

Title (en)

Process for producing liquid hydrocarbons from biomass

Title (de)

Verfahren zur Herstellung von Kohlenwasserstoffen enthaltenden Flüssigkeiten aus Biomasse

Title (fr)

Procédé pour la production de liquides contenant des hydrocarbures à partir de biomasse

Publication

EP 1719811 A1 20061108 (EN)

Application

EP 05076040 A 20050504

Priority

EP 05076040 A 20050504

Abstract (en)

Process for the conversion of biomass into liquid hydrocarbons, comprising the steps of: (a) preparing an aqueous slurry comprising biomass and solid particles comprising a layered material and/or a heat-treated form thereof, the layered material being selected from the group consisting of smectites, anionic clays, layered hydroxy salts, and cationic layered materials, (b) thermally treating said slurry at a temperature in the range of 250 to 400 °C, and (c) optionally separating the thermally treated slurry into (i) an aqueous phase, (ii) an organic phase containing the liquid hydrocarbons, and (iii) a solid phase. This process allows the conversion of biomass into liquid hydrocarbons under mild pressures.

IPC 8 full level

C10G 1/00 (2006.01)

CPC (source: EP)

C10G 1/00 (2013.01); **C10G 1/002** (2013.01); **C10G 1/08** (2013.01)

Citation (search report)

- [DX] EP 0204354 A1 19861210 - SHELL INT RESEARCH [NL]
- [A] EP 0419265 A1 19910327 - SISKIN MICHAEL [US], et al
- [X] SATO TOYOYUKI ET AL: "Development of liquefaction technique of pulverized ligneous biomass powder", AICHE ANNUAL MEETING, CONFERENCE PROCEEDINGS; 2004 AICHE ANNUAL MEETING, CONFERENCE PROCEEDINGS, 2004, pages 2649 - 2656, XP008053414
- [A] ELLIOTT D C ET AL: "HYDROEOXYGENATION OF WOOD-DERIVED LIQUIDS TO PRODUCE HYDROCARBON FUELS", INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE, PROCEEDINGS OF THE INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE, WARRENDAL, S.A.E. INC, US, vol. VOL. 1 CONF. 20, August 1985 (1985-08-01), pages 1586 - 1592, XP001048792
- [A] GEVERT BORJE S ET AL: "UPGRADING OF DIRECTLY LIQUEFIED BIOMASS TO TRANSPORTATION FUELS: CATALYTIC CRACKING", BIOMASS, vol. 14, no. 3, 1987, pages 173 - 183, XP002347118

Cited by

US8500910B2; US8617261B2; EP2105486A1; US2010293838A1; US2012190062A1; US9000245B2; US2019070593A1; US2011256615A1; CN102264979A; EP2071005A1; ES2319021A1; US2011114765A1; US8465627B2; US2012022307A1; US8288599B2; US10427069B2; US9017428B2; WO2009071495A3; WO2009071541A3; WO2007128800A1; WO2009000838A3; WO2009118363A3; WO2010002792A3; WO2017063004A3; US8193399B2; US8314274B2; US7999143B2; WO2012009516A2; US7982078B2; US8058492B2; US7982079B2; US8193400B2; US10934491B2; US9062264B2; US9850440B2; US9944837B2; WO2008114033A3; WO2011082142A1; US8558043B2; US8669405B2; US8853474B2; US7982076B2; US8003834B2; US8324438B2; US7915460B2; US7982075B2; US7999142B2; US8524959B1; US8742183B2; US8057641B2; US8198492B2; US8557193B2; US8816141B2; US7982077B2; US8304592B2; US8471079B2; US8772556B2; US8329968B2; US8329969B2; US8471081B2; US8766025B2; US8288600B2; US8628589B2; US9617489B2; US10786806B2; WO2011008920A2; US80222260B2; US8039682B2; US8283506B2; US8329967B2; US8377152B2; US8454712B2; US8491780B2; US8506658B2; US8623634B2

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Designated extension state (EPC)

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