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Nota di contenuto	Chapter 1: DNAzymes: Synthetic Enzymes Made of DNA -- Chapter 2: -Amylase: General properties, mechanism and panorama of applications by immobilization on nano-structures -- Chapter 3: Oxidoreductases: Overview and Practical Applications -- Chapter 4: Rieske non-heme iron dioxygenases: applications and future perspectives -- Chapter 5: Cross-linked enzyme aggregates: current developments and applications -- Chapter 6: Immobilization of -amylases and their analytical applications -- Chapter 7: Immobilized peroxidase catalyzed decolorization and degradation of industrially important dyes from polluted water -- Chapter 8: Screening, optimization and assembly of key pathway enzymes in metabolic engineering -- Chapter 9: Designing of Artificial Metalloenzymes: From Concept to Applications -- Chapter 10: Anti-inflammatory and antidote drug discovery with secreted phospholipase A2 -- Chapter 11: Clinical Significance of Enzymes in Disease and Diagnosis -- Chapter 12: Enzymes in food and feed industries: where tradition meets innovation -- Chapter 13: Microbial enzymes in food processing -- Chapter 14: Significance of enzymes and their application in agriculture -- Chapter 15: Proteinaceous Trypsin Inhibitors from Plants in Disarming the Insect

Pest.

Sommario/riassunto

This book introduces readers to industrially important enzymes and discusses in detail their structures and functions, as well as their manifold applications. Due to their selective biocatalytic capabilities, enzymes are used in a broad range of industries and processes. The book highlights selected enzymes and their applications in agriculture, food processing and discoloration, as well as their role in biomedicine. In turn, it discusses biochemical engineering strategies such as enzyme immobilization, metabolic engineering, and cross-linkage of enzyme aggregates, and critically weighs their pros and cons. Offering a wealth of information, and stimulating further research by presenting new concepts on enzymatic catalytic functions in basic and applied contexts, the book represents a valuable asset for researchers from academia and industry who are engaged in biochemical engineering, microbiology and biotechnology.
