosphorus atoms, while "hepta-" designates seven sulfur atoms. The suffix "sulfide" is used for compounds containing sulfur. Using the correct p4s7 compound name is essential for clear communication in scientific and industrial settings.

Other Common Names and Synonyms

In addition to its IUPAC name, P4S7 may be referred to as phosphorus heptasulfide or simply phosphorus sulfide (though this is less precise). It is important to distinguish P4S7 from other phosphorus sulfides, as each has unique properties and uses. Synonyms are often used in different regions or industries, but scientific nomenclature remains the standard for clarity.

Physical and Chemical Properties

Appearance and Physical State

P4S7 typically appears as a yellow-orange crystalline solid. It is moderately soluble in carbon disulfide and other organic solvents but insoluble in water. The compound has a melting point of approximately 300°C, with slight variation depending on purity and preparation methods.

Chemical Reactivity

Tetraphosphorus heptasulfide is known for its reactivity with water, acids, and bases. It can decompose under moist conditions, releasing hydrogen sulfide and phosphoric acid. The compound is also used as a reagent in organic synthesis due to its ability to transfer sulfur atoms to organic molecules.

Synthesis and Preparation Methods

Industrial Synthesis of P4S7

Tetraphosphorus heptasulfide is typically synthesized by direct reaction of elemental phosphorus and sulfur at elevated temperatures. The process is conducted in a controlled environment to prevent unwanted side reactions and to ensure the correct stoichiometry. The resulting product is purified through crystallization techniques.

Laboratory Preparation Techniques

In laboratory settings, P4S7 can be prepared in smaller quantities using similar methods. The reaction is usually performed in a sealed vessel to

contain volatile byproducts and to maintain the correct atmosphere. Researchers must adhere to safety protocols due to the compound’s reactive nature.

1. Mix elemental phosphorus and sulfur in the correct ratios
2. Heat the mixture to initiate the reaction
3. Allow the product to cool and crystallize
4. Purify by recrystallization as needed

Applications and Uses of P4S7 Compound

Industrial Applications

Tetraphosphorus heptasulfide is utilized in various industries, especially in the manufacture of organic sulfur compounds, pesticides, and lubricants. Its ability to act as a sulfurizing agent makes it valuable in synthetic chemistry and the production of specialty chemicals.

Role in Organic Chemistry

In organic synthesis, P4S7 is used to convert carbonyl compounds into thiones and to introduce sulfur atoms into organic frameworks. It serves as a key reagent in the preparation of specific pharmaceuticals and agrochemicals.

Other Notable Uses

Beyond chemical synthesis, P4S7 is sometimes employed in the vulcanization of rubber and as an additive in certain lubricants to enhance their anti-wear properties. Its unique properties are leveraged in targeted applications where its sulfurizing ability is required.

Safety, Handling, and Storage

Hazards Associated with P4S7 Compound

Tetraphosphorus heptasulfide is classified as hazardous due to its reactivity with moisture and its potential to release toxic gases. Proper ventilation and protective equipment are necessary when handling this compound. It should be stored in airtight containers to prevent decomposition and accidental exposure.

Best Practices for Safe Handling

Safety protocols for P4S7 include the use of gloves, goggles, and laboratory coats. Work should be conducted in well-ventilated areas, preferably under a fume hood. In case of contact or inhalation, immediate medical attention is recommended.

- Store in airtight, moisture-free containers
- Wear appropriate personal protective equipment
- Handle under controlled conditions
- Dispose of waste according to local regulations

Frequently Asked Questions

Q: What is the official p4s7 compound name?

A: The official name for the p4s7 compound is tetraphosphorus heptasulfide, according to IUPAC nomenclature.

Q: How is tetraphosphorus heptasulfide synthesized?

A: Tetraphosphorus heptasulfide is synthesized by reacting elemental phosphorus with sulfur at elevated temperatures in a controlled environment.

Q: What are the main uses of P4S7 compound?

