

Title (en)  
OXIDATIVE, REDUCTIVE, HYDROLYTIC AND OTHER ENZYMATIC SYSTEMS FOR OXIDIZING, REDUCING, COATING, COUPLING OR CROSS-LINKING NATURAL AND ARTIFICIAL FIBER MATERIALS, PLASTIC MATERIALS OR OTHER NATURAL OR ARTIFICIAL MONOMER TO POLYMER MATERIALS

Title (de)  
OXIDATIVE, REDUKTIVE, HYDROLYTISCHE UND ANDERE ENZYMATISCHE SYSTEME ZUR OXIDATION, REDUKTION, ZUM COATEN, KOPPELN UND CROSSLINKEN VON NATÜRLICHEN UND KÜNSTLICHEN FASERSTOFFEN, KUNSTSTOFFEN ODER ANDEREN NATÜRLICHEN UND KÜNSTLICHEN MONO- BIS POLYMERSTOFFEN

Title (fr)  
SYSTEMES OXYDANTS, REDUCTEURS, HYDROLYTIQUES ET AUTRES SYSTEMES ENZYMATIQUES DESTINES A L'OXYDATION, LA REDUCTION AUX FINS DE REVETEMENT, DE COUPLAGE ET DE RETICULATION DE MATIERES FIBREUSES NATURELLES ET ARTIFICIELLES, DE MATIERES PLASTIQUES OU DE MATIERES MONOMERES A POLYMERES NATURELLES ET ARTIFI

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Abstract (en)  
[origin: WO2005103372A2] The invention relates to methods for oxidizing (redox reactions), preferably pulps (delignification/bleaching), for carrying out coupling reactions (grafting polymer materials) or for carrying out cross-linking reactions of natural (i.e. having natural origin) or artificial (i.e. synthetically produced) monomers to polymers or mixtures of natural and artificial polymers or fiber materials, of lignocellulose-containing, cellulose-containing or proteinaceous natural polymers or fiber materials such as pulp, textiles such as cotton or wool. The invention is characterized in that 1) these oxidation, coupling or cross-linking reactions are carried out using hydrolases such as lipases, esterases, proteases, amidases, transferases, acylases, glycosidases or glycotransferases or oxidoreductases, such as preferably peroxidases, chloroperoxidases and laccases, either individually or in combination with one another; and 2) that these reactions (oxidation, coupling or cross-linking reactions) are carried out with the above-mentioned substances and/or with property-changing substances such as monomer to polymer substances (natural or synthetic) either simultaneously or one after the other using specific enzyme-activated enhancer substances and/or coupling substances.

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