

Title (en)
CARBON DIOXIDE ELECTROLYSIS OPERATION MODE

Title (de)
BETRIEBSART FÜR KOHLENDIOXYD-ELEKTROLYSE

Title (fr)
MODE DE FONCTIONNEMENT D'ÉLECTROLYSE DE DIOXYDE DE CARBONE

Publication
EP 4276223 A1 20231115 (EN)

Application
EP 22172254 A 20220509

Priority
EP 22172254 A 20220509

Abstract (en)
A CO₂RR (reduction reaction) and a CO₂RR electrochemical cell (2) is provided, comprising a three-phase boundary (14) having: a gaseous CO₂ diffused at least partially through a porous cathode (8), a solid catalyst (10) operatively associated with the cathode (8), and a catholyte (12) or membrane (16) in communication with the catalyst (10); a pressure controller (30) adapted to control back pressure within, at or near the three-phase boundary (14); and a reaction product of the CO₂RR selected from the group consisting of: hydrocarbon, alcohol, H₂ and CO.

IPC 8 full level
C25B 1/23 (2021.01); **C25B 3/03** (2021.01); **C25B 3/07** (2021.01); **C25B 3/26** (2021.01); **C25B 9/23** (2021.01); **C25B 11/032** (2021.01); **C25B 15/023** (2021.01); **C25B 15/025** (2021.01)

CPC (source: EP)
C25B 1/23 (2021.01); **C25B 3/03** (2021.01); **C25B 3/07** (2021.01); **C25B 3/26** (2021.01); **C25B 9/23** (2021.01); **C25B 11/032** (2021.01); **C25B 15/023** (2021.01); **C25B 15/025** (2021.01)

Citation (search report)
• [X] WO 2022022849 A1 20220203 - LINDE GMBH [DE]
• [X] DE 102020206447 A1 20211125 - SIEMENS AG [DE]
• [X] US 2019233957 A1 20190801 - JEANTY PHILIPPE [DE], et al
• [X] WO 2021023435 A1 20210211 - SIEMENS AG [DE]

Designated contracting state (EPC)
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Designated extension state (EPC)
BA ME

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DOCDB simple family (publication)
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