

Title (en)  
USE OF OXYHYDROGEN MICROORGANISMS FOR NON-PHOTOSYNTHETIC CARBON CAPTURE AND CONVERSION OF INORGANIC AND/ OR C1 CARBON SOURCES INTO USEFUL ORGANIC COMPOUNDS

Title (de)  
VERWENDUNG VON KNALLGAS-MIKROORGANISMEN ZUR NICHT-PHOTOSYNTHETISCHEN KOHLENSTOFFBINDUNG UND ZUR UMWANDLUNG VON ANORGANISCHEN UND/ODER C1-KOHLENSTOFFQUELLEN IN HILFREICHE ORGANISCHE VERBINDUNGEN

Title (fr)  
UTILISATION DE MICROORGANISMES D'OXYHYDROGÉNATION POUR LA CAPTURE DE CARBONE NON PHOTOSYNTHÉTIQUE ET LA CONVERSION DE SOURCES DE CARBONE INORGANIQUE ET/OU CI EN COMPOSÉS ORGANIQUES UTILES

Publication  
**EP 2582817 A2 20130424 (EN)**

Application  
**EP 11777987 A 20110427**

Priority

- US 32818410 P 20100427
- US 2010001402 W 20100512
- US 2011034218 W 20110427

Abstract (en)  
[origin: WO2011139804A2] Compositions and methods for a hybrid biological and chemical process that captures and converts carbon dioxide and/or other forms of inorganic carbon and/or C1 carbon sources including but not limited to carbon monoxide, methane, methanol, formate, or formic acid, and/or mixtures containing C1 chemicals including but not limited to various syngas compositions, into organic chemicals including biofuels or other valuable biomass, chemical, industrial, or pharmaceutical products are provided. The present invention, in certain embodiments, fixes inorganic carbon or C1 carbon sources into longer carbon chain organic chemicals by utilizing microorganisms capable of performing the oxyhydrogen reaction and the autotrophic fixation of CO<sub>2</sub> in one or more steps of the process.

IPC 8 full level  
**C12P 3/00** (2006.01); **C12M 1/00** (2006.01); **C12M 1/12** (2006.01); **C12M 3/02** (2006.01); **C12N 1/20** (2006.01); **C12P 7/00** (2006.01);  
**C12R 1/01** (2006.01)

CPC (source: EP US)  
**C12M 23/34** (2013.01 - EP US); **C12M 29/02** (2013.01 - EP US); **C12M 29/08** (2013.01 - EP US); **C12M 29/18** (2013.01 - EP US);  
**C12M 29/20** (2013.01 - EP US); **C12M 43/04** (2013.01 - EP US); **C12M 47/02** (2013.01 - EP US); **C12N 1/12** (2013.01 - EP US);  
**C12N 1/20** (2013.01 - EP US); **C12P 7/625** (2013.01 - US); **C25B 1/04** (2013.01 - EP US); **C25B 15/02** (2013.01 - EP US);  
**Y02E 50/30** (2013.01 - EP); **Y02E 60/36** (2013.01 - EP US); **Y02P 20/133** (2015.11 - EP US); **Y02W 10/37** (2015.05 - EP)

Cited by  
CN108034624A; CN109284868A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2011139804 A2 20111110; WO 2011139804 A3 20120405**; BR 112012027661 A2 20151124; BR 112012027661 B1 20201208;  
EP 2582817 A2 20130424; EP 2582817 A4 20160706; JP 2013542710 A 20131128; JP 2018000200 A 20180111; JP 2020103277 A 20200709;  
JP 2022081470 A 20220531; MY 165658 A 20180418

DOCDB simple family (application)  
**US 2011034218 W 20110427**; BR 112012027661 A 20110427; EP 11777987 A 20110427; JP 2013508232 A 20110427;  
JP 2017174045 A 20170911; JP 2019217948 A 20191202; JP 2022005338 A 20220117; MY PI2012004759 A 20110427