

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

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Application

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- 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/cm²; (b) operating with a round trip voltage efficiency of at least 60% with a current density of at least about 100 mA/cm²; and / or (c) giving rise to diffusion rates through the separator for the first active material, the second active material, or both, of about 1x10⁻⁷ mol/cm²-sec or less.

IPC 8 full level

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Citation (search report)

- [XY] US 2012052347 A1 20120301 - WILSON GREGORY J [US], et al
- [X] EP 0595688 A1 19940504 - NIPPON TELEGRAPH & TELEPHONE [JP]
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- [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

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