

(51) International Patent Classification:
C10L 1/18 (2006.01)(21) International Application Number:
PCT/US2009/058755(22) International Filing Date:
29 September 2009 (29.09.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/244,349 2 October 2008 (02.10.2008) US(71) Applicant (for all designated States except US):
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: CO-PROCESSING DIESEL FUEL WITH VEGETABLE OIL TO GENERATE A LOW CLOUD POINT HYBRID DIESEL BIOFUEL

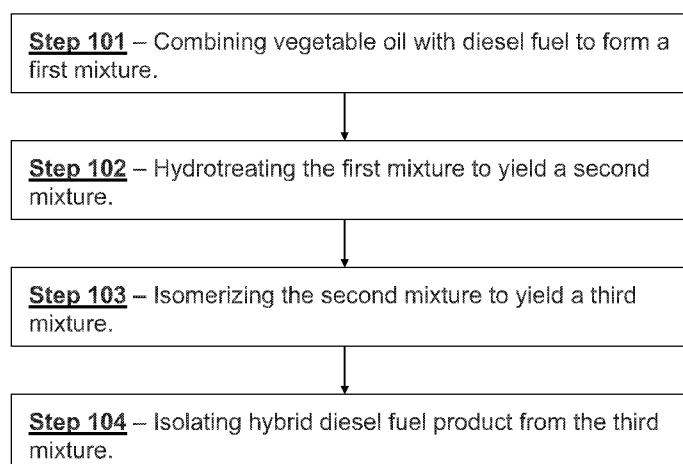


Fig. 1

(57) Abstract: The foregoing describes methods and systems for co-processing vegetable oil and petroleum diesel to yield a hybrid diesel biofuel composition. As previously stated, in some embodiments the present invention is directed to methods/systems by/with which a mixture of vegetable oil and petroleum diesel is co-processed in two stages: the mixture is first hydrotreated to yield a reduced-sulfur hybrid intermediate, and then the hybrid intermediate is processed in an isomerization unit to yield a low cloud point hybrid diesel product that is partially derived from biomass. A notable benefit of at least some such methods/systems is that interstage removal of H₂S and NH₃ is not required between the stages of hydrotreating and isomerizing, wherein such benefit is afforded by sulfur- and nitrogen-tolerant isomerization catalysts.