A: P4S7 is used in organic synthesis, as a sulfurizing agent, in the manufacture of pesticides, lubricants, and specialty chemicals.

Q: What safety precautions should be taken when handling P4S7?

A: Always use gloves, goggles, and work in a well-ventilated area. Store the compound in airtight, moisture-free containers.

Q: What is the appearance of tetraphosphorus heptasulfide?

A: Tetraphosphorus heptasulfide typically appears as a yellow-orange crystalline solid.

Q: Is P4S7 soluble in water?

A: No, P4S7 is insoluble in water but moderately soluble in carbon disulfide and other organic solvents.

Q: How does P4S7 differ from other phosphorus sulfides?

A: P4S7 has a unique ratio and structure compared to other phosphorus sulfides like P4S3 and P4S10, resulting in different properties and applications.

Q: Can P4S7 be used in pharmaceuticals?

A: Yes, it is sometimes used as a reagent in the synthesis of pharmaceutical compounds where sulfur incorporation is required.

Q: What happens if P4S7 reacts with moisture?

A: It decomposes, releasing hydrogen sulfide and phosphoric acid, which are toxic and require careful handling.

Q: What is the molecular formula for tetraphosphorus heptasulfide?

A: The molecular formula is P4S7, indicating four phosphorus atoms and seven sulfur atoms in the compound.

P4s7 Compound Name

Decoding the Mystery: Understanding the P4S7 Compound Name

Are you intrigued by the seemingly cryptic chemical formula P_4S_7? This post dives deep into the fascinating world of phosphorus sulfides, specifically exploring the nomenclature and properties of the compound represented by P_4S_7. We'll unravel its official name, delve into its chemical structure, discuss its applications, and explore its unique characteristics. Forget confusing chemical jargon; this guide offers a clear, concise, and comprehensive understanding of the P_4S7 compound name and its significance.

Understanding Phosphorus Sulfide Nomenclature

The compound P_4S_7, often referred to informally as a phosphorus sulfide, requires a more precise name to accurately reflect its chemical composition. Simply stating "phosphorus sulfide" is insufficient because phosphorus and sulfur can form numerous compounds with varying ratios. To determine the official name, we need to consider the oxidation states of phosphorus and sulfur and apply the IUPAC (International Union of Pure and Applied Chemistry) naming conventions.

Applying IUPAC Rules

IUPAC nomenclature dictates that we use prefixes to indicate the number of atoms of each element present. Therefore, the systematic name for P_4S_7 is Tetraphosphorus heptasulfide. "Tetra" indicates four phosphorus atoms, and "hepta" indicates seven sulfur atoms. This naming system ensures clarity and avoids ambiguity when discussing different phosphorus sulfide compounds.

The Chemical Structure of Tetraphosphorus Heptasulfide

Understanding the chemical structure of P_4S_7 is crucial to grasping its properties and applications. Unlike simpler phosphorus sulfides, P_4S_7 boasts a complex cage-like structure. This structure is not readily apparent from the simple formula. Instead of a simple linear or planar arrangement of atoms, it exhibits a more intricate three-dimensional arrangement.

Visualizing the Cage Structure

Imagine a distorted adamantane structure (a diamond-like arrangement). This cage comprises four phosphorus atoms and seven sulfur atoms. The precise bonding angles and bond lengths are complex and have been the subject of significant research using techniques such as X-ray crystallography. The intricacies of this structure influence its reactivity and properties.

Properties and Applications of Tetraphosphorus Heptasulfide

Tetraphosphorus heptasulfide possesses several unique properties, which determine its applications in various industries. Its most notable characteristics include:

Reactivity: P_4S_7 is a reactive compound, participating in various chemical reactions, especially with nucleophiles. Its reactivity is influenced by the strained nature of its cage-like structure.
Solubility: The solubility of P_4S_7 varies depending on the solvent used. It is generally less soluble in polar solvents compared to non-polar solvents.
Melting Point: Tetraphosphorus heptasulfide has a relatively high melting point, a feature influencing its processing and use in high-temperature applications.

