

Title (en)

POLYMER MEMBRANE WITH ENZYMES LOCALISED IN THE MEMBRANE AND PROCESS FOR PREPARING PRODUCTS BY REACTIONS THAT TAKE PLACE IN POLYMER MEMBRANES

Title (de)

POLYMERMEMBRAN MIT IN DER MEMBRAN LOKALISIERTEN ENZYMEN SOWIE VERFAHREN ZUR HERSTELLUNG VON ERZEUGNISSEN MITTELS IN POLYMERMEMBRANEN ABLAUFENDER REAKTIONEN

Title (fr)

MEMBRANE POLYMERES AVEC DES ENZYMES LOCALISES DANS LA MEMBRANE ET PROCEDE DE PREPARATION DE PRODUITS PAR DES REACTIONS QUI SE DEROULENT DANS DES MEMBRANES POLYMERES

Publication

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Application

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Abstract (en)

[origin: DE19648881A1] A polymer membrane (10) in whose pores are localised enzymes for biocatalytic purposes is formed by open pores (11) that extend through the membrane (10) with cylindrical to conical pores (10) in the cross-section of the membrane (10). At least the pore length (13) and/or pore cross-section (16) are adjusted depending on the type of a substrate (15) supplied to the membrane (10) and on a product (16) formed from the substrate (15) by the enzymes (12). Also disclosed is a process in which the enzyme charge density in the pores of the membrane is adjusted depending on pore diameter and pore length, so that the transverse diffusion of the substrate that flows through the pores up to the enzymes arranged in a side wall area of the pores be an adjustable parameter of the desired chain length and/or ramification of the thus obtained macromolecular product.

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