

1. Record Nr.	UNINA9910829966203321
Titolo	Solid support oligosaccharide synthesis and combinatorial carbohydrate libraries [[electronic resource] /] / edited by Peter H. Seeberger
Pubbl/distr/stampa	New York, : Wiley-Interscience, c2001
ISBN	1-280-54174-1 9786610541744 0-471-46072-9 0-471-22044-2
Descrizione fisica	1 online resource (321 p.)
Altri autori (Persone)	SeebergerPeter H. <1966->
Disciplina	547.7815 572/.565
Soggetti	Oligosaccharides - Synthesis Glycoconjugates Combinatorial chemistry Solid-phase synthesis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Preface; Contributors; 1 Solid-Phase Carbohydrate Synthesis: The Early Work; 1.1 Introduction; 1.2 Solid-Phase Strategies; 1.3 Oligosaccharide Synthesis on Soluble Polymers; 1.4 The Period of Stagnancy (1976-1991); 2 The Glycal Assembly Method on Solid Supports: Synthesis of Oligosaccharides and Glycoconjugates; 2.1 Introduction; 2.2 Why Glycal Assembly? Strategic Considerations; 2.3 Linker Design; 2.4 Solid Support Glycal Assembly via 1,2-Anhydrosugar Donors; 2.5 Solid-Phase Synthesis of the Blood Group H Determinant; 2.6 Solid Support Glycal Assembly via Thioethyl Glycosyl Donors 2.7 Solid Support Assembly via Thioethyl 2-Amidoglycosyl Donors2.8 Solid-Phase Synthesis of the Lewis[sub(b)] Blood Group Determinant; 2.9 Solid-Phase Synthesis of the Hexasaccharide Globo-H Antigen: Progress and Limitations; 2.10 Solid-Phase Synthesis of N-Linked Glycopeptides; 2.11 Conclusions; 3 The Sulfoxide Glycosylation Method and its Application to Solid-Phase Oligosaccharide Synthesis and the Generation of Combinatorial Libraries; 3.1 Introduction; 3.2 Synthesis

of Sulfoxide Donors; 3.3 Mechanism of the Sulfoxide Glycosylation; 3.4 Stereoselectivity
3.5 Solid-Phase Oligosaccharide Synthesis 3.6 Libraries of Oligosaccharides; 3.7 Outlook; 4 The Use of O-Glycosyl Trichloroacetimidates for the Polymer-Supported Synthesis of Oligosaccharides; 4.1 Introduction; 4.2 Polystyrene-Based Supports; 4.3 Controlled-Pore Glass as a Solid Support; 4.4 Soluble Polymers as Supports; 4.5 Oligosaccharide Syntheses on Peptides Attached to a Solid Support; 4.6 Conclusions and Outlook; 5 Synthesis of Oligosaccharides on Solid Support Using Thioglycosides and Pentenyl Glycosides; 5.1 Introduction; 5.2 Thioglycosides as Glycosyl Donors 5.3 Pentenyl Glycosides as Glycosyl Donors 6 Solid-Phase Oligosaccharide Synthesis Using Glycosyl Phosphates; 6.1 Introduction; 6.2 Glycosyl Phosphate Donors; 6.3 Other Phosphorous(V) Glycosyl Donors; 6.4 Conclusion; 7 Stereoselective -Mannosylation on Polymer Support; 7.1 p-Methoxybenzyl-Assisted Intramolecular Aglycon Delivery: Highly Efficient -mannosylation; 7.2 Intramolecular Aglycon Delivery on Polymer Support: Gatekeeper-Controlled Glycosylation; 7.3 Conclusions; 8 Tools for "On-Bead" Monitoring and Analysis in Solid-Phase Oligosaccharide Synthesis; 8.1 Introduction 8.2 IR Spectroscopic Methods 8.3 NMR Spectroscopic Methods; 9 Polyethyleneglycol -Monomethylether (MPEG)-Supported Solution-Phase Synthesis of Oligosaccharides; 9.1 Introduction; 9.2 Polyethyleneglycol -Monomethylether (MPEG); 9.3 Linkers; 9.4 MPEG-Supported Syntheses Using Enzymes; 9.5 Use of MPEG in Mechanistic Studies; 9.6 MPEG and Combinatorial Libraries; 9.7 Other Applications; 9.8 Capping; 9.9 Outlook; 10 Two-Direction Glycosylations for the Preparation of Libraries of Oligosaccharides; 10.1 Two-Directional Glycosylations in Solution 10.2 Two-Directional Glycosylations on Solid Support

Sommario/riassunto

Solid-phase synthesis of carbohydrates presents unique challenges to synthetic chemists and currently represents one of the hottest areas of research in bioorganic chemistry. Solid Support Oligosaccharide Synthesis and Combinatorial Carbohydrate Libraries addresses the exciting expectation that solid-phase assembly of oligosaccharides will have a fundamental impact on the field of glycobiology. This publication details the methodologies currently investigated for the attachment of carbohydrates to beads, synthesis including coupling strategies, and removal of the product from beads. With ch
