Enzymatic Polymerization Of Phenolic Compounds By Oxidoreductases

The enzymatic polymerization of phenolic compounds continues to generate interest in several diverse fields such as food, cosmetics, and pharmaceuticals. The use of these compounds for their antioxidant properties is limited by their low solubility and thermal stability. Polymerization can improve their solubility and their thermal stability thus creating new properties. These properties are dependent on the molecular mass and the structure of polymers. The reaction yield, the polydispersity, the molecular mass, the structure and thus the properties of synthesized polymers can be controlled by the mode of control of the reaction and by the reaction conditions. In this brief, the authors analyze the processes used and the key factors (temperature, solvent, origin of the enzyme, structure of the substrate, reactor design,) which control the polymerization of phenolic species by these oxidoreductase enzymes, to obtain polymers with desired characteristics and properties. EAN/ISBN : 9789400739192 Publisher(s): Springer, Berlin, Springer Netherlands Format: ePub/PDF Author(s): Ghoul, Mohamed - Chebil, Latifa

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