

Title (en)

METHOD FOR PRODUCING A CATALYST-COATED MEMBRANE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER KATALYSATORBESCHICHTETEN MEMBRAN

Title (fr)

PROCÉDÉ DE PRODUCTION DE MEMBRANE REVÊTUE DE CATALYSEUR

Publication

EP 4214780 A1 20230726 (DE)

Application

EP 21770268 A 20210913

Priority

- DE 102020124217 A 20200917
- EP 2021075034 W 20210913

Abstract (en)

[origin: WO2022058260A1] The invention relates to a method for producing a catalyst-coated membrane (CCM), having the steps of: producing and/or providing at least one first ink (16) with a first ink composition, comprising supported catalyst particles (13), a proton-conductive ionomer (15), and a dispersing agent, the content of supported catalyst particles (13) in the composition remaining below the content of the proton-conductive ionomer (15); unwinding a web-shaped proton-conductive membrane material (20) which is provided on a roll (22); applying at least one layer of the first ink (16) onto at least one section of the membrane material (20) using a first application tool (17); and sputtering a catalyst powder consisting of or comprising catalyst particles (13) onto the outermost ink layer facing away from the membrane material (20) using a sputtering device (29).

IPC 8 full level

H01M 4/86 (2006.01); **H01M 4/88** (2006.01); **H01M 4/92** (2006.01); **H01M 8/1004** (2016.01); **H01M 8/1018** (2016.01)

CPC (source: EP KR US)

H01M 4/8642 (2013.01 - EP KR US); **H01M 4/8647** (2013.01 - EP US); **H01M 4/8663** (2013.01 - EP KR); **H01M 4/881** (2013.01 - EP KR US); **H01M 4/8828** (2013.01 - EP KR US); **H01M 4/886** (2013.01 - US); **H01M 4/9058** (2013.01 - KR US); **H01M 4/9083** (2013.01 - KR US); **H01M 4/926** (2013.01 - KR); **H01M 4/928** (2013.01 - EP); **H01M 8/1004** (2013.01 - EP KR US); **H01M 8/1018** (2013.01 - EP KR US); **H01M 4/9058** (2013.01 - EP); **H01M 4/9083** (2013.01 - EP); **H01M 4/926** (2013.01 - EP); **Y02E 60/50** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

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)

DE 102020124217 A1 20220317; CN 115668552 A 20230131; EP 4214780 A1 20230726; JP 2023524741 A 20230613; JP 7470816 B2 20240418; KR 20230002803 A 20230105; US 2023238543 A1 20230727; WO 2022058260 A1 20220324

DOCDB simple family (application)

DE 102020124217 A 20200917; CN 202180042753 A 20210913; EP 2021075034 W 20210913; EP 21770268 A 20210913; JP 2022567117 A 20210913; KR 20227040113 A 20210913; US 202118001852 A 20210913