

Title (en)
PARTICLES COMPRISING A NON-CONDUCTING OR SEMI-CONDUCTING CORE, WHICH ARE COATED WITH A HYBRID CONDUCTING LAYER, PRODUCTION METHODS THEREOF AND USES OF SAME IN ELECTRICAL DEVICES

Title (de)
PARTIKEL MIT EINEM NICHTLEITENDEN ODER HALBLEITENDEN KERN, DIE MIT EINER HYBRID-LEITENDEN SCHICHT BESCHICHTET SIND, ZUGEHÖRIGES HERSTELLUNGSVERFAHREN UND DEREN VERWENDUNGEN IN ELEKTRISCHEN EINRICHTUNGEN

Title (fr)
PARTICULES COMPORTANT UN NOYAU NON CONDUCTEUR OU SEMI CONDUCTEUR ENROBÉES PAR UNE COUCHE CONDUCTRICE HYBRIDE, LEURS PROCÉDES D'OBTENTION ET LEURS UTILISATIONS DANS DES DISPOSITIFS ÉLECTRIQUES

Publication
EP 1520309 A2 20050406 (FR)

Application
EP 03763538 A 20030710

Priority
• CA 0301050 W 20030710
• CA 2394056 A 20020712

Abstract (en)
[origin: EP1775786A1] Particle mixture (I) comprises particles having a nonconducting or semiconducting core and a hybrid conductor coating, the particles being interconnected with hybrid conductor chains to form a network of electrical conductivity. Independent claims are also included for the following: (1) production of (I) by preparing a mixture of a nonconducting or semiconducting material with a conductive material and adding a second conductive material, preparing a mixture of a nonconducting or semiconducting material with at least two conductive materials, or preparing a mixture of conductive material and mixing it with a nonconducting or semiconducting material; (2) battery cathode and anode comprising (I); (3) lithium battery comprising a metallic lithium anode and a cathode comprising (I); (4) hybrid supercapacitor comprising an electrolyte, an anode comprising (I), and a high surface area carbon or graphite cathode.

IPC 1-7
H01M 4/48; **H01M 4/58**; **H01M 4/62**; **H01M 4/04**

IPC 8 full level
H01B 1/00 (2006.01); **H01B 1/18** (2006.01); **H01B 5/14** (2006.01); **H01G 9/00** (2006.01); **H01G 9/025** (2006.01); **H01G 11/46** (2013.01); **H01G 11/56** (2013.01); **H01M 4/04** (2006.01); **H01M 4/131** (2010.01); **H01M 4/136** (2010.01); **H01M 4/48** (2010.01); **H01M 4/485** (2010.01); **H01M 4/50** (2010.01); **H01M 4/505** (2010.01); **H01M 4/52** (2010.01); **H01M 4/525** (2010.01); **H01M 4/58** (2010.01); **H01M 4/62** (2006.01); **H01M 10/0525** (2010.01); **H01M 10/28** (2006.01); **H01M 10/36** (2010.01); **H01M 4/36** (2006.01); **H01M 10/0565** (2010.01)

CPC (source: EP US)
B02C 17/1815 (2013.01 - US); **H01G 11/06** (2013.01 - EP US); **H01G 11/30** (2013.01 - EP US); **H01G 11/32** (2013.01 - US); **H01G 11/46** (2013.01 - US); **H01M 4/131** (2013.01 - EP US); **H01M 4/136** (2013.01 - EP US); **H01M 4/366** (2013.01 - EP US); **H01M 4/485** (2013.01 - EP US); **H01M 4/505** (2013.01 - EP US); **H01M 4/525** (2013.01 - EP US); **H01M 4/5825** (2013.01 - EP US); **H01M 4/625** (2013.01 - EP US); **H01M 4/661** (2013.01 - US); **H01M 10/052** (2013.01 - EP US); **H01M 10/0525** (2013.01 - EP US); **H01M 10/0565** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02E 60/13** (2013.01 - EP US); **Y02P 70/50** (2015.11 - EP)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2004008560 A2 20040122; **WO 2004008560 A3 20040318**; AT E480875 T1 20100915; AU 2003250654 A1 20040202; AU 2003250654 A8 20040202; CA 2394056 A1 20040112; CA 2491173 A1 20040122; CA 2491173 C 20190806; DE 60334163 D1 20101021; EP 1520309 A2 20050406; EP 1775786 A1 20070418; EP 1775786 B1 20100908; ES 2350942 T3 20110128; JP 2005533373 A 20051104; JP 4597666 B2 20101215; US 2006115732 A1 20060601; US 2010047692 A1 20100225; US 2014205911 A1 20140724; US 2020013561 A1 20200109; US 9870873 B2 20180116

DOCDB simple family (application)
CA 0301050 W 20030710; AT 06023645 T 20030710; AU 2003250654 A 20030710; CA 2394056 A 20020712; CA 2491173 A 20030710; DE 60334163 T 20030710; EP 03763538 A 20030710; EP 06023645 A 20030710; ES 06023645 T 20030710; JP 2004520232 A 20030710; US 201414220716 A 20140320; US 201916382704 A 20190412; US 52136505 A 20051024; US 53381709 A 20090731