Industrial Applications

While not as widely used as some other phosphorus compounds, P_4S_7 finds applications in:

Match Head Production (Historically): Although less common now due to safety concerns, it was once a component in match head formulations. Safer alternatives have largely replaced it.
Research and Development: P_4S_7 serves as a valuable precursor for the synthesis of other phosphorus-containing compounds in research settings. Its unique structure makes it an interesting molecule for exploring new chemical reactions and functionalities.
Specialized Chemicals: It may find niche applications in the production of certain specialty chemicals, possibly as a reagent or catalyst in specific chemical processes.

Safety Considerations

Like many phosphorus and sulfur compounds, P_4S_7 should be handled with care. Appropriate safety precautions, including the use of personal protective equipment (PPE) such as gloves and eye protection, are essential when working with this compound. Proper ventilation is also crucial to minimize exposure to potentially harmful vapors.

Conclusion

The seemingly simple chemical formula P_4S_7 reveals a world of chemical complexity when explored. Understanding its systematic name, tetraphosphorus heptasulfide, and its intricate structure is key

to appreciating its properties and applications. While its industrial use may be limited, its significance in research and its historical role in match production underscore its importance in the chemical landscape. Remember to always prioritize safety when handling this and any other chemical compounds.

FAQs

1. Is P_4S_7 flammable? Yes, P_4S_7 is flammable and should be handled away from ignition sources.

2. What is the molar mass of P_4S_7? The molar mass of P_4S_7 is approximately 284.18 g/mol.

3. What are the main hazards associated with P_4S_7? Hazards include skin and eye irritation, respiratory irritation from vapors, and flammability.

4. Are there any environmentally friendly alternatives to P_4S_7 in match production? Yes, modern matches utilize safer and more environmentally friendly formulations that do not include P_4S_7.

5. Where can I find more detailed information on the crystal structure of P_4S_7? Peer-reviewed scientific journals and databases like the Cambridge Crystallographic Data Centre (CCDC) are excellent resources for detailed structural information.

p4s7 compound name: Foundations of College Chemistry Morris Hein, Susan Arena, 2013-01-01 Learning the fundamentals of chemistry can be a difficult task to undertake for health professionals. For over 35 years, Foundations of College Chemistry, Alternate 14th Edition has helped readers master the chemistry skills they need to succeed. It provides them with clear and logical explanations of chemical concepts and problem solving. They'll learn how to apply concepts with the help of worked out examples. In addition, Chemistry in Action features and conceptual questions checks brings together the understanding of chemistry and relates chemistry to things health professionals experience on a regular basis.

p4s7 compound name: *Foundations of College Chemistry, Alternate* Morris Hein, Susan Arena, 2010-01-26 Learning the fundamentals of chemistry can be a difficult task to undertake for health professionals. For over 35 years, this book has helped them master the chemistry skills they need to succeed. It provides them with clear and logical explanations of chemical concepts and problem solving. They'll learn how to apply concepts with the help of worked out examples. In addition, Chemistry in Action features and conceptual questions checks brings together the understanding of chemistry and relates chemistry to things health professionals experience on a regular basis.

p4s7 compound name: Chemistry Charles H. Corwin, 1994 The book focuses on the concepts of chemistry and the applications that maintain and generate motivation for the subject of chemistry.

p4s7 compound name: Inorganic Chemistry in Tables Nataliya Turova, 2011-07-28 The present supplement to Inorganic Chemistry courses is developed in the form of reference schemes, presenting the information on one or several related element derivatives and their mutual transformations within one double-sided sheet. The compounds are placed from left to right corresponding to the increase in the formal oxidation number of the element considered. For each distinct oxidation state the upper position in the column is occupied by an oxide, its hydrated forms, followed then by basic (and oxo-) and normal salts. The position of each compound in this scheme is unambiguously determined in this approach by the central atom oxidation number (in the horizontal

direction) and the nature of ligand (in the vertical one), which simplifies considerably the search for necessary information. The mutual transformations are displayed by arrows accompanied by the reagents or other factors responsible for the reaction (red arrows mean oxidation, green arrows mean reduction, black arrows – if the oxidation number is not changed). Modern training programs require the mastering of a tremendous amount of data. The present tables should serve as a useful addition to textbooks and lectures.

