

Title (en)

ELECTRODE AND PREPARATION METHOD AND USE THEREOF

Title (de)

ELEKTRODE UND HERSTELLUNGSVERFAHREN SOWIE VERWENDUNG DAVON

Title (fr)

ÉLECTRODE ET SON PROCÉDÉ DE FABRICATION ET UTILISATION ASSOCIÉE

Publication

EP 4028580 A4 20230816 (EN)

Application

EP 20864249 A 20201110

Priority

- CN 201910850530 A 20190910
- CN 2020127682 W 20201110

Abstract (en)

[origin: WO2021047687A2] The application discloses an electrode and a preparation method and use thereof. The electrode includes a substrate and a catalytic layer; the catalytic layer is positioned on the upper surface and/or the lower surface of the substrate, and the catalytic layer includes a plurality of catalytic layer units with different chemical compositions; an outermost catalytic layer unit in the catalytic layer that is away from the direction of the substrate is an oxide layer containing a first metal element; other catalytic layer units except the outermost catalytic layer unit are oxide composite layers containing a first metal element and a second metal element; the mole percentage of the first metal element in each layer of the catalytic layer units accounted for a total of metal elements in each layer of the catalytic layer units increases layer by layer along the direction away from the substrate. The electrode can be used as an insoluble anode in the electrometallurgy, can reduce the cell voltage to play an energy-saving role while having a long service life in the electrometallurgy process in which the electrolyte contains high concentration of fluoride ion, and the problems of environmental pollution like lead anode and influence on product purity will not occur.

IPC 8 full level

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CPC (source: CN EP KR)

C25C 1/00 (2013.01 - CN); **C25C 1/10** (2013.01 - EP KR); **C25C 1/16** (2013.01 - EP KR); **C25C 7/02** (2013.01 - CN EP KR)

Citation (search report)

- [X1] JP 3832645 B2 20061011
- [X1] JP 2005089779 A 20050407 - WAKO SANGYO KK
- [X1] US 5098546 A 19920324 - KAWASHIMA YUKIO [JP], et al
- See also references of WO 2021047687A2

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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BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2021047687 A2 20210318; **WO 2021047687 A3 20210429**; CA 3149248 A1 20210318; CN 112553657 A 20210326; CN 112553657 B 20230602; EP 4028580 A2 20220720; EP 4028580 A4 20230816; JP 2022548205 A 20221117; KR 20230088625 A 20230620

DOCDB simple family (application)

CN 2020127682 W 20201110; CA 3149248 A 20201110; CN 201910850530 A 20190910; EP 20864249 A 20201110; JP 2022513635 A 20201110; KR 20227011680 A 20201110