

Title (en)  
NANOSTRUCTURE COMPOSITE BATTERIES AND METHODS OF MAKING SAME FROM NANOSTRUCTURE COMPOSITE SHEETS

Title (de)  
NANOSTRUKTURVERBUNDBATTERIEN UND VERFAHREN ZUR HERSTELLUNG DAVON AUS NANOSTRUKTURVERBUNDFOLIEN

Title (fr)  
BATTERIES COMPOSITES À NANOSTRUCTURES ET LEURS PROCÉDÉS DE FABRICATION À PARTIR DE FEUILLES COMPOSITES À NANOSTRUCTURES

Publication  
**EP 2812937 A4 20160106 (EN)**

Application  
**EP 13778133 A 20130124**

Priority  
• US 201213367572 A 20120207  
• US 2013022873 W 20130124

Abstract (en)  
[origin: WO2013158174A1] A secondary battery capable of being charged after discharging is provided. The battery includes a positive electrode, made from a sheet of carbon nanotubes infiltrated with mixed metal oxides, and a negative electrode made from a sheet of carbon nanotubes with silicon or germanium particles.

IPC 8 full level  
**H01M 4/134** (2010.01); **H01M 4/1391** (2010.01); **H01M 4/1395** (2010.01); **H01M 4/38** (2006.01); **H01M 4/485** (2010.01); **H01M 4/525** (2010.01); **H01M 4/62** (2006.01); **H01M 4/66** (2006.01); **H01M 50/117** (2021.01); **H01M 50/121** (2021.01); **H01M 50/122** (2021.01); **H01M 50/417** (2021.01)

CPC (source: EP US)  
**H01M 4/134** (2013.01 - EP); **H01M 4/1391** (2013.01 - EP); **H01M 4/1395** (2013.01 - EP); **H01M 4/38** (2013.01 - EP); **H01M 4/386** (2013.01 - EP); **H01M 4/485** (2013.01 - EP); **H01M 4/525** (2013.01 - EP); **H01M 4/625** (2013.01 - EP); **H01M 4/663** (2013.01 - EP); **H01M 50/117** (2021.01 - EP US); **H01M 50/121** (2021.01 - EP US); **H01M 50/122** (2021.01 - EP US); **H01M 50/417** (2021.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)  
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• [XY] US 2008261116 A1 20081023 - BURTON DAVID J [US], et al  
• [XA] US 2011111279 A1 20110512 - SMITHYMAN JESSE [US], et al  
• [A] US 2009317710 A1 20091224 - DOUGLAS JOEL S [US], et al  
• [A] KR 20100115271 A 20101027 - WI SOON IM [KR]  
• See references of WO 2013158174A1

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)  
**WO 2013158174 A1 20131024; WO 2013158174 A9 20131212**; EP 2812937 A1 20141217; EP 2812937 A4 20160106; JP 2015516643 A 20150611

DOCDB simple family (application)  
**US 2013022873 W 20130124**; EP 13778133 A 20130124; JP 2014556562 A 20130124