

Title (en)

METHOD AND DEVICE FOR ELECTROLYSIS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ELEKTROLYSE

Title (fr)

PROCÉDÉ ET DISPOSITIF D'ÉLECTROLYSE

Publication

**EP 4263905 A1 20231025 (DE)**

Application

**EP 21836145 A 20211213**

Priority

- DE 102020133773 A 20201216
- EP 2021085382 W 20211213

Abstract (en)

[origin: WO2022128855A1] The invention relates to a method for electrolysis, wherein H<sub>2</sub>O is brought into contact with an anode (2) and a catholyte is brought into contact with a cathode (3), wherein the catholyte contains an additive, wherein an electrical voltage is applied between the anode (2) and the cathode (3) such that oxygen is formed on the anode (2) and the additive is reduced on the cathode (3), and wherein protons and the reduced additive are brought into contact with a catalyst (4) such that the reduced additive is oxidised and hydrogen is formed from the protons. The additive means that the electrolysis can be carried out under low pressure and hydrogen can still be obtained at high pressure. This simplifies the design of the electrolysis cell and prevents efficiency-reducing gas cross-permeation.

IPC 8 full level

**C25B 1/02** (2006.01); **C01B 3/02** (2006.01); **C25B 1/01** (2021.01); **C25B 1/04** (2021.01); **C25B 9/19** (2021.01); **C25B 9/70** (2021.01); **C25B 15/08** (2006.01)

CPC (source: EP US)

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Citation (search report)

See references of WO 2022128855A1

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