

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 A1 19950329 (EN)

Application

EP 94114639 A 19940916

Priority

JP 26570193 A 19930929

Abstract (en)

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

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