

1. Record Nr.	UNINA9910877353403321
Autore	Huang Chun-Hui
Titolo	Rare Earth Coordination Chemistry [[electronic resource]] : Fundamentals and Applications
Pubbl/distr/stampa	Hoboken, : Wiley, 2011
ISBN	0-470-82487-5 0-470-82486-7
Descrizione fisica	1 online resource (601 p.)
Disciplina	546 546.41 546/.41
Soggetti	Coordination compounds Rare earth metal compounds Rare earths Law - U.S Chemistry Physical Sciences & Mathematics Law, Politics & Government Inorganic Chemistry Law - U.S. - General
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Rare Earth Coordination Chemistry; Contents; Author Biographies; Foreword; Preface; 1 Introduction; 1.1 Electronic Configuration of Lanthanide Atoms in the Ground State; 1.2 Lanthanide Contraction; 1.3 Specificity of the Photophysical Properties of Rare Earth Compounds; 1.3.1 Spectral Terms; 1.3.2 Selection Rules for Atomic Spectra; 1.3.3 Lifetime; 1.3.4 Absorption Spectra; 1.3.5 The Emission Spectra of Rare Earth Compounds; 1.4 Specificities of Rare Earth Coordination Chemistry; 1.4.1 Valence State of Rare Earth Elements; 1.4.2 Chemical Bonding of Rare Earth Elements 1.4.3 Coordination Numbers of Rare Earth Complexes 1.4.4 Tetrad Effect of Lanthanide Elements - Changing Gradation Rules in

Lanthanide Coordination Chemistry; 1.5 Coordination Chemistry of Inorganic Compounds; 1.5.1 Rare Earth Hydroxides; 1.5.2 Rare Earth Halide and Perchlorate Compounds; 1.5.3 Rare Earth Cyanide and Thiocyanate Compounds; 1.5.4 Rare Earth Carbonate Compounds; 1.5.5 Rare Earth Oxalate Compounds; 1.5.6 Rare Earth Nitrate Compounds; 1.5.7 Rare Earth Phosphate Compounds; 1.5.8 Rare Earth Sulfate Compounds; 1.5.9 Rare Earth Borate Compounds; 1.6 Outlook; Acknowledgments
References
2 -Diketonate Lanthanide Complexes; 2.1 Introduction; 2.2 Types of -Diketones Used for Lanthanide Complexes; 2.2.1 Mono(-Diketone) Ligands; 2.2.2 Bis(-Diketones) Ligands; 2.2.3 Dendritic -Diketones Ligands; 2.3 -Diketonate Lanthanide Complexes; 2.3.1 Mononuclear Lanthanide Complexes with -Diketones; 2.3.2 Polynuclear -Diketonate Lanthanide Complexes; 2.4 Summary and Outlook; Acknowledgments; References; 3 Rare Earth Complexes with Carboxylic Acids, Polyaminopolycarboxylic Acids, and Amino Acids; 3.1 Introduction; 3.2 Rare Earth Complexes with Carboxylic Acids
3.2.1 Preparation of Rare Earth Complexes with Carboxylic Acids
3.2.2 Structural Chemistry of Rare Earth Complexes with Carboxylic Acids; 3.2.3 Solution Chemistry of Rare Earth Complexes with Carboxylic Acids; 3.3 Rare Earth Complexes with Polyaminopolycarboxylic Acids; 3.3.1 Preparation of Rare Earth Complexes with Polyaminopolycarboxylic Acids; 3.3.2 Structural Chemistry of Rare Earth Complexes with Polyaminopolycarboxylic Acids; 3.3.3 Solution Chemistry of Rare Earth Complexes with Polyaminopolycarboxylic Acids; 3.4 Rare Earth Complexes with Amino Acids
3.4.1 Preparation of Rare Earth Complexes with Amino Acids
3.4.2 Structural Chemistry of Rare Earth Complexes with Amino Acids; 3.4.3 Solution Chemistry of Rare Earth Complexes with Amino Acids; 3.5 Summary and Outlook; References; 4 N-Based Rare Earth Complexes; 4.1 Introduction; 4.2 Rare Earth Complexes with Amide Type Ligands; 4.2.1 Rare Earth Complexes with Aliphatic Amide Type Ligands; 4.2.2 Rare Earth Complexes with Silyl Amide Type Ligands; 4.3 Rare Earth Complexes with N-Heterocyclic Type Ligands; 4.3.1 Rare Earth Complexes with Pyridine Type Ligands
4.3.2 Rare Earth Complexes with Imidazole Type Ligands

Sommario/riassunto

Edited by a highly regarded scientist and with contributions from sixteen international research groups, spanning Asia and North America, Rare Earth Coordination Chemistry: Fundamentals and Applications provides the first one-stop reference resource for important accomplishments in the area of rare earth. Consisting of two parts, Fundamentals and Applications, readers are armed with the systematic basic aspects of rare earth coordination chemistry and presented with the latest developments in the applications of rare earths. The systematic introduction of basic knowledge, application technology and the
