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Author (1), Co-Author (1,2), Co-author (2)

(1) CARISMA LLC

111 Carisma Street, DE-47057 Duisburg, Germany

(2) National Fuel Cell Research Centre

Proton Street 100, DE-24228 Oldenburg, Germany

Tel.: +49-75-981-6320

youremail@universal.de

Abstract

High and middle temperature PEMFCs are very relevant today owing to their many fold advantages. The price of proton conducting membranes, materials used in the electrode and the system have to meet the DoE targets. The new class of membranes allow these cells to operate in the 80 – 240°C range. Waste heat from such cells would be useful for cooling and heating purposes leading to a high CCHP efficiency. The membranes should be suitable for use both in humidified and non-humidified PEMFCs. In the absence of a viable, cost-effective H2 economy, these cells enable use of reformates without exhibiting power loss or degradation over prolonged periods.

Graphic/Table

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