

Title (en)

PARTICULATE POROUS CARBON MATERIAL AND USE THEREOF IN LITHIUM CELLS

Title (de)

TEILCHENFÖRMIGES PORÖSES KOHLENSTOFFMATERIAL UND DESSEN VERWENDUNG IN LITHIUMZELLEN

Title (fr)

MATÉRIAU DE CARBONE POREUX PARTICULAIRE ET UTILISATION DE CELUI-CI DANS DES PILES AU LITHIUM

Publication

EP 2691338 A4 20141015 (EN)

Application

EP 12764268 A 20120330

Priority

- EP 11160720 A 20110331
- IB 2012051540 W 20120330
- EP 12764268 A 20120330

Abstract (en)

[origin: WO2012131628A1] Provided is a particulate porous carbon material comprising a carbon phase and at least one pore phase arranged in the carbon phase, the carbon phase of the particles forming, with the pore phase, essentially co-continuous, irregular phase domains, the distance between adjacent domains of the pore phase being essentially not more than 50nm. Also provided are a process for producing such carbon material, a composite material comprising elemental sulfur and such carbon material, and the use of such materials in lithium cells, especially lithium-sulfur cells.

IPC 8 full level

C01B 31/00 (2006.01); **C01B 31/04** (2006.01); **C30B 31/02** (2006.01); **H01M 4/133** (2010.01); **H01M 4/1393** (2010.01); **H01M 4/587** (2010.01); **H01M 4/62** (2006.01); **H01M 10/00** (2006.01); **H01M 10/052** (2010.01); **H01M 10/39** (2006.01)

CPC (source: EP KR)

C01B 32/225 (2017.07 - EP KR); **H01M 4/133** (2013.01 - EP KR); **H01M 4/1393** (2013.01 - EP KR); **H01M 4/587** (2013.01 - EP KR); **H01M 4/625** (2013.01 - EP KR); **H01M 10/052** (2013.01 - EP KR); **H01M 10/39** (2013.01 - EP KR); **C01P 2004/60** (2013.01 - KR); **C01P 2006/12** (2013.01 - KR); **C01P 2006/16** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

- [XY] WO 2010128144 A1 20101111 - BASF SE [DE], et al
- [Y] WO 2009114314 A2 20090917 - TOYOTA ENG & MFG NORTH AMERICA [US], et al
- [Y] WO 2007140224 A2 20071206 - GM GLOBAL TECH OPERATIONS INC [US], et al
- [XY] STEFAN SPANGE ET AL.: "NANOCOMPOSITES WITH STRUCTURE DOMAINS OF 0.5 TO 3 NM BY POLYMERIZATION OF SILICON SPIRO COMPOUNDS", ANGEW.CHEM.INT.ED., vol. 48, 2009, pages 8254 - 8258, XP002729081
- See references of WO 2012131628A1

Cited by

CN108011081A

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 2012131628 A1 20121004; CN 103459312 A 20131218; EP 2691338 A1 20140205; EP 2691338 A4 20141015; JP 2014522355 A 20140904; KR 20140018907 A 20140213

DOCDB simple family (application)

IB 2012051540 W 20120330; CN 201280016847 A 20120330; EP 12764268 A 20120330; JP 2014501799 A 20120330; KR 20137025372 A 20120330