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Nota di contenuto	Preface -- Role of solid state fermentation to improve cost economy of cellulase production -- Submerged fermentation for fungal cellulase production -- Significance of process parameters to improve cellulase system; role of non-enzymatic protein to improve cellulose hydrolysis -- Assessment of thermophilic/thermostable cellulase for industrial purposes -- How purity alters cellulase and its cost in industries -- Efficiency analysis of crude verses pure cellulase in industries -- Cost effective techniques for cellulase purification for industries -- Strategies to reuse cellulase and immobilization of enzymes -- Significance of feedstock on industrial cellulases -- Current advancements in recombinant technology for industrial cellulases --

Novel metagenomics, genomics, and secretomics approaches underway to identify improved sources of cellulases -- Index.

Sommario/riassunto

Cellulase is a key enzyme of industrial interest and plays a crucial role in the hydrolysis of cellulose, a prime component of plant cell walls. Cellulase covers a broad area in the global market of industrially important enzymes and it is considered as the third largest industrial enzyme globally. Additionally, cellulase contributes about 20% of the total enzyme market globally because of its massive demand in various industries such as in biofuel production, pulp, paper, textile, food, and beverages, as well as in detergent industries. Among these, the demand of cellulase may become frequently selected in the commercial production of biofuels in the future and thus will further increase demand of cellulase in the biofuel industry. Because biofuel production is still not realized in a cost-effective, practical implementation due to its high cost (the higher cost of biofuels is due to higher production costs of enzymes), there is a need to introduce these types of approaches, which will help to lower the cost of enzyme production for developing overall economic biofuel production.