p4s7 compound name: Introductory Chemistry Charles H. Corwin, 2005 For one-semester courses in Basic Chemistry, Introduction to Chemistry, and Preparatory Chemistry, and the first term of Allied Health Chemistry. This text is carefully crafted to help students learn chemical skills and concepts more effectively. Corwin covers math and problem-solving early in the text; he builds student confidence and skills through innovative problem-solving pedagogy and technology formulated to meet student needs.

p4s7 compound name: Descriptive Inorganic Chemistry James E. House, Kathleen A. House, 2010-09-22 Descriptive Inorganic Chemistry, Second Edition, covers the synthesis, reactions, and properties of elements and inorganic compounds for courses in descriptive inorganic chemistry. This updated version includes expanded coverage of chemical bonding and enhanced treatment of Buckminster Fullerenes, and incorporates new industrial applications matched to key topics in the text. It is suitable for the one-semester (ACS-recommended) course or as a supplement in general chemistry courses. Ideal for majors and non-majors, the book incorporates rich graphs and diagrams to enhance the content and maximize learning. - Includes expanded coverage of chemical bonding and enhanced treatment of Buckminster Fullerenes - Incorporates new industrial applications matched to key topics in the text

p4s7 compound name: Rhodium Catalyzed Hydroformylation Piet W.N.M. van Leeuwen, Carmen Claver, 2006-04-11 In the last decade there have been numerous advances in the area of rhodium-catalyzed hydroformylation, such as highly selective catalysts of industrial importance, new insights into mechanisms of the reaction, very selective asymmetric catalysts, in situ characterization and application to organic synthesis. The views on hydroformylation which still prevail in the current textbooks have become obsolete in several respects. Therefore, it was felt timely to collect these advances in a book. The book contains a series of chapters discussing several rhodium systems arranged according to ligand type, including asymmetric ligands, a chapter on applications in organic chemistry, a chapter on modern processes and separations, and a chapter on catalyst preparation and laboratory techniques. This book concentrates on highlights, rather than a concise review mentioning all articles in just one line. The book aims at an audience of advanced students, experts in the field, and scientists from related fields. The didactic approach also makes it useful as a guide for an advanced course.

p4s7 compound name: *Phosphorus in Environmental Technology* E. Valsami-Jones, 2004-05-31 Phosphorus in Environmental Technology: Principles and Applications, provides a definitive and detailed presentation of state-of-the-art knowledge on the environmental behaviour of phosphorus and its applications to the treatment of waters and soils. Special attention is given to phosphorus removal for recovery technologies, a concept that has emerged over the past 5-6 years. The book features an all-encompassing approach: the fundamental science of phosphorus (chemistry, geochemistry, mineralogy, biology), key aspects of its environmental behaviour and mobility, industrial applications (treatment, removal, recovery) and the principles behind such applications, novel biotechnologies and, importantly, it also addresses socio-economic issues which often influence implementation and the ultimate success of any new technology. A detailed subject index helps the reader to find their way through the different scientific and technological aspects covered, making it an invaluable reference work for students, professionals and consultants dealing with phosphorus-related environmental technologies. State-of-the-art knowledge on the behaviour of phosphorus and its applications to environmental science and technology. Covers all aspects of phosphorus in the environment, engineered and biological systems; an interdisciplinary text.

p4s7 compound name: Hazardous Materials Chemistry () (Toby) Bevelacqua, Laurie A.

