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| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | The Chemistry of the Fullerenes; Contents; Chapter 1. The Parent Fullerenes; 1.1 The Fullerenes: Molecular Allotropes of Carbon; 1.2 The Discovery of the Fullerenes; 1.3 Fullerene Production; 1.3.1 Fullerene Generation by Vaporization of Graphite; 1.3.1.1 Resistive Heating of Graphite; 1.3.1.2 Arc heating of Graphite; 1.3.1.3 Solar Generators; 1.3.1.4 Inductive Heating of Graphite; 1.3.2 Fullerene Synthesis in Combustion; 1.3.3 Formation of Fullerenes by Pyrolysis of Naphthalene; 1.3.4 Endohedrals; 1.3.5 The Formation Process; 1.4 Separation and Purification; 1.5 Properties; 1.5.1 Structures<br>1.5.2 Physical and Spectroscopic PropertiesReferences; Chapter 2. Reduction; 2.1 Introduction; 2.2 Fulleride Anions; 2.3 Reductive Electrosynthesis; 2.3.1 Electrocrystallization; 2.3.2 Electrophilic Additions to Fulleride Anions; 2.4 Reduction with Metals; 2.4.1 Alkali Metal Fullerides; 2.4.1.1 Generation in Solution and Quenching Experiments; 2.4.1.2 Synthesis and Properties of Alkali Metal Fulleride Solids; 2.4.2 Alkaline Earth Metal Fullerides; 2.4.3 Reduction with Mercury; 2.5 Reduction with Organic Donor Molecules; References; |

Chapter 3. Nucleophilic Additions; 3.1 Introduction  
3.2 Addition of Carbon Nucleophiles 3.2.1 Hydroalkylation and Hydroarylation of C<sub>60</sub> and C<sub>70</sub>; 3.2.2 Langmuir - Blodgett Films of C<sub>60</sub>H<sub>t</sub>-Bu; 3.2.3 Addition of Macromolecular Carbanions - Fullerene Polymers; 3.2.4 Cyclopropanation of C<sub>60</sub> and C<sub>70</sub>; 3.3 Addition of Amines; 3.4 Addition of Hydroxide; References; Chapter 4. Cycloadditions; 4.1 Introduction; 4.2 [4+2] Cycloadditions; 4.3 [3+2] Cycloadditions; 4.3.1 Addition of Diazomethanes. Diazoacetates and Diazoamides; 4.3.2 Addition of Azides; 4.3.3 Addition of Trimethylenemethanes; 4.3.4 Addition of Azomethine Ylides 4.3.5 Addition of Nitrile Oxides 4.3.6 Addition of Sulfinimides; 4.3.7 Addition of Disiliranes; 4.4 [2+2] Cycloadditions; 4.4.1 Addition of Benzyne; 4.4.2 Addition of Enones; 4.4.3 Addition of Quadricyclane; 4.4.4 Addition of Electron Rich Alkynes; 4.4.5 Photopolymerization of C<sub>60</sub>; 4.5 [2+1] Cycloadditions; 4.5.1 Addition of Carbenes; 4.5.2 Addition of Silylenes; References; Chapter 5. Hydrogenation; 5.1 Introduction; 5.2 Oligohydrofullerenes C<sub>60</sub>H<sub>2n</sub> and C<sub>70</sub>H<sub>2n</sub> (n = 1 - 6); 5.2.1 Hydrogenation via Hydroboration, Hydrozirconation and Zinc/Acid Reduction; 5.2.2 Theoretical Investigations 5.3 Polyhydrofullerenes C<sub>60</sub>H<sub>2n</sub> and C<sub>70</sub>H<sub>2n</sub> (n = 7 - 70) 5.3.1 Birch - Huckel Reduction; 5.3.2 Transfer Hydrogenation of C<sub>60</sub> and C<sub>70</sub>; 5.3.3 Catalytic Hydrogenation; 5.3.4 Theoretical Investigations; References; Chapter 6. Radical Additions; 6.1 Introduction; 6.2 ESR Investigations of Radical Additions; 6.2.1 Addition of Single Radicals; 6.2.2 Multiple Radical Additions; 6.3 Metalation of C<sub>60</sub> with Pentacarbonylrhenium Radicals; 6.4 Hydrostannylation of C<sub>60</sub>; 6.5 Addition of Bis (trifluoromethyl)nitroxide; 6.6 Radical Copolymerization of C<sub>60</sub> and Paracyclophane; References  
Chapter 7. Transition Metal Complex Formation

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### Sommario/riassunto

Although synthetic fullerenes have only been around for a few years, there are thousands of scientific articles dealing with them. This is the first monograph in the field and thus represents a vital source of information summarizing the most important and fundamental aspects of the organic and organometallic chemistry of the fullerenes. The book is logically arranged so that information is easy to retrieve, and the style lends itself to effortless reading and to learning more about the chemical properties of a family of molecules that constitute new building blocks for novel architectures

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