Record Nr. UNINA9910437841503321 Advances in enzyme biotechnology / / Pratyoosh Shukla, Bret I. **Titolo** Pletschke, editors Pubbl/distr/stampa New Delhi;; New York,: Springer, c2013 **ISBN** 81-322-1094-8 Edizione [1st ed. 2013.] 1 online resource (179 p.) Descrizione fisica Altri autori (Persone) ShuklaPratyoosh PletschkeBret I Disciplina 660.634 Soggetti Enzymes - Biotechnology Industrial microbiology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Improvement of thermostable enzyme with sugar metabolic activity by Nota di contenuto targeted mutagenesis -- Glycoside hydrolases for modification of glycosylation in polyphenolic antioxidants -- On the enzyme specificity for the synthesis of prebiotic galacto-oligosaccharides -- Microbial mannanases: properties and applications -- Enzyme Synergy for Enhanced Degradation of Lignocellulosic Waste -- Manganese peroxidase: molecular diversity, heterologous expression and applications -- Advance Techniques in Enzyme Research -- Regulatory motif identification in biological sequences: An overview of computational methodologies -- Structural, Molecular and Functional Aspects of Chitin deacetylase -- Role of enzymes and proteins in plant - microbe interaction : A study of M. oryzae vs Rice -- Industrial enzyme applications in biorefineries for starchy materials. Sommario/riassunto Enzyme Technology is one the most promising disciplines in modern biotechnology. In this book, the applications of a wide variety of enzymes are highlighted. Current studies in enzyme technology are focused towards the discovery of novel enzymes (termed "biodiscovery" or "bio-prospecting") and the identification and elucidation of novel pathways of these novel enzymes with emphasis on their

industrial relevance. With the development of molecular techniques and other bioinformatics tools, the time to integrate this subject with other

fields in the life sciences has arrived. A rapid expansion of the knowledge base in the field of enzyme biotechnology has occurred over the past few years. Much of this expansion has been driven by the biodiscovery of many new enzymes from a wide range of environments, some extreme in nature, followed by subsequent protein (enzyme) engineering. These enzymes have found a wide range of applications, ranging from bioremediation, bio-monitoring, biosensor development, bioconversion to biofuels and other biotechnologically important valueadded products. Hydrolases constitute a major component of the global annual revenue generated by industrial enzymes and the emphasis has therefore been placed on these enzymes and their applications. With the immense interest of researchers active in this area, this book will serve to provide information on current aspects in this field of study. In the current edition, the contributions of many diversified topics towards establishing new directions of research in the area of enzyme biotechnology are described. This book serves to provide a unique source of information to undergraduates, post graduates and doctoral courses in microbiology and biotechnology along with allied life sciences. The present edition of the book covers all important areas of enzyme biotechnology i.e. the wide variety of enzymes in the field of enzyme biotechnology and their industrial applications, new methods and state-of-the-art information on modern methods of enzyme discovery. This book will act as good resource on most of the current facets of enzyme technology for all students engaged in bioengineering and biotechnology.