

Title (en)
PROCESS FOR THE HETEROGENEOUSLY CATALYSED GAS-PHASE PARTIAL OXIDATION OF (METH)ACROLEIN TO (METH)ACRYLIC ACID

Title (de)
VERFAHREN DER HETEROGEN KATALYSIERTEN GASPHASENPARTIALOXIDATION VON (METH)ACROLEIN ZU (METH)ACRYLSÄURE

Title (fr)
PROCÉDÉ D'OXYDATION PARTIELLE EN PHASE GAZEUSE À CATALYSE HÉTÉROGÈNE DE (MÉTH)ACROLÉINE POUR OBTENIR DE L'ACIDE (MÉTH)ACRYLIQUE

Publication
EP 2846908 A1 20150318 (DE)

Application
EP 13720891 A 20130429

Priority
• DE 102012207811 A 20120510
• US 201261645082 P 20120510
• EP 2013058849 W 20130429

Abstract (en)
[origin: DE102012207811A1] Heterogeneously catalyzed gas phase partial oxidation of (meth)acrolein to (meth)acrylic acid using a catalytically active multimetal oxide mass (I) is claimed, where (I) is obtained by hydrothermally treating a mixture of sources of elemental constituents of (I) in the presence of water in a hyperbaric vessel, separating the formed solid material, as precursor, and thermally treating the precursor. Heterogeneously catalyzed gas phase partial oxidation of (meth)acrolein to (meth)acrylic acid using a catalytically active multimetal oxide mass of formula (Mo 1 2V a(X 1>) b(X 2>) c(X 3>) d(X 4>) e(X 5>) f(X 6>) gO n) (I) is claimed, where at least 50 mol.% of X 1>in (I) contains W, and (I) is obtained by hydrothermally treating a mixture of sources of elemental constituents of (I) in the presence of water in a hyperbaric vessel, separating the formed solid material, as precursor, and thermally treating the precursor. X 1> : W, Nb, Ta, Cr and/or Ce; X 2> : Cu, Ni, Co, Fe, Mn and/or Zn; X 3> : Sb, Te and/or Bi; X 4> : one or more alkali metal and/or H; X 5> : one or more alkaline earth metal; X 6> : Si, Al, Ti and/or Zr; a : 1-6; b : 0.2-8; c : 0-18; d, g : 0-40; e, f : 0-4; and n : a number that determines the valence and frequency of elements other than O. Independent claims are included for: (1) the catalytically active multimetal oxide mass (I); and (2) a shell-type catalyst from a carrier body, where the surface of the carrier body is applied with (I) and/or optionally binding agent for the application of (I) on the surface of the carrier body.

IPC 8 full level
B01J 37/03 (2006.01); **B01J 23/00** (2006.01); **B01J 23/30** (2006.01); **B01J 23/888** (2006.01); **B01J 35/00** (2024.01); **B01J 37/00** (2006.01); **B01J 37/02** (2006.01); **B01J 37/10** (2006.01); **C07C 51/25** (2006.01)

CPC (source: EP US)
B01J 23/002 (2013.01 - EP US); **B01J 23/30** (2013.01 - EP US); **B01J 23/8885** (2013.01 - EP US); **B01J 35/30** (2024.01 - EP US); **B01J 35/40** (2024.01 - EP US); **B01J 35/613** (2024.01 - EP US); **B01J 37/0009** (2013.01 - EP US); **B01J 37/0036** (2013.01 - EP US); **B01J 37/0045** (2013.01 - EP US); **B01J 37/0221** (2013.01 - EP US); **B01J 37/0223** (2013.01 - EP US); **B01J 37/033** (2013.01 - EP US); **B01J 37/04** (2013.01 - EP US); **B01J 37/06** (2013.01 - EP US); **B01J 37/08** (2013.01 - EP US); **B01J 37/10** (2013.01 - EP US); **C01G 39/00** (2013.01 - EP US); **C01G 41/006** (2013.01 - EP US); **C07C 51/16** (2013.01 - EP US); **C07C 51/235** (2013.01 - EP US); **C07C 51/252** (2013.01 - EP US); **C08F 220/06** (2013.01 - EP US); **B01J 2523/00** (2013.01 - EP US); **C01P 2002/72** (2013.01 - EP US); **C01P 2006/12** (2013.01 - EP US)

C-Set (source: EP US)
1. **B01J 2523/00 + B01J 2523/55 + B01J 2523/68 + B01J 2523/69**
2. **B01J 2523/00 + B01J 2523/17 + B01J 2523/55 + B01J 2523/68 + B01J 2523/69**
3. **C07C 51/252 + C07C 57/04**
4. **C07C 51/235 + C07C 57/04**

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
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