

Title (en)

HIGH ENERGY AND POWER DENSITY ANODE FOR BATTERIES AND METHOD FOR THE PRODUCTION THEREOF

Title (de)

ANODE MIT HOHER ENERGIE- UND LEISTUNGSDICHTE FÜR BATTERIEN UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

ANODE DE FORTE DENSITÉ D'ÉNERGIE ET DE PUISSANCE POUR BATTERIES ET MÉTHODE DE SA FABRICATION

Publication

EP 4169094 A1 20230426 (FR)

Application

EP 21737778 A 20210623

Priority

- FR 2006529 A 20200623
- IB 2021055530 W 20210623

Abstract (en)

[origin: CA3182818A1] This invention relates to a method for producing an anodic member for a lithium-ion secondary battery. The anodic member is produced from a colloidal suspension having aggregates or agglomerates of monodisperse nanoparticles of a conductive material of lithium ions having an average primary diameter of between 5 nm and 100 nm, and has a mesoporosity between 35% and 70% by volume. This anodic member may be used in lithium-ion microbatteries. During its first charging, the metallic lithium precipitates in 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 US); **H01M 4/0407** (2013.01 - EP IL KR); **H01M 4/0409** (2013.01 - EP IL KR); **H01M 4/0416** (2013.01 - EP IL); **H01M 4/0423** (2013.01 - US); **H01M 4/0428** (2013.01 - EP IL KR); **H01M 4/0447** (2013.01 - EP IL KR); **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 10/446** (2013.01 - US); **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 US); **H01M 2004/028** (2013.01 - EP IL KR); **H01M 2010/0495** (2013.01 - EP IL KR); **H01M 2300/0071** (2013.01 - EP IL KR US); **H01M 2300/0091** (2013.01 - EP IL KR); **Y02E 60/10** (2013.01 - EP IL); **Y02P 70/50** (2015.11 - EP IL)

Citation (search report)

See references of WO 2021260565A1

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 3111740 A1 20211224; **FR 3111740 B1 20221230**; CA 3182818 A1 20211230; CN 115989596 A 20230418; EP 4169094 A1 20230426; IL 299309 A 20230201; JP 2023531237 A 20230721; KR 20230030634 A 20230306; US 2023246188 A1 20230803; WO 2021260565 A1 20211230

DOCDB simple family (application)

FR 2006529 A 20200623; CA 3182818 A 20210623; CN 202180052238 A 20210623; EP 21737778 A 20210623; IB 2021055530 W 20210623; IL 29930922 A 20221220; JP 2022579662 A 20210623; KR 20237002643 A 20210623; US 202118003209 A 20210623