

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
01 December 2022 (01.12.2022)



(10) International Publication Number
WO 2022/248321 A1

(51) International Patent Classification:

C07C 67/39 (2006.01) B01J 35/00 (2006.01)
C07C 69/54 (2006.01) B01J 35/02 (2006.01)
B01J 23/52 (2006.01)

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).

(21) International Application Number:

PCT/EP2022/063509

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(22) International Filing Date:

19 May 2022 (19.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

21176518.5 28 May 2021 (28.05.2021) 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, 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, 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, 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, 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, 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,

(54) Title: REACTOR AND PROCESS FOR PRODUCING ALKYL METHACRYLATES

(57) Abstract: The present invention relates to a process for producing methyl methacrylate by direct oxidative esterification of methacrolein. Methyl methacrylate is used in large amounts for producing polymers and copolymers with other polymerizable compounds. In addition, methyl methacrylate is an important synthesis unit for a variety of specialty esters based on methacrylic acid (MAA) which can be produced by transesterification with the appropriate alcohol. There is consequently a great interest in very simple, economic and environmentally friendly processes for preparing this starting material. The present invention especially relates to an optimized workup of the reactor discharge from the oxidative esterification of methacrolein by means of which co-discharged fine catalyst particles may be very efficiently separated and optionally removed or recycled. In addition, this novel process can reduce the formation of byproducts in extended continuous operation compared to known variants. A further aspect of the present invention is a reactor system containing stirrer configurations which allow virtually abrasion-free operation and thus a catalyst on-stream time of several years.



WO 2022/248321 A1