

Preparation of modified Ni/YSZ anode for internal reforming of intermediate temperature SOFC

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Nickel-Yttria Stabilized Zirconia cermet has been widely used in solid oxide fuel cells as an anode material. However, Ni-YSZ is not appropriate for intermediate temperature SOFC anode working below 800°C due to the loss of active sites by carbon deposition on Ni/YSZ anode in reforming process of hydrocarbon fuel. And there are many reports on the use of oxide catalysts such as ceria-based materials in replacement for the Ni-based SOFC anode. In this study, we prepared modified Ni-YSZ materials and tested them via methane reformation. We investigated the effect of the addition of materials on the catalysts to inhabit the coking.