

Title (en)

PROCESS AND CATALYST FOR THE CATALYTIC OXIDATIVE DEHYDROGENATION OF ALKYL AROMATICS AND PARAFFINS

Title (de)

VERFAHREN UND KATALYSATOR FÜR DIE KATALYTISCHE OXIDATIVE DEHYDRIERUNG VON ALKYLAROMATEN UND PARAFFINEN

Title (fr)

PROCEDE ET CATALYSEUR DE DESHYDROGENATION CATALYTIQUE OXYDATIVE D'AROMATES D'ALKYLE ET DE PARAFFINES

Publication

**EP 0931040 A1 19990728 (DE)**

Application

**EP 97942868 A 19970821**

Priority

- DE 19636884 A 19960911
- EP 9704546 W 19970821

Abstract (en)

[origin: DE19636884A1] The invention concerns a process for the heterogenocatalytic oxidative gaseous phase dehydrogenation of alkyl aromatics or aliphatics (educts) to form the corresponding alkenyl aromatics or olefins. In a first reaction step, the educt is dehydrogenated with a bismuth-containing redox catalyst (oxygen carrier) in the absence of molecular oxygen, and, in a second reaction step, the reduced catalyst is reoxidized with an oxidizing agent. The reaction steps are chronologically or spatially decoupled, and at least one reducible bismuthate (5) on a basic or neutral carrier is used as the bismuth-containing catalyst. The invention further concerns Ba-bismuthate (5) having the composition Ba<sub>9</sub>Bi<sub>3</sub>O<sub>14</sub> as novel substance.

IPC 1-7

**C07C 5/42**; **B01J 23/18**

IPC 8 full level

**B01J 23/18** (2006.01); **C07B 61/00** (2006.01); **C07C 5/42** (2006.01); **C07C 15/46** (2006.01)

CPC (source: EP)

**C07C 5/42** (2013.01); **C07C 2523/02** (2013.01); **C07C 2523/04** (2013.01); **C07C 2523/18** (2013.01)

Citation (search report)

See references of WO 9811038A1

Designated contracting state (EPC)

BE DE ES FR GB IT NL

DOCDB simple family (publication)

**DE 19636884 A1 19980312**; EP 0931040 A1 19990728; JP 2001500137 A 20010109; WO 9811038 A1 19980319

DOCDB simple family (application)

**DE 19636884 A 19960911**; EP 9704546 W 19970821; EP 97942868 A 19970821; JP 51318998 A 19970821