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Nota di contenuto	Frontmatter -- Contents -- List of Contributors -- 1. Carbon Nanomembranes / Angelova, Polina / Götzhäuser, Armin -- 2. Controlled Functionalization of Graphene by Oxo-addends / Eigler, Siegfried / Hirsch, Andreas -- 3. Chemical Synthesis of Cycloparaphenylenes / Segawa, Yasutomo / Yagi, Akiko / Itami, Kenichiro -- 4. Controlled Chemical Synthesis in CVD Graphene / Liu, Hongtao / Liu, Yunqi -- 5. Chemical Functionalization of Graphene Family Members / Vacchi, Isabella Anna / Ménard-Moyon, Cécilia / Bianco, Alberto -- 6. Graphene via Molecule-Assisted Ultrasound-Induced Liquid-Phase Exfoliation: A Supramolecular Approach / Eredia, Matilde / Ciesielski, Artur / Samorì, Paolo -- 7. Solution Synthesis of Atomically Precise Graphene Nanoribbons / Shekhirev, Mikhail / Sinitskii, Alexander -- 8. Nanodiamonds for Biological Applications / Wu, Yuzhou / Weil, Tanja -- 9. Polycyclic Hydrocarbons with an Open-Shell Ground State / Das, Soumyajit / Wu, Jishan -- 10. Synthesis and Use of Reactive Molecular Precursors for the Preparation of Carbon Nanomaterials / Schulte, Bjoern / Schrettl, Stephen / Frauenrath, Holger -- Index

Chemistry of Carbon Nanostructures aims to present the current state-of-the-art synthesis and application of carbon materials like nano diamonds, ribbons and graphene-like structures in science and engineering. Edited by Professor Klaus Müllen, who received the Adolf von Bayer Medal for his contribution to Carbon Chemistry, and Xinliang Feng, this book combines outstanding contributions by a renowned international team of experts. The authors discuss chemical aspects of carbon nanostructures, their synthesis, functionalization and design strategies for defined applications. Recent advances in carbon nanomembranes, molecule-assisted ultrasound-induced liquid-phase exfoliation of graphene, and solution synthesis of graphene nanoribbons and biological application of nanodiamonds are highlighted topics. This book provides an excellent reference on the chemistry of carbon nanostructures for Chemists, Materials Scientists, Condensed-matter Physicists, Surface Scientists, and Engineers.

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