

Title (en)
BATTERY UTILIZING PRINTABLE LITHIUM

Title (de)
BATTERIE MIT VERWENDUNG VON DRUCKBAREM LITHIUM

Title (fr)
BATTERIE UTILISANT DU LITHIUM IMPRIMABLE

Publication
EP 3942631 A1 20220126 (EN)

Application
EP 19780090 A 20190918

Priority

- US 201916359733 A 20190320
- US 201962864739 P 20190621
- US 201962874269 P 20190715
- US 201916573587 A 20190917
- US 2019051705 W 20190918

Abstract (en)
[origin: WO2020190330A1] A battery having a cathode and a composite anode is provided. In one embodiment, the composite anode may include a lithium metal anode, a solid electrolyte and at least one interface layer. The interface layer improves the uniformity of the surface of the solid electrolyte thereby optimizing contact between the surface of the lithium metal anode and the surface of the solid electrolyte for better battery performance. The anode and/or the interface may be formed of a printable lithium composition including lithium metal powder, a polymer binder compatible with the lithium metal powder, a rheology modifier compatible with the lithium metal powder, and a solvent compatible with the lithium metal powder and with the polymer binder. The cathode may be a composite cathode. In another embodiment, the printable lithium composition may be in the form of a foil or film.

IPC 8 full level
H01M 4/38 (2006.01); **H01M 4/04** (2006.01); **H01M 4/134** (2010.01); **H01M 4/36** (2006.01); **H01M 4/587** (2010.01); **H01M 4/62** (2006.01); **H01M 6/40** (2006.01); **H01M 10/052** (2010.01); **H01M 10/0562** (2010.01)

CPC (source: EP KR)
H01M 4/0404 (2013.01 - EP); **H01M 4/0426** (2013.01 - EP); **H01M 4/134** (2013.01 - EP KR); **H01M 4/1395** (2013.01 - KR); **H01M 4/38** (2013.01 - EP); **H01M 4/382** (2013.01 - EP KR); **H01M 4/587** (2013.01 - EP); **H01M 4/622** (2013.01 - EP KR); **H01M 4/625** (2013.01 - EP KR); **H01M 10/052** (2013.01 - EP KR); **H01M 10/0562** (2013.01 - EP KR); **H01M 4/0404** (2013.01 - KR); **H01M 4/0409** (2013.01 - KR); **H01M 4/364** (2013.01 - EP); **H01M 6/40** (2013.01 - EP); **H01M 2300/0065** (2013.01 - EP); **H01M 2300/0068** (2013.01 - KR); **H01M 2300/0091** (2013.01 - KR)

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 2020190330 A1 20200924; CN 113597691 A 20211102; EP 3942631 A1 20220126; JP 2022526299 A 20220524; JP 7476226 B2 20240430; KR 20210143228 A 20211126; SG 11202108855W A 20210929

DOCDB simple family (application)
US 2019051705 W 20190918; CN 201980094296 A 20190918; EP 19780090 A 20190918; JP 2021556513 A 20190918; KR 20217033588 A 20190918; SG 11202108855W A 20190918