

Title (en)
SOLUTION-DEPOSITED ELECTRODE COATINGS FOR THERMAL RUNAWAY MITIGATION IN RECHARGEABLE BATTERIES

Title (de)
LÖSUNGSABGESCHIEDENE ELEKTRODENBESCHICHTUNGEN ZUR ABSCHWÄCHUNG DES THERMISCHEN DURCHGEHENS IN WIEDERAUFLADBAREN BATTERIEN

Title (fr)
REVÊTEMENTS D'ÉLECTRODE DÉPOSÉS EN SOLUTION POUR ATTÉNUATION D'EMBALLEMENT THERMIQUE DANS DES BATTERIES RECHARGEABLES

Publication
EP 4059071 A4 20240724 (EN)

Application
EP 20888138 A 20201108

Priority
• US 201962934522 P 20191113
• US 2020059590 W 20201108

Abstract (en)
[origin: WO2021096786A1] Provided herein are battery cells comprising artificial solid-electrolyte interphase (SEI) layers used as protective coatings on electrodes. The SEI layers are produced by liquid-phase deposition (LDP). The battery cell may comprise an anode, a cathode, an electrolyte disposed between the anode and the cathode, a polymer separator disposed between the anode and the cathode, and a casing containing the anode, the cathode, the electrolyte, and the polymer separator, wherein at least one or the anode or cathode comprises an SEI layer produced by an LDP method.

IPC 8 full level
H01M 4/36 (2006.01); **H01M 4/04** (2006.01); **H01M 4/13** (2010.01); **H01M 4/133** (2010.01); **H01M 4/139** (2010.01); **H01M 4/1393** (2010.01); **H01M 4/62** (2006.01); **H01M 10/00** (2006.01); **H01M 10/052** (2010.01); **H01M 10/42** (2006.01)

CPC (source: EP)
H01M 4/0416 (2013.01); **H01M 4/13** (2013.01); **H01M 4/133** (2013.01); **H01M 4/139** (2013.01); **H01M 4/1393** (2013.01); **H01M 4/62** (2013.01); **H01M 10/052** (2013.01); **H01M 10/4235** (2013.01); **Y02E 60/10** (2013.01)

Citation (search report)
• [XY] US 2016351973 A1 20161201 - ALBANO FABIO [US], et al
• [Y] WO 2018237083 A1 20181227 - CORESHELL TECH INC [US]
• [Y] XU RUI ET AL: "Artificial Interphases for Highly Stable Lithium Metal Anode", MATTER, vol. 1, no. 2, 1 August 2019 (2019-08-01), US, pages 317 - 344, XP055775409, ISSN: 2590-2385, DOI: 10.1016/j.matt.2019.05.016
• [Y] ANUPAM GIRI ET AL: "Synthesis of 2D Metal Chalcogenide Thin Films through the Process Involving Solution-Phase Deposition", ADVANCED MATERIALS, VCH PUBLISHERS, DE, vol. 30, no. 25, 24 April 2018 (2018-04-24), pages n/a, XP071872504, ISSN: 0935-9648, DOI: 10.1002/ADMA.201707577
• [A] ANUPAM GIRI ET AL: "One-Step Solution Phase Growth of Transition Metal Dichalcogenide Thin Films Directly on Solid Substrates", ADVANCED MATERIALS, VCH PUBLISHERS, DE, vol. 29, no. 26, 24 April 2017 (2017-04-24), pages n/a, XP071871917, ISSN: 0935-9648, DOI: 10.1002/ADMA.201700291
• See also references of WO 2021096786A1

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 2021096786 A1 20210520; CN 115210907 A 20221018; EP 4059071 A1 20220921; EP 4059071 A4 20240724

DOCDB simple family (application)
US 2020059590 W 20201108; CN 202080092933 A 20201108; EP 20888138 A 20201108