

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 March 2025 (13.03.2025)



(10) International Publication Number
WO 2025/053786 A1

(51) International Patent Classification:

C10G 1/10 (2006.01) *B01J 21/06* (2006.01)
C10G 47/14 (2006.01) *B01J 21/18* (2006.01)
B01J 23/46 (2006.01) *B01J 27/14* (2006.01)

SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, 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, ME, 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).

(21) International Application Number:

PCT/SG2024/050501

(22) International Filing Date:

07 August 2024 (07.08.2024)

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

(25) Filing Language:

English

Published:

— with international search report (Art. 21(3))

(26) Publication Language:

English

(30) Priority Data:

10202302519X 08 September 2023 (08.09.2023) SG

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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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,

(54) Title: MILD CATALYTIC METHOD TO SELECTIVELY PRODUCE METHANE GAS FUEL FROM PLASTIC WASTE

(57) Abstract: The present disclosure relates to a catalytic method of producing methane gas fuel from plastic waste. The method comprises subjecting plastic waste to hydrogenolysis under mild conditions in the presence of a Rh-based catalyst to obtain a methane gas fuel, wherein the mild conditions include heating the plastic waste at a temperature of less than 300oC, under 2x106 Pa of hydrogen pressure, and within 3 hours; and wherein the Rh-based catalyst is rhodium supported on a material selected from carbon, titanium dioxide and lanthanum phosphate.

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