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Nota di contenuto	1. Introduction -- 2. General scope for enzymatic tools in engineering of polysaccharide materials -- 3. Phosphorylase-catalyzed enzymatic glycosylation -- 4. Phosphorylase-catalyzed enzymatic polymerization -- 5. Chemoenzymatic synthesis of amylose-grafted synthetic polymers by utilizing phosphorylase catalysis -- 6. Chemoenzymatic synthesis of amylose-grafted biopolymers by utilizing phosphorylase catalysis -- 7. Preparation of amylose-polymer inclusion complexes in phosphorylase-catalyzed enzymatic polymerization (vine-twinning polymerization) -- 8. Extension of vine-twinning polymerization by phosphorylase catalysis -- 9. Carbohydrate engineering by phosphorylase catalysis -- 10. Preparation of amylose-based nanomaterials by phosphorylase catalysis.
Sommario/riassunto	Polysaccharides and their related compounds are attracting much attention due to their potential as new functional materials in many research fields such as medicine, pharmaceuticals, foods, and cosmetics. Therefore, precision synthesis of new polysaccharides with well-defined structure is increasingly important. For this purpose, enzymatic method is a very powerful tool because the reaction proceeds in a manner that is highly stereo- and region-controlled. This book focuses on advances in the practical synthesis of polysaccharides by

phosphorylase-catalyzed chain-elongation from the perspective of
polysaccharide engineering.
