

Title (en)

CATALYST FOR REACTING CARBOXYLIC ACID NITRILES

Title (de)

KATALYSATOR ZUR UMSETZUNG VON CARBONSÄURENITRILEN

Title (fr)

CATALYSEUR DE TRANSFORMATION DE NITRILES D'ACIDE CARBOXYLIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: CA2722334A1] The invention relates to a catalyst for reacting carboxylic acid nitriles with water, the catalyst comprising at least 60% by weight of manganese dioxide having the empirical formula MnO_x, wherein x is in the range of 1.7 to 2.0, and at least one plasticizer. The invention further relates to a method for producing the catalysts mentioned above and to a method for producing carboxylic acid amides by reacting carboxylic acid nitriles with water in the presence of the catalyst according to the invention.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2009130075A2

Citation (examination)

- JP H09104665 A 19970422 - DAICEL CHEM & DAICEL CHEM: "Patent Abstracts of Japan of JP H09 104665 A", 22 April 1997 (1997-04-22), XP055136682 & DAICEL CHEM: "JPO: MACHINE TRANSLATION OF JP H09 104665 A", 22 April 1997 (1997-04-22), XP055136829 & DAICEL CHEM: "CORRECTED MACHINE TRANSLATION OF JP H09 104665 A", 22 April 1997 (1997-04-22), XP055136692
- US 5653949 A 19970805 - CHEN JAMES M [US], et al
- US 4290923 A 19810922 - MEIN PETER G, et al
- EP 0945429 A1 19990929 - MITSUBISHI GAS CHEMICAL CO [JP]
- EP 0379111 A2 19900725 - MITSUBISHI GAS CHEMICAL CO [JP]
- FERDI SCHÜTH ET AL: "Handbook of Heterogeneous Catalysis 2nd ed.", 29 February 2008 (2008-02-29), pages 676 - 699, XP055136695
- "Ullmann's Encyclopedia of Industrial Chemistry 5th Edition Volume A7", 25 December 1086, VCH, Weinheim; New York, NY, article "Structure and Composition of Clay Minerals", pages: 110 - 113, XP055136697

Citation (third parties)

Third party :

- EP 0956898 A2 19991117 - MITSUBISHI GAS CHEMICAL CO [JP]
- JP H09104665 A 19970422 - DAICEL CHEM
- US 5653949 A 19970805 - CHEN JAMES M [US], et al
- US 4290923 A 19810922 - MEIN PETER G, et al
- EP 0945429 A1 19990929 - MITSUBISHI GAS CHEMICAL CO [JP]
- EP 0379111 A2 19900725 - MITSUBISHI GAS CHEMICAL CO [JP]
- ERTL G. ET AL: "Handbook of Heterogeneous Catalysis, Second, Completely Revised and Enlarged Edition", vol. 1, February 2008, pages: 676 - 699, XP003028625
- GERHARTZ W. ET AL: "Ullmann's Encyclopedia of Industrial Chemistry, Fifth, Completely Revised Edition", vol. A7, 1986, pages: 110 - 113, XP003028626

Cited by

DE102016210285A1; DE102013213699A1; WO2015003998A1

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