

Title (en)  
ENERGY CONVERTING DEVICE FOR CONVERTING ELECTRIC ENERGY INTO CHEMICAL ENERGY, ELECTRICAL NETWORK COMPRISING SUCH AN ENERGY CONVERTING DEVICE, AND METHOD FOR OPERATING SUCH AN ENERGY CONVERTING DEVICE

Title (de)  
ENERGIEWANDLUNGSEINRICHTUNG ZUR UMWANDLUNG ELEKTRISCHER ENERGIE IN CHEMISCHE ENERGIE, STROMNETZ MIT EINER SOLCHEN ENERGIEWANDLUNGSEINRICHTUNG, UND VERFAHREN ZUM BETREIBEN EINER SOLCHEN ENERGIEWANDLUNGSEINRICHTUNG

Title (fr)  
DISPOSITIF DE TRANSFORMATION D'ÉNERGIE POUR LA TRANSFORMATION D'ÉNERGIE ÉLECTRIQUE EN ÉNERGIE CHIMIQUE, RÉSEAU COMPRENANT UN TEL DISPOSITIF DE TRANSFORMATION D'ÉNERGIE ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UN TEL DISPOSITIF DE TRANSFORMATION D'ÉNERGIE

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Application  
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Abstract (en)  
[origin: WO2018234325A1] The invention relates to an energy converting device (3) for converting electric energy into chemical energy, comprising an electrolysis device (5) which can be connected to an electrical network (1) and is designed to split water into hydrogen and oxygen using electric power; a fuel synthesis device (7) which is fluidically connected to the electrolysis device (5) such that the fuel synthesis device (7) can be supplied with hydrogen generated in the electrolysis device (5) as a reactant, wherein the fuel synthesis device (7) is designed to synthesize a fuel from hydrogen and carbon dioxide; and an internal combustion engine (9) which is fluidically connected to the electrolysis device (5) such that the internal combustion engine (9) can be supplied with oxygen generated in the electrolysis device (5). The internal combustion engine (9) is designed to be operated in a continuous mode using the oxygen generated in the electrolysis device (5) as combustion gas. The invention further relates to a method for operating such an energy converting device.

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