

Title (en)
HYDROGEN STORAGE ALLOYS

Title (de)
WASSERSTOFFSPEICHERLEGIERUNGEN

Title (fr)
ALLIAGES DE STOCKAGE D'HYDROGÈNE

Publication
EP 3256616 A4 20181017 (EN)

Application
EP 16749722 A 20160209

Priority

- US 201514619352 A 20150211
- US 201514619365 A 20150211
- US 201514619374 A 20150211
- US 201514619388 A 20150211
- US 2016017170 W 20160209

Abstract (en)
[origin: WO2016130561A1] Hydrogen storage alloys comprising a) at least one main phase, b) a storage secondary phase and c) a catalytic secondary phase, where the weight ratio of the catalytic secondary phase abundance to the storage secondary phase abundance is ≥ 3 ; or comprising a) at least one main phase, b) from 0 to 13.3 wt% of a storage secondary phase and c) a catalytic secondary phase, where the alloy comprises from 0.05 to 0.98 at% of one or more rare-earth elements, or the alloy comprises for example i) one or more elements selected from the group consisting of Ti, Zr, Nb and Hf and ii) one or more elements selected from the group consisting of V, Cr, Mn, Ni, Sn, Al, Co, Cu, Mo, W, Fe, Si, Sn and rare earth elements, where the atomic ratio of ii) to i) is from 1.80 to 1.98; exhibit improved electrochemical properties at low temperature.

IPC 8 full level
C22C 30/04 (2006.01); **C22C 19/00** (2006.01); **H01M 4/38** (2006.01); **H01M 4/86** (2006.01); **H01M 8/04** (2016.01); **H01M 8/10** (2016.01); **H01M 10/30** (2006.01); **H01M 12/08** (2006.01)

CPC (source: EP US)
C22C 19/007 (2013.01 - EP); **C22C 19/03** (2013.01 - EP); **C22C 30/00** (2013.01 - EP); **H01M 4/383** (2013.01 - EP US); **H01M 8/04216** (2013.01 - EP); **H01M 8/083** (2013.01 - EP); **H01M 10/345** (2013.01 - EP); **H01M 12/08** (2013.01 - EP); **Y02E 60/10** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Citation (search report)

- [XA] WO 2014107732 A2 20140710 - OVONIC BATTERY CO [US], et al
- [A] US 2005255382 A1 20051117 - YOUNG KWO [US], et al
- [A] US 2004248005 A1 20041209 - OVSHINSKY STANFORD R [US], et al
- [A] US 6270719 B1 20010807 - FETCENKO MICHAEL A [US], et al
- [A] WO 2013158850 A1 20131024 - BASF CORP [US], et al
- See references of WO 2016130561A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
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DOCDB simple family (application)
US 2016017170 W 20160209; CN 201680009641 A 20160209; EP 16749722 A 20160209; JP 2017542184 A 20160209