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Sommario/riassunto

Enzymes, also known as biocatalysts, are proteins produced by living cells and found in a wide range of species, including animals, plants, and microorganisms. Due to their specificity, enzymes are often widely used to catalyze various chemical reactions as proficient biocatalysts in many applications. Since enzymes are proteins, they are easily denatured and lose their activity under unfavorable conditions of the surrounding environment. Therefore, in order to prolong the activity of and increase the stability of enzymes, immobilization technology is commonly used for improving the overall efficiency of enzyme catalysis. Recent developments in the discovery of stable enzymes have expanded their uses to encompass organic synthesis and the production of specialized chemicals, pharmaceutical intermediates, and agrochemicals. In order to improve enzyme performance, microbial screening or gene cloning is generally used. It is also common for enzyme studies to use a particular medium for microbiological fermentation in order to produce enzymes. This Special Issue shows that enzymes and biocatalysis have found numerous applications in various fields. These applications include the production of APIs, wastewater treatment, transformation of health ingredients, laundry detergent, fortification of feed, and biocementation. Moreover, there are also studies focusing on the immobilization and production procedures of enzymes. Finally, an extensive review of metagenomics

studies related to water and soil has also been included.