

Title (en)
A biomass treatment process

Title (de)
Verfahren zur Behandlung von Biomasse

Title (fr)
Procédé de traitement de biomasse

Publication
EP 2340313 A2 20110706 (EN)

Application
EP 09796432 A 20091028

Priority
• IB 2009007443 W 20091028
• US 29070008 A 20081030

Abstract (en)
[origin: WO2010049815A2] The present invention provides processes and systems for treating biomass and, e.g., making biofuels, such as bioethanol, from the biomass. More particularly, one process according to the present invention includes (a) inducing at least a first portion of a composition containing biomass and a working fluid to flow into a passage of a fluid processing apparatus, (b) injecting a high velocity transport fluid into the composition through a nozzle communicating with the passage of the fluid processing apparatus, whereby the transport fluid applies a shear force to the composition such that the working fluid is atomised and a vapour and droplet flow regime is formed downstream of the nozzle, (c) condensing the vapour and droplet flow regime, (d) transferring the composition to a first holding vessel, and (e) holding the composition in the first holding vessel at a first predetermined temperature for a first predetermined period of time, wherein a liquefaction enzyme is added to the composition prior to or during the process. Thereafter, the composition may be further processed to form a biofuel, such as, e.g., bioethanol.

IPC 8 full level
C12P 19/02 (2006.01); **B01F 3/12** (2006.01); **B01F 5/04** (2006.01); **C12M 1/40** (2006.01); **C12P 7/10** (2006.01); **C12P 19/14** (2006.01); **C13K 1/06** (2006.01)

CPC (source: EP KR)
B01F 23/511 (2022.01 - EP); **B01F 23/59** (2022.01 - EP); **B01F 25/312** (2022.01 - EP); **B01F 25/31241** (2022.01 - EP); **B01F 25/31243** (2022.01 - EP); **C08H 8/00** (2013.01 - EP); **C12M 1/40** (2013.01 - KR); **C12M 21/12** (2013.01 - EP); **C12M 29/14** (2013.01 - EP); **C12M 43/02** (2013.01 - EP); **C12M 45/02** (2013.01 - EP); **C12M 45/09** (2013.01 - EP); **C12M 45/20** (2013.01 - EP); **C12P 7/10** (2013.01 - EP KR); **C12P 19/02** (2013.01 - EP); **C12P 19/14** (2013.01 - EP KR); **C13K 1/02** (2013.01 - EP); **C13K 1/06** (2013.01 - EP KR); **D21C 11/0007** (2013.01 - EP); **A23V 2002/00** (2013.01 - EP); **C12P 2201/00** (2013.01 - EP); **D21C 1/02** (2013.01 - EP); **D21C 5/00** (2013.01 - EP); **Y02E 50/10** (2013.01 - EP); **Y02P 20/133** (2015.11 - EP)

C-Set (source: EP)
A23V 2002/00 + A23V 2250/082 + A23V 2250/5108 + A23V 2250/5118

Citation (examination)
WO 2008023060 A1 20080228 - NOVOZYMES AS [DK], et al

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2010049815 A2 20100506; WO 2010049815 A3 20100930; BR PI0921727 A2 20180130; CA 2741994 A1 20100506; CN 102333879 A 20120125; EP 2340313 A2 20110706; JP 2012507276 A 20120329; KR 20110079849 A 20110708

DOCDB simple family (application)
IB 2009007443 W 20091028; BR PI0921727 A 20091028; CA 2741994 A 20091028; CN 200980152726 A 20091028; EP 09796432 A 20091028; JP 2011533851 A 20091028; KR 20117012141 A 20091028