Title (en)

ELECTROCHEMICAL CELL AND METHOD OF USING SAME

Title (de)

ELEKTROCHEMISCHE ZELLE UND VERFAHREN ZU IHRER VERWENDUNG

Title (fr)

CELLULE ÉLECTROCHIMIQUE ET SON PROCÉDÉ D'UTILISATION

Publication

EP 4252294 A1 20231004 (EN)

Application

EP 21883621 A 20211018

Priority

- US 202017074297 A 20201019
- US 2021055389 W 20211018

Abstract (en)

[origin: WO2022086845A1] A novel electrochemical cell is disclosed in multiple embodiments. The instant invention relates to an electrochemical cell design. In one embodiment, the cell design can electrolyze water into pressurized hydrogen using low-cost materials. In another embodiment, the cell design can convert hydrogen and oxygen into electricity. In another embodiment, the cell design can electrolyze water into hydrogen and oxygen for storage, then later convert the stored hydrogen and oxygen back into electricity and water. In some embodiments, the cell operates with a wide internal pressure differential.

IPC 8 full level

H01M 8/1004 (2016.01)

CPC (source: EP)

C02F 1/46109 (2013.01); **C25B 1/04** (2013.01); **C25B 9/05** (2021.01); **C25B 9/23** (2021.01); **H01M 8/1004** (2013.01); **H01M 8/186** (2013.01); C02F 2001/46142 (2013.01); C02F 2201/46115 (2013.01); C02F 2303/10 (2013.01); H01M 2300/0094 (2013.01); Y02E 60/50 (2013.01)

Citation (search report)

See references of WO 2022086845A1

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

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022086845 A1 20220428; EP 4252294 A1 20231004

DOCDB simple family (application)

US 2021055389 W 20211018; EP 21883621 A 20211018