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Nota di contenuto	Foldamers; Foreword; Contents; Preface; List of Contributors; Part 1 Structure: Foldamer Design Concepts; 1 Foldamers Based on Local Conformational Preferences; 1.1 Introduction; 1.2 Rigidly Locked Molecules; 1.3 Predictable Foldamers; 1.3.1 Local Conformational Control; 1.3.2 Folded Conformations of -conjugated Systems; 1.3.2.1 Crescents and Helices; 1.3.2.2 Linear Strands; 1.3.2.3 Macrocycles; 1.3.3 Partially -conjugated Oligomers; 1.4 Semi-rigid Backbones; 1.4.1 Tertiary Aromatic Amides, Imides and Ureas; 1.4.2 Tertiary Aliphatic Amides: Polyprolines and Peptoids 1.4.3 Hindered Polymer and Oligomer Backbones1.5 Conformational Transitions; 1.6 Conclusion and Perspectives; References; 2 Foldamers

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2.4.1 The -Oligopeptide Precedent: from Antibiotic Gramicidin A to Poly-Gln Aggregates in Huntington's Disease2.4.2 Introducing Periodicity at the Level of a Dimer Unit in -Peptides leads to a Remarkably Stable Mixed Helical Fold; 2.4.2.1 By Mixing (2)- and (3)-Amino Acids; 2.4.2.2 Additional Substitution Patterns Stabilizing the Mixed 10/12- (12/10-) Helix; 2.4.3 Extending the Concept of Mixed Helices; 2.5 Nonperiodic Structures: Open Chain -Turn-like Motifs and Hairpins in Designed Homo-oligomers; 2.5.1 Sheet-forming -peptides; 2.5.2 Turn Segment for Hairpin Formation
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Sommario/riassunto

This truly comprehensive treatise of foldamers, from synthesis to applications in bio-, material-, and nanoscience is at once an introduction to the topic, while providing in-depth accounts on various aspects clearly aimed at the specialist.The book is clearly structured, with the first part concentrating on structure and foldamer design concepts, while the second part covers functional aspects from properties to applications. The international team of expert authors provides overviews of synthetic approaches as well as analytical techniques.