Norman, 2018-03-30 Hazardous Materials Chemistry, Third Edition by Armando S. Bevelacqua and Laurie A. Norman explores basic chemical principles, nomenclature, and toxicology so that fire fighters and first responders can effectively identify hazards associated with specific chemicals and chemical families, determine the potential dangers present at a hazardous materials incident, and make safe and informed decisions.

p4s7 compound name: *Handbook of Preparative Inorganic Chemistry* Georg Brauer, 1963 Preparative methods. Elements and compounds. Hydrogen, deuterium, water. Hydrogen peroxide. Fluorine, hydrogen fluoride. Fluorine compounds. Chlorine, bromine, iodine. Oxygen, ozone. Sulfur, selenium, tellurium. Nitrogen. Phosphorus. Arsenic, antimony, bismuth. Carbon. Silicon and germanium. Tin and lead. Boron. Aluminum. Gallium, indium, thallium. Alkaline earth metals. Alkali metals. Copper, silver, gold. Zinc, cadmium, mercury. Scandium, yttrium, rare earths. Titanium, zirconium, hafnium, thorium. Vanadium, niobium, tantalum. Chromium, molybdenum, tungsten, uranium. Manganese. Rhenium. Iron. Cobalt, nickel. The platinum metals. Adsorbents and catalysts. Hydroxo salts. Iso - and heteropoly acids and their salts. Carbonyl and nitrosyl compounds. Alloys and intermetallic compounds.

p4s7 compound name: The Chemistry of the Non-Metals P. Powell, 2013-06-29 This book is a new attempt to interrelate the chemistry of the non-metals. In the early chapters, simple compounds of the non-metals with the halogens, hydrogen, and oxygen are surveyed, permitting a large area of chemistry to be discussed without the burden of too many facts. The structural relationships in the elemental forms of the non-metals are then used as an introduction to the catenated compounds, including the boron hydrides. In the concluding chapter, selected heteronuclear chain, ring, and cage compounds are con sidered. In some chapters, we have thought it useful to outline important features of a topic in relation to chemical theory, before giving a more detailed ac count of the chemistry of individual elements. The book is certainly not comprehensive and the bias in the material selected probably reflects our interest in volatile, covalent non-metal compounds. Suggestions for furt her reading are presented in two ways. A selected bibliography lists general textbooks which relate to much of our subject matter. References in the text point to review articles and to a few original papers which we consider to be of special interest. Although there are few difficult concepts in the text, the treatment may be appreciated most by students with some previous exposure to a Group by Group approach to non-metal chemistry. We have assumed an elementary knowledge of chemical periodicity, bonding theory, thermodynamics, and spectroscopic methods of structure determination.

p4s7 compound name: Introduction to General, Organic, and Biochemistry Morris Hein, Scott Pattison, Susan Arena, Leo R. Best, 2014-01-15 The most comprehensive book available on the subject, Introduction to General, Organic, and Biochemistry, 11th Edition continues its tradition of fostering the development of problem-solving skills, featuring numerous examples and coverage of current applications. Skillfully anticipating areas of difficulty and pacing the material accordingly, this readable work provides clear and logical explanations of chemical concepts as well as the right mix of general chemistry, organic chemistry, and biochemistry. An emphasis on real-world topics lets readers clearly see how the chemistry will apply to their career.

p4s7 compound name: *General Chemistry* Raymond Chang, 1986

p4s7 compound name: Characterization of Minerals, Metals, and Materials 2015 John Carpenter, Chengguang Bai, J. Pablo Escobedo-Diaz, Jiann-Yang Hwang, Shadia Ikhmayies, Bowen Li, Jian Li, Sergio Neves Monteiro, Zhiwei Peng, Mingming Zhang, 2016-12-20 This collection focuses on the characterization of minerals, metals, and materials as well as the application of characterization results on the processing of these materials. Papers cover topics such as clays, ceramics, composites, ferrous metals, non-ferrous metals, minerals, electronic materials, magnetic materials, environmental materials, advanced materials, and soft materials. In addition, papers covering materials extraction, materials processing, corrosion, welding, solidification, and method development are included. This book provides a current snapshot of characterization in materials science and its role in validating, informing, and driving current theories in the field of materials

science. This volume will serve the dual purpose of furnishing a broad introduction of the field to novices while simultaneously serving to keep subject matter experts up-to-date.

