

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

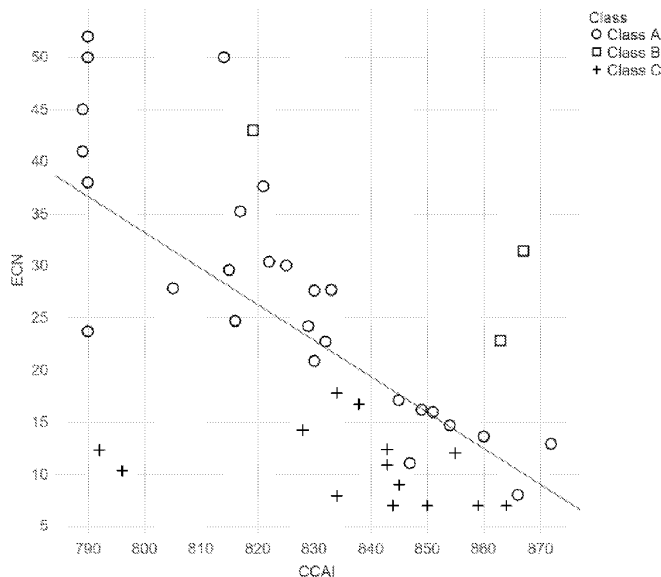
(43) International Publication Date
28 January 2021 (28.01.2021)



(10) International Publication Number
WO 2021/015810 A1

- (51) International Patent Classification:
C10L 1/08 (2006.01)
- (21) International Application Number:
PCT/US2019/066762
- (22) International Filing Date:
17 December 2019 (17.12.2019)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
62/877,129 22 July 2019 (22.07.2019) US
- (71) Applicant: **EXXONMOBIL RESEARCH AND ENGINEERING COMPANY** [US/US]; 1545 Route 22 East, P.O. Box 900, Ammandale, NJ 08801-0900 (US).
- (72) Inventors: **FRUCHEY, Erin, R.**; 1835 Arch Street Apt. 811, Philadelphia, PA 19103 (US). **GOLISZ, Suzanne, R.**; 12 Glen View Drive, Ammandale, NJ 08801 (US). **KAR, Kenneth, C.H.**; 2807 Parrish Street, Philadelphia, PA 19130 (US). **RUBIN-PITEL, Sheryl, B.**; 232 South Chancellor Street, Newtown, PA 18940 (US).
- (74) Agent: **MIGLIORINI, Robert, A.** et al.; ExxonMobil Research and Engineering Company, 1545 Route 22 East P.O. Box 900, Ammandale, NJ 08801-0900 (US).
- (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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

(54) Title: LOW SULFUR FUEL WITH ADEQUATE COMBUSTION QUALITY



(57) Abstract: Fuel compositions that are low sulfur and have adequate combustion quality are disclosed. An example fuel composition that is low sulfur may have the following enumerated properties: a sulfur content of about 0.50% or less by weight of the fuel composition; a calculated carbon aromaticity index of about 870 or less; a density at 15 °C of about 900 kg/m³ to about 1,010 kg/m³; a kinematic viscosity at 50 °C of about 100 centistokes to about 700 centistokes; and an estimated cetane number of about 7 or greater.

[Continued on next page]

TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, 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:

- *with international search report (Art. 21(3))*