

Title (en)
FUEL CELL SYSTEM, MOTOR VEHICLE CONTAINING A FUEL CELL SYSTEM, AND METHOD FOR OPERATING A FUEL CELL SYSTEM

Title (de)
BRENNSTOFFZELLENSYSTEM, KRAFTFAHRZEUG ENTHALTEND EIN BRENNSTOFFZELLENSYSTEM UND VERFAHREN ZUM BETREIBEN EINES BRENNSTOFFZELLENSYSTEMS

Title (fr)
SYSTÈME DE PILES À COMBUSTIBLE, VÉHICULE AUTOMOBILE COMPRENANT UN SYSTÈME DE PILES À COMBUSTIBLE ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UN SYSTÈME DE PILES À COMBUSTIBLE

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Application
EP 14758585 A 20140904

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Abstract (en)
[origin: WO2015032880A1] The invention relates to a fuel cell system, comprising a plurality of fuel cells combined to form a fuel cell stack. The fuel cell system is characterized in that at least one fuel cell is a redox flow fuel cell having an electrode assembly, which electrode assembly has a proton-permeable separator, which separator is arranged between an anode region and a cathode region. The redox flow fuel cell has a regenerator spatially separated from the electrode assembly, and a water-forming reaction of the redox flow fuel cell occurs in the regenerator. The redox flow fuel cell also comprises at least one oxidation-fluid conveying unit for feeding oxidation fluid into the regenerator in order to perform the water-forming reaction in the regenerator of the redox flow fuel cell. The redox flow fuel cell also comprises a pumping circuit, comprising a pumping device and a pumping line, for transporting an electrochemical storage system through the cathode region or the anode region of the redox flow fuel cell and through the regenerator. The electrochemical storage system contains active redox molecules and is designed to receive and release electrons. The fuel cell system also comprises a control device, which is designed to adjust an available electrical and/or thermal power of the fuel cell system by changing a redox state of the electrochemical storage system.

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