

Title (en)
ZINC ELECTRODES FOR BATTERIES

Title (de)
ZINKELEKTRODEN FÜR BATTERIEN

Title (fr)
ÉLECTRODES DE ZINC POUR BATTERIES

Publication
EP 3704754 A4 20210721 (EN)

Application
EP 18873576 A 20181030

Priority
• US 201715797181 A 20171030
• US 2018058096 W 20181030

Abstract (en)
[origin: WO2019089505A2] An article having a continuous network of zinc and a continuous network of void space interpenetrating the zinc network. The zinc network is a fused, monolithic structure. A method of: providing an emulsion having a zinc powder and a liquid phase; drying the emulsion to form a sponge; annealing and/or sintering the sponge to form an annealed and/or sintered sponge; heating the annealed and/or sintered sponge in an oxidizing atmosphere to form an oxidized sponge having zinc oxide on the surface of the oxidized sponge; and electrochemically reducing the zinc oxide to form a zinc metal sponge.

IPC 8 full level
H01M 4/04 (2006.01); **H01M 4/02** (2006.01); **H01M 4/06** (2006.01); **H01M 4/134** (2010.01); **H01M 4/24** (2006.01); **H01M 4/38** (2006.01); **H01M 4/42** (2006.01); **H01M 4/94** (2006.01); **H01M 12/06** (2006.01); **H01M 12/08** (2006.01)

CPC (source: EP KR)
H01M 4/0471 (2013.01 - KR); **H01M 4/06** (2013.01 - KR); **H01M 4/134** (2013.01 - KR); **H01M 4/244** (2013.01 - EP); **H01M 4/38** (2013.01 - EP); **H01M 4/42** (2013.01 - KR); **H01M 4/94** (2013.01 - KR); **H01M 12/06** (2013.01 - KR); **H01M 12/08** (2013.01 - EP KR); **H01M 2004/021** (2013.01 - KR); **H01M 2220/20** (2013.01 - KR); **H01M 2220/30** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP)

Citation (search report)
• [XYI] US 2014147757 A1 20140529 - ROLISON DEBRA R [US], et al
• [Y] US 2001009741 A1 20010726 - DURKOT RICHARD EDWARD [US], et al
• [A] US 2015072230 A1 20150312 - YEBKA BOUZIANE [US], et al
• See also references of WO 2019089505A2

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

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WO 2019089505 A2 20190509; **WO 2019089505 A3 20190725**; CN 111406330 A 20200710; CN 111406330 B 20240223; EP 3704754 A2 20200909; EP 3704754 A4 20210721; JP 2021501446 A 20210114; JP 7275127 B2 20230517; KR 20200066695 A 20200610

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US 2018058096 W 20181030; CN 201880071313 A 20181030; EP 18873576 A 20181030; JP 2020524107 A 20181030; KR 20207013482 A 20181030