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Hao(10) **Pub. No.: US 2023/0231152 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PROTON EXCHANGE MEMBRANE FUEL
CELL AND PREPARATION METHOD
THEREFOR, AND PROTON EXCHANGE
MEMBRANE FUEL CELL STACK****Publication Classification**(51) **Int. Cl.**
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(2) Date: **Nov. 9, 2022**(57) **ABSTRACT**

A proton exchange membrane fuel cell that uses hydrogen peroxide as an oxidant is disclosed. The proton exchange membrane fuel cell includes an anode gas diffusion layer, an anode catalyst layer, a proton exchange membrane and a cathode catalyst layer arranged sequentially. The proton exchange membrane fuel cell further includes a single electrode plate, and does not include a cathode gas diffusion layer. A cell stack including the proton exchange membrane fuel cell is also disclosed, as well as a method for preparing the proton exchange membrane fuel cell.

