

WHOLE CELL BIOCATALYSTS FOR ORGANIC TRANSFORMATIONS

ZYRUS Investment Company

Initial Bidding Guidance: Please inquire

This portfolio covers several patent families with priority dates between 2001 and 2013. The portfolio is directed at a platform technology using auto-reproductive-surface-immobilized-Biocatalysts ("ar SIB"). The platform is a system which uses intact bacterial cells and functional enzymes such as nitrilases, redox enzymes, lipases and cellulose degrading enzymes, which are presented as immobilized tools on the cell surface of E.coli with high density. Alternatively, membrane fractions of arSIBs can be used.

By combining an efficient bacterial expression system with the advantages of immobilized enzymes, the system provides an easy access to suitable enzymes and significantly reduces the cost of enzymes required for the respective organic transformations. Production of the modified microorganisms can be done in conventional industrial scale plants with standard fermentation equipment. The catalyst production can also be integrated and combined with biomass hydrolysis, thereby reducing the need for off-site production of enzymes or a separate on-site facility. In bioethanol production, the cost of production of the ready-to-use biocatalyst is estimated to be competitive with that of current enzymes, thus contributing to a lower overall production price per gallon of bioethanol.

Representative patent family: Biomass Degradation for Bioethanol Production

Earliest Priority Date: 03-11-2013

Claimed Subject Matter: U.S. Application 14/203,594 (published as US 2014/0377811)

The claims cover nucleic acid constructs encoding a cellulase, a transmembrane linker and a transporter domain of an autotransporter as the key functional constituents, the polypeptides encoded by these nucleic acid constructs and microorganisms which display these polypeptides on their surface as well as membrane fractions prepared therefrom. Further claims cover methods for the degradation of cellulose using the microorganisms and methods for their preparation.

Contact:

For more information on the assets available for sale in this portfolio, contact Michelle Tyler.

Michelle Tyler
Vice President - Transactions
Michelle@icapip.com
(650) 741-4117

TECHNOLOGY

BIOCATALYSTS; ETHANOL

NOVELTY

AN INNOVATIVE WHOLE CELL TECHNOLOGY THAT FACILITATES ORGANIC TRANSFORMATIONS SUCH AS REDOX-REACTIONS AND THE CONVERSION LIGNOCELLULOSIC BIOMASS TO ETHANOL

IMPORTANCE

A VALUABLE PORTFOLIO FOR COMPANIES PRODUCING ETHANOL AND OTHER CHEMICAL PRODUCTS

NUMBER OF ASSETS

52

PATENTS (15)

US 8,945,887
AT 1373571
BE 1373571
CH 1373571
DE 60216245.9
DK 1373571
FI 1373571
FR 1373571
GB 1373571
IE 1373571
IT 1373571
NL 1373571
RU 2534346
SE 1373571

APPLICATIONS (37)

Please inquire for a complete asset listing.