

Title (en)

OPTIMAL MEMBRANE ELECTROCHEMICAL ENERGY STORAGE SYSTEMS

Title (de)

ELEKTROCHEMISCHE ENERGIESPEICHERSYSTEME MIT EINER OPTIMALEN MEMBRAN

Title (fr)

SYSTÈMES DE STOCKAGE D'ÉNERGIE ÉLECTROCHIMIQUES À MEMBRANE OPTIMALE

Publication

**EP 2878026 A4 20160615 (EN)**

Application

**EP 13823245 A 20130724**

Priority

- US 201261676473 P 20120727
- US 201261683260 P 20120815
- US 201261738546 P 20121218
- US 201261739538 P 20121219
- US 201261739140 P 20121219
- US 201261739145 P 20121219
- US 201313795878 A 20130312
- US 201313796004 A 20130312
- US 201313948497 A 20130723
- US 2013051802 W 20130724

Abstract (en)

[origin: WO2014018615A1] This invention is directed to aqueous redox flow batteries comprising ionically charged redox active materials and separators, wherein the separator is about 100 microns or less and the flow battery is capable of (a) operating with a current efficiency of at least 85% with a current density of at least about 100 mA/cm<sup>2</sup>; (b) operating with a round trip voltage efficiency of at least 60% with a current density of at least about 100 mA/cm<sup>2</sup>; and / or (c) giving rise to diffusion rates through the separator for the first active material, the second active material, or both, of about 1x10<sup>-7</sup> mol/cm<sup>2</sup>-sec or less.

IPC 8 full level

**H01M 8/08** (2006.01); **H01M 8/18** (2006.01); **H01M 8/10** (2006.01); **H01M 8/1053** (2016.01)

CPC (source: EP KR)

**H01M 8/1053** (2013.01 - KR); **H01M 8/1055** (2013.01 - KR); **H01M 8/188** (2013.01 - EP KR); **H01M 8/1053** (2013.01 - EP); **H01M 8/1055** (2013.01 - EP); **H01M 2008/1095** (2013.01 - EP); **H01M 2300/0082** (2013.01 - EP KR); **Y02E 60/50** (2013.01 - EP)

Citation (search report)

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- [X] EP 0595688 A1 19940504 - NIPPON TELEGRAPH & TELEPHONE [JP]
- [E] WO 2014018589 A1 20140130 - SUN CATALYTIX CORP [US]
- [Y] PUIKI LEUNG ET AL: "Progress in redox flow batteries, remaining challenges and their applications in energy storage", RSC ADVANCES: AN INTERNATIONAL JOURNAL TO FURTHER THE CHEMICAL SCIENCES, vol. 2, no. 27, 1 January 2012 (2012-01-01), GB, pages 10125, XP055260653, ISSN: 2046-2069, DOI: 10.1039/c2ra21342g
- See references of WO 2014018615A1

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 2014018615 A1 20140130**; AU 2013295838 A1 20150219; BR 112015001740 A2 20170704; CN 105190971 A 20151223; CN 105190971 B 20190329; EP 2878026 A1 20150603; EP 2878026 A4 20160615; EP 3502057 A1 20190626; IL 236906 A0 20150331; IN 676DEN2015 A 20150626; JP 2015523698 A 20150813; JP 6400577 B2 20181003; KR 102149161 B1 20200828; KR 20150045453 A 20150428; MX 2015001281 A 20150904; RU 2015106676 A 20160920

DOCDB simple family (application)

**US 2013051802 W 20130724**; AU 2013295838 A 20130724; BR 112015001740 A 20130724; CN 201380050681 A 20130724; EP 13823245 A 20130724; EP 19155139 A 20130724; IL 23690615 A 20150125; IN 676DEN2015 A 20150127; JP 2015524413 A 20130724; KR 20157005380 A 20130724; MX 2015001281 A 20130724; RU 2015106676 A 20130724