

1. Record Nr.	UNINA9910138961303321
Titolo	Inorganic hydrazine derivatives : synthesis, properties, and applications // edited by K. C. Patil and Tanu Mimani Rattan
Pubbl/distr/stampa	West Sussex, England : , : John Wiley & Sons, , 2014 ©2014
ISBN	1-118-69356-6 1-118-69359-0 1-118-69358-2
Edizione	[First edition.]
Descrizione fisica	1 online resource (286 p.)
Classificazione	SCI013030
Altri autori (Persone)	PatilK. C RattanTanu Mimani
Disciplina	661
Soggetti	Hydrazines - Industrial applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Inorganic Hydrazine Derivatives: Synthesis, Properties and Applications; Contents; List of Contributors; Foreword; Preface; Acknowledgements; 1 Hydrazine and Its Inorganic Derivatives; 1.1 Introduction; 1.1.1 Properties of Hydrazine; 1.1.1.1 Redox Properties; 1.1.2 Hydrazine versus Hydrazine Hydrate; 1.1.2.1 Reducing Property of Hydrazine Hydrate; 1.2 Inorganic Hydrazine Derivatives; 1.2.1 Hydrazine Salts; 1.2.1.1 Synthesis; 1.2.1.2 Structure - Single-Crystal X-Ray Studies; 1.2.2 Metal Hydrazines; 1.2.2.1 Synthesis; 1.2.2.2 Structure - Single- Crystal X-Ray Studies 1.2.3 Metal Hydrazine Carboxylates 1.2.3.1 Synthesis; 1.2.3.2 Structure - Single-Crystal X-Ray Studies; 1.2.4 Hydrazinium Metal Complexes; 1.2.4.1 Synthesis; 1.2.4.2 Structure - Single-Crystal X-Ray Studies; 1.3 Characterization of Inorganic Hydrazine Derivatives; 1.3.1 Analytical Techniques; 1.3.2 Spectroscopic Methods; 1.3.2.1 Infrared Spectroscopy; 1.3.2.2 X-Ray Methods; 1.3.3 Thermal Methods; 1.4 Applications of Inorganic Hydrazine Derivatives; References; 2 Hydrazine Salts; 2.1 Introduction; 2.2 Salts of the Monovalent Cation (N <sub>2</sub> H <sub>5</sub> <sup>+</sup> ) - N <sub>2</sub> H <sub>5</sub> A 2.2.1 Simple Hydrazinium Salts (A <sup>-</sup> = F, Cl, Br, I, NO <sub>3</sub> , N <sub>3</sub> , VO <sub>3</sub> , HF <sub>2</sub> ,

HSO<sub>4</sub>, SCN, SO<sub>3</sub>NH<sub>2</sub>, COOCH<sub>3</sub>) 2.2.1.1 Synthesis; 2.2.1.2 Infrared Spectra; 2.2.1.3 Thermal Properties; 2.2.2 Hydrazinium Salts with Oxidizing Anions - N<sub>2</sub>H<sub>5</sub>A (A<sup>-</sup> = N<sub>3</sub>, NO<sub>2</sub>, NO<sub>3</sub>, ClO<sub>4</sub>, etc.); 2.2.2.1 Synthesis; 2.2.2.2 Thermal Properties; 2.3 Salts of the Divalent Cation [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub><sup>2+</sup> and N<sub>2</sub>H<sub>6</sub><sup>2+</sup>]; 2.3.1 Dihydrazinium Salts (N<sub>2</sub>H<sub>5</sub>)<sub>2</sub><sup>2+</sup> - [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub>B, B<sub>2</sub>=SO<sub>3</sub>, SO<sub>4</sub>, C<sub>2</sub>O<sub>4</sub>, CO<sub>3</sub>, HPO<sub>4</sub>]; 2.3.1.1 Synthesis, Infrared Spectra, and Thermal Properties; 2.3.2 Hydrzonium Salts (N<sub>2</sub>H<sub>6</sub><sup>2+</sup>) - N<sub>2</sub>H<sub>6</sub>(A)<sub>2</sub> or N<sub>2</sub>H<sub>6</sub>B  
2.3.2.1 Synthesis, Infrared Spectra, and Thermal Properties 2.4 Salts of Monovalent (N<sub>2</sub>H<sub>5</sub><sup>+</sup>) and Divalent [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub><sup>2+</sup>, N<sub>2</sub>H<sub>6</sub><sup>2+</sup>] Cations; 2.4.1 Hydrazine Fluorides - Hydrazinium Fluoride (N<sub>2</sub>H<sub>5</sub>F), Hydrazinium Bifluoride (N<sub>2</sub>H<sub>5</sub>HF<sub>2</sub>), and Hydrzonium Fluoride (N<sub>2</sub>H<sub>6</sub>F<sub>2</sub>); 2.4.1.1 Synthesis; 2.4.1.2 Infrared Spectra; 2.4.1.3 Thermal Properties; 2.4.2 Hydrazine Sulfates - Hydrazinium Bisulfate (N<sub>2</sub>H<sub>5</sub>HSO<sub>4</sub>), Dihydrazinium Sulfate [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub>SO<sub>4</sub>], and Hydrzonium Sulfate (N<sub>2</sub>H<sub>6</sub>SO<sub>4</sub>); 2.4.2.1 Synthesis; 2.4.2.2 Infrared Spectra; 2.4.2.3 Thermal Properties  
2.4.3 Hydrazine Oxalates - Hydrazinium Hydrogen Oxalate (N<sub>2</sub>H<sub>5</sub>HC<sub>2</sub>O<sub>4</sub>) and Dihydrazinium Oxalate [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub>C<sub>2</sub>O<sub>4</sub>] 2.4.3.1 Synthesis; 2.4.3.2 Thermal Properties; 2.4.4 Hydrazine Phosphates - Monohydrazinium Phosphate (N<sub>2</sub>H<sub>5</sub>H<sub>2</sub>PO<sub>4</sub>) and Dihydrazinium Phosphate [(N<sub>2</sub>H<sub>5</sub>)<sub>2</sub>HPO<sub>4</sub>]; 2.4.4.1 Synthesis; 2.4.4.2 Thermal Properties; 2.4.5 Hydrazine Perchlorates - Hydrazinium Perchlorate (N<sub>2</sub>H<sub>5</sub>ClO<sub>4</sub>), Hydrazinium Perchlorate Monohydrate (N<sub>2</sub>H<sub>5</sub>ClO<sub>4</sub>·H<sub>2</sub>O), Hydrazinium Perchlorate Hemihydrate (N<sub>2</sub>H<sub>5</sub>ClO<sub>4</sub>·0.5H<sub>2</sub>O), and Hydrzonium Perchlorate [N<sub>2</sub>H<sub>6</sub>(ClO<sub>4</sub>)<sub>2</sub>]; 2.4.5.1 Synthesis; 2.4.5.2 Infrared Spectra; 2.4.5.3 Thermal Properties  
2.4.5.4 Nature of Water Present in Hydrazinium Perchlorate Hydrates, N<sub>2</sub>H<sub>5</sub>ClO<sub>4</sub>·0.5H<sub>2</sub>O and N<sub>2</sub>H<sub>6</sub>(ClO<sub>4</sub>)<sub>2</sub>·2H<sub>2</sub>O

Sommario/riassunto

"Inorganic Hydrazine Derivatives: Synthesis, Properties and Applications presents a comprehensive review of the research carried out in this field during the last four decades"--