



CATL: Division of Catalysis Science and Technology

476 - Role of PEG on the formation of polyphenols with laccase enzymes

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Abstract: Laccase catalyzes the polymerization of phenolic compounds in the presence of oxygen. It is known that polyethylene glycol (PEG) enhances transformation of the phenols. High conversion rates and high yields are obtained in presence of PEG. PEG is believed to protect the enzyme of being entrapped inside the formed polymer. However the mechanisms by what the PEG enhances the reaction are not completely clear. The structure and aggregation of the polyphenols are different when obtained in the presence of PEG. PEG seems to play an important role as interfacial agent on the region selectivity in the polymerization reaction catalyzed by laccase enzymes.

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