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Chapter 14 Fermentation of Lactic Acid Bacteria: State of the Art and New PerspectivesChapter 15 The Bubble Column Reactor: A Novel Reactor Type for Cosmetic Esters: Chapter 16 Pharmaceutical Intermediates by Biocatalysis: From Fundamental Science to Industrial Applications; Chapter 17 Biocatalysis toward New Biobased Building Blocks for Polymeric Materials: 1.1 Introduction: 1.2 Enzyme Activity of Lipases from Different Sources and Engineering Approaches; 1.3 Noncanonical Amino Acids in Lipase Design and Engineering 1.4 Case Study: Manipulating Proline, Phenylalanine, and Methionine Residues in Lipase1.5 ""Unnatural"" Lipases Are Able to Catalyze Reactions under Different Hostile Environments; 1.6 Lipase Engineering via Bioorthogonal Chemistries: Activity and Immobilization; 1.7 Conclusions and Perspectives: References: 2.1 Introduction: 2.2 Sequence- versus Function-Based Metagenomic Approach to Find Novel Biocatalysts; 2.3 Alternative Hosts, Metatranscriptomics, and Metaproteomics; 2.4 Future Perspectives; References; 3.1 Introduction 3.2 Metagenomics to Retrieve New Genes from Extremophilic Microorganisms3.3 Microbial Expression Hosts for the Production of Extremozymes: 3.4 Molecular Biology Approaches for Enzyme Improvement; 3.5 Conclusions and Future Perspectives; References; 4.1 Introduction; 4.2 Discussions; 4.3 Summary; References; 5.1 Introduction; 5.2 Computational Tools to Assist Biocatalysis Research; 5.3 From Active Site Analysis to Protein Stability Considerations; 5.4 Applying DoGSiteScorer and HYDE to Biocatalytical Questions; 5.5 Conclusion and Future Directions; Acknowledgments; References 6.1 Proteases in Industry