

Title (en)

CA, MG AND NI CONTAINING ALLOYS, METHOD FOR PREPARING THE SAME AND USE THEREOF FOR GAS PHASE HYDROGEN STORAGE

Title (de)

CA, MG UND NI ENTHALTENDE LEGIERUNGEN, VERFAHREN ZU DEREN HERSTELLUNG UND DESSEN VERWENDUNG ZUR GASPHASENWASSERSTOFFSPEICHERUNG

Title (fr)

ALLIAGES CONTENANT CA, MG ET NI, LEUR PROCEDE DE PREPARATION ET LEUR UTILISATION POUR LE STOCKAGE D'HYDROGENE EN PHASE GASEUSE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO03072838A1] Disclosed are new Ca, Mg and Ni-containing alloys of the general formula: $\text{Ca}_c \text{Mg}_d \text{Me}_b \text{Ni}_{1-z} \text{T}_z \text{A}$ where: M is at least one metal selected from the group consisting of Y, Ce, La, Pr, Nd, Th, Ti, V, Zr, Ta, Hf, Sr, Ba and Misch metals T is at least one element selected from the group consisting of Al, Zn, Cu, Fe, Co, Mn, Cr, Mo, W, Si, Ga, Ge, In, Sn, Ag, C and B a is an integer equal to 2 or 5 z is a number ranging from 0 to 0.5 when a is equal to 2, then $0.9 \leq b \leq 1.1$ and when a is equal to 5, then either $1.75 \leq b \leq 2.25$ or $0.75 \leq b \leq 1.31$. These alloys which are of the AB₂, A₂B₅ or AB₅ types, may be single phase or multiphase and are useful for reversibly absorbing hydrogen from a gas phase. Also disclosed is a method for preparing the above alloys.

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