

Title (en)

Process for preparing by milling a composite material comprising an oxide phase and a metallic phase.

Title (de)

Verfahren zur Herstellung von Verbundmaterial mit einer metallischen Phase und einer Oxydphase durch Mahlen.

Title (fr)

Procédé de préparation par broyage de matériaux composites comportant une phase oxyde et une phase métallique.

Publication

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Application

EP 91400927 A 19910405

Priority

FR 9004820 A 19900413

Abstract (en)

Preparation of oxide-metal composite materials comprising an oxide phase and a metal phase. <??>The process for the preparation of composite materials consisting essentially of an oxide phase and of a metal phase is characterised in that at least one oxide precursor of the metal phase and at least one reducing agent precursor of the oxide phase are mixed and in that the mixture is subjected to high-energy mechanical milling without any external heat input, - the quantity of reducing agent representing from 90 to 110 % of the stoichiometric quantity corresponding to the reaction of reduction of the oxide precursor by the reducing agent, - the duration of milling being chosen so as to reduce at least 80 % of the metal atoms of the oxide precursor to the metallic state, pure or in alloy form. <??>The process of the invention is particularly advantageous for the preparation of oxide-metal composite materials whose mechanical or electrical properties or radiation-absorption properties are improved.

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- [X] US 3723092 A 19730327 - BENJAMIN J
- [X] US 3205099 A 19650907 - VORDAHL MILTON B

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