

Title (en)

HIGH ENERGY AND POWER DENSITY ANODE FOR BATTERIES

Title (de)

ANODE MIT HOHER ENERGIE- UND LEISTUNGSDICHTE FÜR BATTERIEN

Title (fr)

ANODE DE FORTE DENSITE D'ENERGIE ET DE PUISSANCE POUR BATTERIES

Publication

EP 4169093 A1 20230426 (FR)

Application

EP 21736706 A 20210623

Priority

- FR 2006530 A 20200623
- IB 2021055537 W 20210623

Abstract (en)

[origin: CA3182743A1] This invention relates to a method for manufacturing an anodic member for a lithium ion secondary battery with a capacity greater than 1 mAh. The anodic member is manufactured from a colloidal suspension having aggregates or agglomerates of monodisperse nanoparticles of a lithium ion conducting material with a mean primary diameter of between 5 nm and 100 nm having a mesoporosity of between 35% and 70% by volume. This anodic member may be used in a lithium ion battery. When first charged, metallic lithium precipitates into the mesopores of the anodic member and forms the anode.

IPC 8 full level

H01M 4/04 (2006.01); **H01M 4/02** (2006.01); **H01M 4/134** (2010.01); **H01M 4/1395** (2010.01); **H01M 4/38** (2006.01); **H01M 4/62** (2006.01); **H01M 4/66** (2006.01); **H01M 10/04** (2006.01); **H01M 10/052** (2010.01); **H01M 10/056** (2010.01); **H01M 10/0562** (2010.01); **H01M 10/0585** (2010.01); **H01M 50/117** (2021.01); **H01M 50/121** (2021.01); **H01M 50/124** (2021.01); **H01M 50/128** (2021.01); **H01M 50/129** (2021.01)

CPC (source: EP IL KR US)

H01M 4/0404 (2013.01 - EP IL KR); **H01M 4/0407** (2013.01 - EP IL KR US); **H01M 4/0409** (2013.01 - EP IL KR US); **H01M 4/0416** (2013.01 - EP IL); **H01M 4/0428** (2013.01 - EP IL KR US); **H01M 4/0447** (2013.01 - EP IL KR); **H01M 4/0457** (2013.01 - US); **H01M 4/0471** (2013.01 - US); **H01M 4/134** (2013.01 - EP IL KR); **H01M 4/1395** (2013.01 - EP IL KR); **H01M 4/382** (2013.01 - EP IL KR); **H01M 4/5825** (2013.01 - US); **H01M 4/62** (2013.01 - EP IL); **H01M 4/661** (2013.01 - EP IL KR); **H01M 10/049** (2013.01 - EP IL KR); **H01M 10/052** (2013.01 - EP IL KR); **H01M 10/0525** (2013.01 - US); **H01M 10/056** (2013.01 - EP IL); **H01M 10/0562** (2013.01 - EP IL KR US); **H01M 10/0585** (2013.01 - EP IL KR); **H01M 50/117** (2021.01 - EP IL KR); **H01M 50/121** (2021.01 - EP IL KR); **H01M 50/124** (2021.01 - EP IL KR); **H01M 50/128** (2021.01 - IL KR); **H01M 50/129** (2021.01 - IL KR); **H01M 50/128** (2021.01 - EP); **H01M 50/129** (2021.01 - EP); **H01M 2004/021** (2013.01 - EP IL KR US); **H01M 2004/027** (2013.01 - EP IL KR); **H01M 2004/028** (2013.01 - EP IL KR); **H01M 2010/0495** (2013.01 - EP IL KR); **H01M 2300/0071** (2013.01 - EP IL KR); **H01M 2300/0091** (2013.01 - EP IL); **Y02E 60/10** (2013.01 - EP IL); **Y02P 70/50** (2015.11 - EP IL)

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

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

FR 3111741 A1 20211224; **FR 3111741 B1 20221230**; CA 3182743 A1 20211230; CN 116171496 A 20230526; EP 4169093 A1 20230426; IL 299409 A 20230201; JP 2023531238 A 20230721; KR 20230030635 A 20230306; US 2023261171 A1 20230817; WO 2021260571 A1 20211230

DOCDB simple family (application)

FR 2006530 A 20200623; CA 3182743 A 20210623; CN 202180052253 A 20210623; EP 21736706 A 20210623; IB 2021055537 W 20210623; IL 29940922 A 20221222; JP 2022579663 A 20210623; KR 20237002654 A 20210623; US 202118003229 A 20210623