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Nota di contenuto

Carbon-Rich Compounds; Foreword; Contents; Preface; List of Contributors; 1 Pioneers of Carbon-rich Compounds; 1.1 Introduction; 1.2 19th Century Achievements; 1.3 1900-1928: Dawn of the Twentieth Century; 1.4 1929-1949: Rise of the Polycyclic Aromatic Hydrocarbon; 1.5 1950-1969; 1.5.1 The Annulenes, Dehydrobenzoannulenes, and Phenylacetylene Scaffolding; 1.5.2 Fused Polycyclic and peri-Condensed Benzenoid Systems; 1.5.3 The Helicenes, Radialenes, Fulvalenes, and Circulenes; 1.6 1970-Present: The Way Ahead; References; 2 Electronic Conduction in Photoactive Metallo-wires; 2.1 Introduction
2.2 Attenuation along Molecular Bridges2.3 Information Transfer; 2.3.1 Intramolecular Triplet Energy Transfer; 2.3.2 Short Covalent Bridges; 2.3.3 Supramolecular Systems; 2.3.4 Prolonging the Excited State Lifetime; 2.3.5 Long-range Triplet Energy Transfer; 2.4 Molecular-scale Switches; 2.5 Perspectives; 2.6 Experimental: Selected Procedures; 2.6.1 General Procedure for the Preparation of the Mononuclear [RuL (n)]; 2.6.2 General Procedure for the Preparation of the Hetero-Dinuclear Complexes 81(1) and 81(5); 2.6.3 Synthesis at the Complex; Acknowledgements; Abbreviations; References
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3.5.2 Synthesis of hexakis(4-dodecylphenyl)-peri-hexabenzocoronene (HBC-PhC12) - a general synthetic method towards six-fold alkyl- and alkylphenyl-substituted HBCs [38]3.5.3 Functionalization of insoluble HBC building blocks 30-32 by Sonogashira coupling reactions [48]. Synthesis of hexakis(1-dodecynylphenyl)-peri-hexabenzocoronene (34a) as a representative example; 3.5.4 Synthesis of C96-C12 precursor 1,3,5-tris[3 ,4 -di(4  -dodecylphenyl)-2 ,5 -diphenylphenyl] benzene (44a) by Diels-Alder cycloaddition reaction - a representative procedure for the synthesis of branched oligophenylenes [50]
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Sommario/riassunto

This is the only up-to-date book on the market to focus on the synthesis of these compounds in this particularly suitable way. A team of excellent international authors guarantees high-quality content, covering such topics as monodisperse carbon-rich oligomers, molecular electronic wires, polyaromatic hydrocarbons, nonconjugated small molecules, nanotubes, fullerenes, polyynes, macrocycles, dendrimers, phenylenes and diamondoid structures.The result is a must-have for everyone working in this expanding and interdisciplinary field, including organic and polymer chemists, materials scientist