

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 September 2024 (06.09.2024)



(10) International Publication Number
WO 2024/182198 A1

(51) International Patent Classification:

B01J 23/31 (2006.01) **B01J 23/30** (2006.01)
B01J 23/00 (2006.01) **B01J 37/031** (2006.01)
B01J 23/22 (2006.01) **C07C 5/48** (2006.01)
B01J 23/28 (2006.01) **G01N 23/20** (2018.01)

(21) International Application Number:

PCT/US2024/016858

(22) International Filing Date:

22 February 2024 (22.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23382182.6 28 February 2023 (28.02.2023) EP

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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,
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).

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))

(54) Title: CATALYST AND PROCESS FOR THE DEHYDROGENATION OF ALKANES TO OLEFINS

2 θ ($\pm$ 0.3°)	Rel. Intensity (%)
5.3	0.2 – 10
6.6	1.5 – 15
7.84	2.5 – 45
8.95	4 – 21
22.17	100
27.2	20 – 70

(57) Abstract: An oxidative dehydrogenation catalyst having: a structure having a formula $\text{Mo}_v\text{V}_w\text{A}_y\text{Bi}_z\text{O}_x$, where v is 1, w is from 0.2 to 0.5, A is W or Ta, y is from 0.001 to 0.3, z is from 0.01 to 0.3, and x is the oxygen content required to charge-balance the structure. The oxidative dehydrogenation catalyst comprises a crystalline structure (Pba2-32 space group) characterized by reflections determined with Cu-K α X-ray diffraction (XRD) as follows: 2 θ ($\pm$ 0.3°) Rel. Intensity (%) 5.30.2 – 10 6.61.5 – 15 7.842.5 – 45 8.954 – 21 22.17100 27.220 – 70



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