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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

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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

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