1. Record Nr. UNINA9910809109303321

Titolo	Progress in inorganic chemistry . Volume 58 / / edited by Kenneth D. Karlin
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, , 2014 ©2014
ISBN	1-118-79279-3 1-118-79283-1 1-118-79280-7
Descrizione fisica	1 online resource (525 p.)
Collana	Progress in Inorganic Chemistry
Disciplina	546.7
Soggetti	Chemistry, Inorganic
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Progress in Inorganic Chemistry; Contents; Chapter 1: Tris(dithiolene) Chemistry: A Golden Jubilee; I. INTRODUCTION; II. LIGANDS; A. Arene Dithiolates; B. Alkene Dithiolates; 1. Sulfur; 2. Carbon Disulfide; 3. Phosphorus Pentasulfide; 4. Other Sulfur Sources; C. Dithiones; III. COMPLEXES; A. Metathesis; B. Redox; C. Transmetalation; IV. STRUCTURES; A. Beginnings; 1. Neutral Complexes; 2. Reduced Complexes; 3. Isoelectronic Series; B. Redux; 1. Trigonal Twist; 2. Dithiolene Fold; 3. Oxidized Ligands; V. THEORY; A. Huckel; B. Fenske-Hall; VI. ELECTROCHEMISTRY; VII. MAGNETOMETRY VIII. SPECTROSCOPYA. Vibrational; B. Electronic; C. Nuclear Magnetic Resonance; D. Electron Paramagnetic Resonance; 1. Spin Doublet; 2. Spin Quartet; E. X-Ray Absorption Spectroscopy; 1. Metal Edges; 2. Sulfur K-Edge; F. Mossbauer; IX. SUMMARY; A. Group 4 (IV B); B. Group 5 (V B); C. Group 6 (VI B); D. Group 7 (VII B); E. Group 8 (VIII B); F. Group 9 (VIII B) and Beyond; X. CONCLUSIONS; ACKNOWLEDGMENTS; ABBREVIATIONS; REFERENCES; Chapter 2: How to Find an HNO Needle in a (Bio)-Chemical Haystack; I. INTRODUCTION; A. Azanone and Its Elusive Nature; II. CHEMICAL AND BIOLOGICAL RELEVANCE OF HNO A. Chemical Relevance of HNO as a Reaction Intermediate1. HNO Donors; 2. Reactions in Which Azanone Has Been Proposed As an Intermediate; B. Azanone Biological Relevance: Friend or Foe?; III.

AZANONE DETECTION METHODS; A. Trapping vs Real-Time Detection; B. Colorimetric Methods; 1. Manganese Porphyrins as Trapping Agents; 2. Miscellaneous Colorimetric Methods; C. Thiol Blocking; D. Phosphines; E. Electron Paramagnetic Resonance; F. Mass Spectrometry; G. Fluorescence-Based Methods; H. Electrochemical Real-Time Detection; IV. CONCLUSIONS AND FUTURE PERSPECTIVES; ACKNOWLEDGMENTS; ABBREVIATIONS
REFERENCESChapter 3: Photoactive Metal Nitrosyl and Carbonyl Complexes Derived from Designed Auxiliary Ligands: An Emerging Class of Photochemotherapeutics; I. INTRODUCTION; II. METAL NITROSYL AND CARBONYL COMPLEXES AS NITRIC OXIDE AND CARBON MONOXIDE DONORS; III. PHOTOACTIVE METAL NITROSYL COMPLEXES; A. Metal Nitrosyl Complexes With Monodentate Ligands; B. Metal Nitrosyl Complexes Derived from Polydentate Ligands With Extended Structure; C. Metal Nitrosyl Complexes Derived from Polydentate Ligands With Carboxamide Groups; D. Polymer Matrices With Incorporated Metal Nitrosyl Complexes
IV. PHOTOACTIVE METAL CARBONYL COMPLEXESA. Homoleptic Metal Carbonyls; B. Metal Carbonyl Complexes With Amino Acid Ligands; C. Manganese(I) Tricarbonyl Complexes; D. Metal Carbonyl Complexes Derived from Polydentate Ligands; V. CONCLUSION; ACKNOWLEDGMENT; ABBREVIATIONS; REFERENCES; Chapter 4: Metal-Metal Bond-Containing Complexes as Catalysts for C-H Functionalization; I. INTRODUCTION; A. Overview of Metal-Metal Multiple Bonds; B. Early Examples of M-M Bond-Containing Complexes in Catalysis; C. Metal-Metal Bonding; D. Structural Manifestations of M-M Bonding
E. Physical and Spectroscopic Properties of M-M Bond-Containing Compounds

Sommario/riassunto

This series provides inorganic chemists and materials scientists with a forum for critical, authoritative evaluations of advances in every area of the discipline. Volume 58 continues to report recent advances with a significant, up-to-date selection of contributions by internationally-recognized researchers. The chapters of this volume are devoted to the following topics: Tris(dithiolene) Chemistry: A Golden Jubilee How to find an HNO needle in a (bio)-chemical Haystack Photoactive Metal Nitrosyl and Carbonyl Complexes Derived from Designed Auxiliary