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MOLTEN HYDRIDE FUEL CELL



ABSTRACT

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A fuel cell assembly comprises at least one fuel cell (10). The fuel cell (10) comprises an anode (15) and a cathode (16) held in a spaced apart relationship by at least one spacer element (22) comprising an electrically insulating material. A proximal end of the spacer element (22) is in contact with the cathode (16), and a distal end is in contact with the anode (15). An electrolyte (17) is disposed between, and in contact with the anode (15) and the cathode (16). The electrolyte (17) comprises a molten salt having a hydride ion conductance number greater than about 0.95 at a fuel cell operating temperature. A fuel gas inlet (18), adjacent to the cathode (16), is provided for delivering a fuel gas to the electrolyte. An oxidizing gas inlet (19), adjacent to the anode (15), is provided for delivering an oxidizing gas to the electrolyte (17). An exhaust port (20) is in fluid communication with the anode (15).

Fig. 3