

Title (en)

SELF-CHARGING AND/OR SELF-CYCLING ELECTROCHEMICAL CELLS

Title (de)

SELBSTLADENDE UND/ODER SELBSTZYKLISCHE ELEKTROCHEMISCHE ZELLEN

Title (fr)

CELLULES ÉLECTROCHIMIQUES AUTOCHARGEABLES ET/OU À CYCLAGE AUTOMATIQUE

Publication

EP 3482444 A1 20190515 (EN)

Application

EP 17743122 A 20170710

Priority

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- US 2017041382 W 20170710

Abstract (en)

[origin: WO2018013485A1] The present disclosure provides an electrochemical cell including a solid glass electrolyte including an alkali metal working ion that is conducted by the electrolyte, and a dipole, an anode having an effective anode chemical potential μ_A , and a cathode having an effective cathode chemical potential μ_C . One or both of the cathode and anode substantially lack the working ion prior to an initial charge or discharge of the electrochemical cell. At open-circuit prior to an initial charge or discharge, an electric double-layer capacitor is formed at one or both of an interface between the solid glass electrolyte and the anode and an interface between the solid glass electrolyte and the cathode due to a difference between μ_A and μ_C .

IPC 8 full level

H01M 10/0562 (2010.01); **H01M 6/18** (2006.01)

CPC (source: EP KR)

H01M 6/182 (2013.01 - EP KR); **H01M 6/185** (2013.01 - EP KR); **H01M 10/0562** (2013.01 - EP KR); **H01M 10/4235** (2013.01 - KR); **H01M 2300/0068** (2013.01 - KR); **H01M 2300/0071** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

See references of WO 2018013485A1

Designated contracting state (EPC)

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