

1. Record Nr.	UNINA9910809143003321
Autore	Hussein Nejib Ben
Titolo	The synthetic methods, structures, and properties of the Ca-C bond organocalcium containing compounds // Nejib Ben Hussein and Noureddine Raouafi
Pubbl/distr/stampa	Singapore : , : Bentham Science Publishers Pte. Ltd., , [2022] ©2022
ISBN	981-5040-64-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (102 pages)
Disciplina	547.2
Soggetti	Organic compounds
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Cover -- Title -- Copyright -- End User License Agreement -- Contents -- Preface -- CONSENT FOR PUBLICATION -- CONFLICT OF INTEREST -- ACKNOWLEDGEMENTS -- Acknowledgements -- General Introduction -- GENERAL INTRODUCTION -- CONCLUSION -- Calcium Element -- 1. CALCIUM ELEMENT -- 1.1. Introduction -- 1.2. Calcium Physical Properties -- 1.3. Calcium Chemical Properties -- 1.4. Calcium-Carbon Bonding in Organic Compounds -- 2. SHORT HISTORICAL VIEW ON CA-C-BOND ORGANOCALCIUM CONTAINING COMPOUNDS -- 3. CHALLENGES FOR THE SYNTHESIS OF ORGANOCALCIUM CA-C CONTAINING COMPOUNDS -- CONCLUSION -- REFERENCES -- Organocalcium (Ca-C) -bond Containing Compounds -- 1. CA-C-BOND ALKYL CALCIUM COMPOUNDS -- 1.1. Introduction -- 1.2. Silyl Substituted Methylcalcium Derivatives -- 1.3. Calcium Transmetalation of Dialkylzinc -- 1.4. Cycloalkylcalcium Derivatives -- 2. BENZYL CALCIUM COMPOUNDS -- 2.1. Introduction -- 2.2. Benzyl Ca-C Bond Formation -- 3. ALKENYL CALCIUM COMPOUNDS -- 4. ALKYNYL CALCIUM COMPOUNDS -- 5. REACTION OF DIENE AND DIYNE COMPOUNDS WITH CALCIUM -- 5.1. Reaction of Diene Compounds with Calcium -- 5.2. Reaction of Diyne compounds with Calcium -- 6. CA-C ARYL COMPOUNDS -- 6.1. Phenyl Calcium Compounds -- 6.2. Biphenyl Naphthalene Anthracene Halo-Derivatives -- 6.3. Anthracene Reduction -- 7. HETEROAROMATIC CALCIUM

COMPOUNDS -- 7.1. Halo-Thiophene Derivatives -- 7.2. Picoline Derivatives -- 7.2.1. Reaction of bis(allyl)calcium with 2-Picoline -- 7.2.2. Reaction of bis(allyl)calcium with 4-picoline -- 7.2.3. Reaction of bis(allyl)calcium with 4-t-Bu-pyridine -- 7.2.4. Reaction of bis(allyl)calcium with 2,6-Lutidine -- CONCLUSION -- REFERENCES -- Coordination, Degrading Agent, Catalyst Property and Spectroscopy of Organocalcium Compounds -- 1. CARBON-CARBON -BOND CALCIUM COORDINATION -- 2. ORGANOCALCIUM COMPOUNDS AND SOLVENT DEGRADATION. 2.1. Ether Degradation -- 2.2. Durability in Ethereal Solutions -- 3. ORGANOCALCIUM CA-C -BOND CONTAINING CATALYSTS -- 4. NMR SPECTROSCOPY OF ORGANOCALCIUM COMPOUNDS -- 4.1.  $^{43}\text{Ca}$  NMR Spectroscopy -- 4.2.  $^{13}\text{C}$  NMR Spectroscopy -- 4.3.  $^1\text{H}$  NMR Spectroscopy -- CONCLUSION -- REFERENCES -- Conclusion -- Subject Index -- Back Cover.

---

Sommario/riassunto

This reference describes the chemistry of organocalcium compounds that contain a Ca-C -bond. It collects the information about this niche group of organometallic compounds into 4 easy-to-read chapters. It is intended for scholars in the field of organic chemistry, and researchers in industrial chemistry and chemical engineering departments. Key features: - Presents a comparison to homologous compounds of other alkaline earth metals. - Explains the main problems encountered in the synthesis of organocalcium compounds with reference to the reactivity of calcium, the low solubility in common solvents and the high reactivity of the formed intermediates and products - Highlights many concepts about the Ca-C bond such as the steric hindrance, degrading agent properties, organocalcium spectroscopy, and more.

---