

Concise Inorganic Chemistry 5th Edition

This updated edition of the Handbook of Inorganic Compounds is the perfect reference for anyone that needs property data for compounds, CASRN numbers for computer or other searches, a consistent tabulation of molecular weights to synthesize inorganic materials on a laboratory scale, or data related to physical and chemical properties. Fully revised

?????xkcd??
????????????????xkcd.com??
??
??
??
???Google????????????????????????xkcd????????????????????????????????51???
??
??
??
??

Silver holds three world records; it has the lowest contact resistance, highest electrical conductivity and the best thermal conductivity of all metals. The element's physical strength, brilliance and malleability leads to its many uses from electronics to optical applications. A new 'silver rush' has occurred following the recent discovery that silver, when divided to form particles at the nano scale, can take on new properties. Meanwhile, there has been an increase in regulations against environmental pollution of silver ions toxicity, which have caused numerous diseases and disorders in the marine, microbial, invertebrate and vertebrate community (including humans). Both of which have led to a great interest in silver recovery for both environmental toxicity and an economic point of view. Comprised of ten chapters, this book draws attention to the most advance technologies in silver recovery and recycling from various spent sources, which will appeal to research scientists and metallurgists. The state of the art in recovery of silver from different sources by hydrometallurgical and bio-metallurgical processing and varieties of leaching, cementing, reducing agents, adsorbents, and bio-sorbents are highlighted in this book. Contents: Introduction (Syed Sabir)Leaching of Silver Contained in Mining Tailings. A Comparative Study of Several Leaching Reagents (Eleazar Salinas-Rodríguez, Juan Hernández-Ávila, Eduardo Cerecedo-Sáenz, Alberto Arenas-Flores, Ma Isabel Reyes-Valderrama, Edmundo Roldán-Contreras and Ventura Rodríguez-Lugo)Adsorption and Recovery of Silver from Aqueous Solutions (Emanuelle Dantas de Freitas, Thiago Lopes da Silva, Meuris Gurgel Carlos da Silva and Melissa Gurgel Adeodato Vieira)The Biogenic Synthesis of Silver Nanoparticles as a Method for Recovering Silver from Secondary Sources Using Extracts from Indigenous Australian Plants (Derek Fawcett, Sridevi Brundavanam and G errard Eddy Jai Poinern)Electrochemical Recovery of Silver from Waste Solutions (Victor Reyes-Cruz, Mar a Aurora Veloz Rodr guez, Jos  Angel Cobos Murcia and Gustavo Urbano Reyes)Recovery of Silver from Industrial Wastes:

Strategies and Technologies (M Chakankar, U Jadhav and H Hocheng) Silver Recovery Methods from Photographic Wastes (Nuri Nakibo?lu) Recovery of Silver from E-wastes Using Acidothiourea (Katsutoshi Inoue, Biplob Kumar Biswas, Manju Gurung, Hidetaka Kawakita, Keisuke Ohto and Shafiq Alam) Silver Extraction and Recovery with Macrocyclic and Tripodal Compounds (Keisuke Ohto, Yuki Ueda, Ramachandra Rao Sathuluri, Hidetaka Kawakita, Shitaro Morisada and Katsutoshi Inoue) Environmental Impacts of Silver from Spent Nanosources (Marija Ljubojevi?, Mirta Mili? and Ivana Vinkovi? Vr?ek) Readership: Students, researchers, chemists, metallurgists, environmental scientists and electronic waste recovery experts. Keywords: Silver; Silver Recovery; Toxicology; Inorganic Chemistry; Silver Ions Review: 0

Boasting numerous industrial applications, inorganic chemistry forms the basis for research into new materials and bioinorganic compounds such as calcium that act as biological catalysts. Now complete, this highly acclaimed series presents current knowledge in all areas of inorganic chemistry, including chemistry of the elements; organometallic, polymeric and solid-state materials; and compounds relevant to bioinorganic chemistry.

Previously by Angelici, this laboratory manual for an upper-level undergraduate or graduate course in inorganic synthesis has for many years been the standard in the field. In this newly revised third edition, the manual has been extensively updated to reflect new developments in inorganic chemistry. Twenty-three experiments are divided into five sections: solid state chemistry, main group chemistry, coordination chemistry, organometallic chemistry, and bioinorganic chemistry. The included experiments are safe, have been thoroughly tested to ensure reproducibility, are illustrative of modern issues in inorganic chemistry, and are capable of being performed in one or two laboratory periods of three or four hours. Because facilities vary from school to school, the authors have included a broad range of experiments to help provide a meaningful course in almost any academic setting. Each clearly written & illustrated experiment begins with an introduction that highlights the theme of the experiment, often including a discussion of a particular characterization method that will be used, followed by the experimental procedure, a set of problems, a listing of suggested Independent Studies, and literature references.

