

Title (en)

Catalyst material, based on a titanium-copper alloy and process for producing the same

Title (de)

Katalysatorwerkstoff gegründet auf einer Titan-Kupferlegierung und Verfahren zu seiner Herstellung

Title (fr)

Matériau pour catalyseurs, à base d'un alliage titane-cuivre et procédé pour sa fabrication

Publication

EP 0645466 B1 19980708 (EN)

Application

EP 94114639 A 19940916

Priority

JP 26570193 A 19930929

Abstract (en)

[origin: EP0645466A1] A Ti-Cu based alloy catalyst material having a composition including at least one element selected from the group consisting of V, Ni, Zr, Cr, Mn, Fe and Co as a partial substitute element for Ti and/or Cu in a composition represented by the general formula $Ti_{100-a}Cu_a$, wherein "a" is, in atomic %, $30 \leq a \leq 50$, 0.1 to 20 atomic % in the general formula $Ti_{100-a}Cu_a$ being substituted with said at least one element, in which a fine Ti-Cu intermetallic compound having a mean particle size of 10 nm or less is uniformly precipitated in an amorphous phase and/or α -Ti matrix. The alloy catalyst is produced by preparing an alloy of the above-specified composition having an amorphous phase and/or α -Ti matrix, and heating the alloy at a temperature of from the transformation temperature T_x of a non-equilibrium phase minus 50 K to the transformation temperature T_x plus 100 K so as to precipitate a fine Ti-Cu intermetallic compound in the matrix. The catalyst material is not only excellent in mechanical properties but also useful as a catalyst for various reactions.

IPC 1-7

C22C 45/10

IPC 8 full level

B01J 23/72 (2006.01); **B01J 23/74** (2006.01); **B01J 23/847** (2006.01); **B01J 23/86** (2006.01); **B01J 23/889** (2006.01); **C07C 1/04** (2006.01); **C07C 1/24** (2006.01); **C07C 5/10** (2006.01); **C10G 2/00** (2006.01); **C22C 45/10** (2006.01)

CPC (source: EP)

C22C 45/10 (2013.01)

Cited by

EP1354976A4; DE10224722C1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0645466 A1 19950329; **EP 0645466 B1 19980708**; DE 69411483 D1 19980813; DE 69411483 T2 19990218; JP H07163879 A 19950627

DOCDB simple family (application)

EP 94114639 A 19940916; DE 69411483 T 19940916; JP 26570193 A 19930929