Record Nr. UNINA9910132377603321 Enzyme technologies [[electronic resource]]: metagenomics, evolution, **Titolo** biocatalysis, and biosynthesis / / edited by Wu-Kuang Yeh, Hsiu-Chiung Yang, James R. McCarthy Hoboken, N.J., : Wiley, c2010 Pubbl/distr/stampa **ISBN** 1-283-30028-1 9786613300287 0-470-62729-8 0-470-62730-1 Descrizione fisica 1 online resource (390 p.) Collana Chemical biology of enzymes for biotechnology and pharmaceutical applications;; v. 1 Altri autori (Persone) YehWu-Kuang <1942-> YangHsiu-Chiung McCarthyJames R. <1943-> Disciplina 660.6/34 Soggetti Enzymes - Biotechnology Pharmaceutical biotechnology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. ENZYME TECHNOLOGIES; CONTENTS; Contributors; Preface; PART A Nota di contenuto NEW APPROACHES TO FINDING AND MODIFYING ENZYMES: 1 Functional Metagenomics as a Technique for the Discovery of Novel Enzymes and Natural Products; 2 Directed Enzyme and Pathway Evolution; 3 Combining Natural Biodiversity and Molecular-Directed Evolution to Develop New Industrial Biocatalysts and Drugs; 4 Principles of Enzyme Optimization for the Rapid Creation of Industrial Biocatalysts; PART B BIOCATALYTIC APPLICATIONS; 5 Enzyme Catalysis in the Synthesis of **Active Pharmaceutical Ingredients** 6 Enzymatic Processes for the Production of Pharmaceutical Intermediates 7 Novel Developments Employing Redox Enzymes: Old Enzymes in New Clothes; PART C BIOSYNTHETIC APPLICATIONS; 8 Drug Discovery and Development by Combinatorial Biosynthesis; 9

> Reprogramming Daptomycin and A54145 Biosynthesis to Produce Novel Lipopeptide Antibiotics; 10 Pathway and Enzyme Engineering and

Applications for Glycodiversification; Index

Sommario/riassunto

"Enzyme Technologies in Drug Discovery highlights how, what, and where enzymes have become critical in pharmaceutical and biotechnology research. This book provides in-depth reviews of recent developments in biosynthesis, biocatalysis, and the chemical biology of enzymes. This text discusses enzymatic assays, including emerging assay technologies for key enzyme classes in pharmaceutical research. In addition to new developments in proteomics, this book includes two emerging technologies in life sciences, metabolomics and preclinomics. This volume reviews important progress on the chemical biology of enzymes in the post-genomic era"--