p4s7 compound name: Phosphorus and Its Compounds: Chemistry John R. Van Wazer, 1958

p4s7 compound name: Ebook: Chemistry Julia Burdge, 2014-10-16 Chemistry,Third Edition, by Julia Burdge offers a clear writing style written with the students in mind. Julia uses her background of teaching hundreds of general chemistry students per year and creates content to offer more detailed explanation on areas where she knows they have problems. With outstanding art, a consistent problem-solving approach, interesting applications woven throughout the chapters, and a wide range of end-of-chapter problems, this is a great third edition text.

p4s7 compound name: *Atkins' Physical Chemistry 11e* Peter Atkins, Julio De Paula, James Keeler, 2019-09-06 Atkins' Physical Chemistry: Molecular Thermodynamics and Kinetics is designed for use on the second semester of a quantum-first physical chemistry course. Based on the hugely popular Atkins' Physical Chemistry, this volume approaches molecular thermodynamics with the assumption that students will have studied quantum mechanics in their first semester. The exceptional quality of previous editions has been built upon to make this new edition of Atkins' Physical Chemistry even more closely suited to the needs of both lecturers and students. Re-organised into discrete 'topics', the text is more flexible to teach from and more readable for students. Now in its eleventh edition, the text has been enhanced with additional learning features and maths support to demonstrate the absolute centrality of mathematics to physical chemistry. Increasing the digestibility of the text in this new approach, the reader is brought to a question, then the math is used to show how it can be answered and progress made. The expanded and redistributed maths support also includes new 'Chemist's toolkits' which provide students with succinct reminders of mathematical concepts and techniques right where they need them. Checklists of key concepts at the end of each topic add to the extensive learning support provided throughout the book, to reinforce the main take-home messages in each section. The coupling of the broad coverage of the subject with a structure and use of pedagogy that is even more innovative will ensure Atkins' Physical Chemistry remains the textbook of choice for studying physical chemistry.

p4s7 compound name: Relationship Between Chemical Structure and Toxic Action on Rats James B. De Witt, 1953

p4s7 compound name: *Study Guide General Chemistry, Second Edition, Becker/Wentworth* Becker, Benjamin L. Carroll, 1980

p4s7 compound name: *College Chemistry* William Harrison Nebergall, Frederic Cowles Schmidt, 1957

p4s7 compound name: Systematic Inorganic Chemistry of the Fifth-and-sixth-group Nonmetallic Elements Don M. Yost, Horace Russell, 1944

p4s7 compound name: Chemistry John R. Van Wazer, 1958

p4s7 compound name: The Chemistry of Phosphorus John Emsley, Dennis Hall, 1976

p4s7 compound name: Name Reactions of Functional Group Transformations Jie Jack Li, E. J. Corey, 2007-07-09 This practical, well-organized reference delves deeply into functional group transformations, to provide all the detailed information that researchers need. Topics are organized into the following sections: oxidation, reduction, asymmetric synthesis, and functional group manipulations Each section includes a description of the functional group transformation, the historical perspective, mechanisms, variations and improvements on the reaction, synthetic utilities and applications for the reaction, experimental details, and references to the primary literature Contributors are well-known and respected for their work on the specific name reactions.

p4s7 compound name: Asimov on Chemistry Isaac Asimov, 1975 Essays samlet under overskrifterne: Inorganic chemistry, Nuclear chemistry, Organic chemistry, Biochemistry, Geochemistry, General

p4s7 compound name: Thermochemical Data of Pure Substances: Ag-Kr Ihsan Barin, 1993

p4s7 compound name: Essential Chemistry Raymond Chang, 1996-02

p4s7 compound name: Introduction to the Chemistry of Life Peter P. Berlow, Donald J. Burton, Joseph Isaac Routh, 1982

