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Short Communication

Cathode Supported Hybrid Direct Carbon Fuel Cells with Different Anodes

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Three different types of hybrid direct carbon fuel cells were investigated for direct electrochemical oxidation of carbon black. One where anode-supported with a Ni/YSZ (yttria stabilized zirconia) anode and two cathode supported cells with either a Ni/YSZ anode or a praseodymium-doped cerium oxide anode. The middle one performed the best, probably due to better contact to anode with the fuel and the presence of metallic nickel.

Keywords: Carbon black oxidation, HDCFC, Cathode supported, CPO, Ni-YSZ

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