

Title (en)

NOVEL BATTERY SYSTEMS BASED ON LITHIUM DIFLUOROPHOSPHATE

Title (de)

NEUARTIGE BATTERIESYSTEME AUF DER BASIS VON LITHIUM-DIFLUORPHOSPHAT

Title (fr)

NOUVEAUX SYSTÈMES DE BATTERIE À BASE DE DIFLUOROPHOSPHATE DE LITHIUM

Publication

EP 3662532 A1 20200610 (EN)

Application

EP 18841764 A 20180731

Priority

- US 201715663976 A 20170731
- US 201762565985 P 20170929
- IB 2018055745 W 20180731

Abstract (en)

[origin: WO2019025980A1] A nonaqueous electrolyte for a lithium ion battery includes a lithium salt, a first nonaqueous solvent, and an additive mixture comprising a first operative additive of lithium difluorophosphate and a second operative additive of either fluoro ethylene carbonate or vinylene carbonate. A lithium-ion battery includes a negative electrode, a positive electrode comprising NMC with micrometer-scale grains, a nonaqueous electrolyte having lithium ions dissolved in a first nonaqueous solvent, and an additive mixture having a first operative additive of either fluoro ethylene carbonate or vinylene carbonate and a second operative additive of either 1,3,2-dioxathiolane-2,2-dioxide, another sulfur-containing additive, or lithium difluorophosphate.

IPC 8 full level

H01M 10/056 (2010.01); **H01M 10/0525** (2010.01)

CPC (source: EP KR)

H01M 4/505 (2013.01 - KR); **H01M 4/525** (2013.01 - EP KR); **H01M 10/0525** (2013.01 - EP KR); **H01M 10/0567** (2013.01 - EP KR); **H01M 10/0569** (2013.01 - KR); **H01M 4/366** (2013.01 - EP KR); **H01M 4/62** (2013.01 - EP KR); **H01M 10/0569** (2013.01 - EP); **H01M 2004/021** (2013.01 - EP); **H01M 2220/10** (2013.01 - EP KR); **H01M 2220/20** (2013.01 - EP KR); **H01M 2300/0025** (2013.01 - EP); **H01M 2300/004** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP)

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

DOCDB simple family (publication)

WO 2019025980 A1 20190207; CA 3071314 A1 20190207; CN 111149247 A 20200512; EP 3662532 A1 20200610; EP 3662532 A4 20210908; JP 2020529718 A 20201008; JP 2023062096 A 20230502; KR 102484670 B1 20230104; KR 20200039705 A 20200416; KR 20230008253 A 20230113; MX 2020001221 A 20201008

DOCDB simple family (application)

IB 2018055745 W 20180731; CA 3071314 A 20180731; CN 201880063848 A 20180731; EP 18841764 A 20180731; JP 2020506241 A 20180731; JP 2023023241 A 20230217; KR 20207005890 A 20180731; KR 20227046337 A 20180731; MX 2020001221 A 20180731