p4s7 compound name: The Organic Chemistry of Drug Synthesis, Volume 7 Daniel Lednicer, 2007-12-14 The classic reference on the synthesis of medicinal agents -- now completely updated The seventh volume in the definitive series that provides a quick yet thorough overview of the synthetic routes used to access specific classesof therapeutic agents, this volume covers approximately 220 new non-proprietary drug entities introduced since the publication of Volume 6. Many of these compounds represent novel structural types firstidentified by sophisticated new cell-based assays. Specifically, a significant number of new antineoplastic and antiviral agents are covered. As in the previous volumes, materials are organized by chemical class and syntheses originate with available starting materials. Organized to make the information accessible, this resource covers disease state, rationale for method of drug therapy, and the biological activities of each compound and preparation. The Organic Chemistry of Drug Synthesis, Volume 7 is a hands-on reference for medicinal and organic chemists, and a great resource for graduate and advanced undergraduate students in organic and medicinal chemistry.

p4s7 compound name: Introduction to Chemistry Thomas R. Dickson, 1991 Based on feedback from students and professors alike, this introductory textbook has been revised to offer material in a different sequence, and expanded end-of-chapter questions. A major theme of the text is the introduction, explanation and illustration of the problem-solving methods of beginning chemistry. Approaches to solutions chemical problems, and the unit-equation, factor-label or dimensional-analysis methods are explained in detail with numerous examples. Relevant analogies and special topics continue to reinforce, introduce and illustrate chemical concepts.

p4s7 compound name: *Chemistry* Julia Burdge, 2018-09

p4s7 compound name: Fundamentals of Chemistry Ralph A. Burns, 2003 For one-semester preparatory chemistry courses or general-purpose introductory chemistry courses. This clearly written, well-illustrated, versatile textbook provides thorough coverage of chemistry with a balance of problem solving skills, real-world applications and an emphasis on critical thinking and the process of science. A supporting theme throughout the text continually emphasizes that chemistry is everywhere.

p4s7 compound name: n.m.r. and chemistry ,

p4s7 compound name: Handbook of Preparative Inorganic Chemistry V2 Georg Brauer, 2012-12-02 Handbook of Preparative Inorganic Chemistry, Volume 2, Second Edition focuses on the methods, mechanisms, and chemical reactions involved in conducting experiments on inorganic chemistry. Composed of contributions of various authors, the second part of the manual focuses on elements and compounds. Included in the discussions are copper, silver, and gold. Numerical calculations and diagrams are presented to show the properties, compositions, and chemical reactions of these materials when exposed to varying laboratory conditions. The manual also looks at other elements such as scandium, yttrium, titanium, zirconium, hafnium, and thorium. Lengthy discussions on the characteristics and nature of these elements are presented. The third part of the guidebook discusses special compounds. The manual also provides formula and subject index, including an index for procedures, materials, and devices. Considering the value of information presented, the manual can best serve the interest of readers and scientists wanting to institute a system in the conduct of experiments in laboratories.

p4s7 compound name: Workbook with Solutions for use with General Chemistry Raymond Chang, 2007-04-10 By Brandon J. Cruickshank (Northern Arizona University) and Raymond Chang is a success guide written for use with General Chemistry. It aims to help students hone their analytical and problem-solving skills by presenting detailed approaches to solving chemical problems. Solutions for all of the text’s even-numbered problems are included.

p4s7 compound name: *The Chemical Bond* Linus Pauling, 1967

p4s7 compound name: Essentials of Chemistry Ralph A. Burns, John William Hill, 1995 The second edition of this chemistry textbook, that uses practice examples, and applications relating

chemistry to our lives and the environment.

p4s7 compound name: A Text-Book of Inorganic Chemistry J. Newton Friend, 1920

p4s7 compound name: *Modern Physical Organic Chemistry* Eric V. Anslyn, Dennis A. Dougherty, 2006 In additionto covering thoroughly the core areas of physical organic chemistry -structure and mechanism - this book will escortthe practitioner of organic chemistry into a field that has been thoroughlyupdated.

p4s7 compound name: *Reviews of Petroleum Technology* Institute of Petroleum (Great Britain), 1949