This book addresses the question, What is inorganic chemistry good for? rather than the more traditional question, How can we develop a theoretical basis for inorganic chemistry from sophisticated theories of bonding? The book prepares students of science or engineering for entry into the multi-billion-dollar inorganic chemical and related industries, and for rational approaches to environmental problems such as pollution abatement, corrosion control, and water treatment. A much expanded and updated revision of the 1990 text, Applied Inorganic Chemistry (University of Calgary Press), Inorganic Chemistry covers topics including atmospheric pollution and its abatement, water conditioning, fertilizers, cement chemistry, extractive metallurgy, metallic corrosion, catalysts, fuel cells

focuses on the commercial exploitation of inorganic chemicals and the treatment of the inorganic aspects of environmental chemistry has also been extended. Atomic structure and the Periodic table. Introduction to bonding. The ionic bond. The covalent bond. The metallic bond. General properties of the elements. Coordination compounds. Hydrogen and the hydrides. Group 1 - The alkali metals. The chlor-alkali industry. Group 2 - The alkaline earth elements. The group 13 elements. The group 14 elements. The group 15 elements. Group 16 - the chalcogens. Group 17 - the halogens. Group 18 - the noble gases. An introduction to the transition elements. Group 3 - The scandium group. Group 4 - The titanium group. Group 5 - The vanadium group. Group 6 - The chromium group. Group 7 - The manganese group. Group 8 - The iron group. Group 9 - The cobalt group. Group 10 - The nickel Group. Group 11 - The copper group: Coinage metals. Group 12 - The zinc group. The lanthanide series. The actinides. The atomic nucleus. Spectra

This book entitled "Inorganic Chemistry-II", is an effort to present the subject matter in a comprehensible and easily understandable form. This textbook is purposefully prepared for the postgraduate Inorganic Chemistry second semester course and it covers all the topics recommended.

An introductory textbook on the structural principles of inorganic-chemical molecules and solids. Traditional concepts and modern approaches are considered and demonstrated with the aid of examples. The most important structural types are examined from different perspectives.

In the present edition of the book, a new layout of the book with good looking pictures and tables has been brought for better understanding.

Over 400 years ago, Swiss alchemist and physician Paracelsus (1493-1541) cited: "All substances are poisons; there is none that is not a poison. The right dose differentiates a poison from a remedy." This is often condensed to: "The dose makes the poison." So, why are we overtly anxious about intoxications? In fact, poisons became a global problem with the industrial revolution. Pesticides, asbestos, occupational chemicals, air pollution, and heavy metal toxicity maintain high priority worldwide, especially in developing countries. Children between 0 and 5 years old are the most vulnerable to both acute and chronic poisonings, while older adults suffer from the chronic effects of chemicals. This book aims to raise awareness about the challenges of poisons, to help clinicians understand current issues in toxicology.

Unsur golongan utama merupakan unsur-unsur yang banyak terdapat di bumi dan di jagat raya atau dikenal sebagai unsur representatif. Unsur-unsur ini berada pada blok s dan p dalam sistem periodik unsur. Pemaparan dalam buku Kimia Unsur Golongan Utama ini mencakup sifat, reaksi, ekstraksi unsur, sintesis senyawa, kegunaan serta peranan unsur dan senyawa dalam kehidupan sehari-hari, industri, kesehatan, biologi, dan lingkungan. Pada Bab 1 dibahas tentang unsur hidrogen yang ditulis dalam bab terpisah karena sifatnya yang sangat berbeda dan kurang cocok dimasukkan ke dalam unsur golongan 1 yang membahas unsur-unsur golongan alkali. Bab 2 hingga 9 dibahas berturut-turut tentang unsur golongan 1 (alkali), 2 (alkali tanah), 13, 14, 15 (pniktogen), 16 (Kalkogen), 17 (halogen), dan 18 (gas mulia).

A comprehensive introduction to inorganic chemistry and, specifically, the science of metal-based drugs, Essentials of Inorganic Chemistry describes the basics of inorganic chemistry, including organometallic chemistry and radiochemistry, from a

