

Title (en)

BIOMASS FUEL SYNTHESIS METHODS FOR INCREASED ENERGY EFFICIENCY

Title (de)

VERFAHREN ZUR SYNTHESE VON BIOMASSEKRAFTSTOFFEN FÜR ERHÖHTE ENERGIEEFFIZIENZ

Title (fr)

SYNTHÈSE DE BIOCOMBUSTIBLES/BIOCARBURANTS AMÉLIORANT LE RENDEMENT ÉNERGÉTIQUE

Publication

**EP 2002010 A2 20081217 (EN)**

Application

**EP 07754007 A 20070326**

Priority

- US 2007007430 W 20070326
- US 76740306 P 20060325

Abstract (en)

[origin: WO2007112090A2] A high efficiency method for synthesizing biomass fuels leveraging the synergistic impact of ionic liquids on both the significant gains in pretreatment of biomass and the utilization of the combination of ionic liquids and carbon dioxide under supercritical conditions for energy generation is provided. The strategic use of heat exchangers, preferably microchannel heat exchangers and microchannel reactors further increase the efficiency and performance of the system by extensive heat recovery and the direct utilization of the biomass solution as the working fluid of a thermodynamic cycle.

IPC 8 full level

**B32B 27/38** (2006.01); **C12P 7/649** (2022.01)

CPC (source: EP US)

**C12P 7/10** (2013.01 - EP); **C12P 7/649** (2013.01 - EP US); **C12P 2201/00** (2013.01 - EP); **Y02E 50/10** (2013.01 - EP); **Y02P 20/10** (2015.11 - EP); **Y02P 20/54** (2015.11 - EP); **Y02P 20/59** (2015.11 - EP)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**WO 2007112090 A2 20071004**; **WO 2007112090 A3 20090312**; AU 2007230908 A1 20071004; BR PI0709137 A2 20110628; CA 2647263 A1 20071004; CN 101505961 A 20090812; EP 2002010 A2 20081217; MX 2008012130 A 20090123

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**US 2007007430 W 20070326**; AU 2007230908 A 20070326; BR PI0709137 A 20070326; CA 2647263 A 20070326; CN 200780016023 A 20070326; EP 07754007 A 20070326; MX 2008012130 A 20070326