سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها
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عنوان مقاله:

Solid oxide fuel cells promoted with nano sized Pd catalysts for both hydrocarbon and hydrogen economies

محل انتشار:

دومین کنفرانس ملی هیدروژن و پیل سوختی (سال: 1391)

تعداد صفحات اصل مقاله: 5

نویسنده:

Alireza Babaei - *Energy Research Institute @ NTU, Nanyayang Technological University, Singapore*

خلاصه مقاله:

Nickel/gadolinium doped ceria (Ni/GDC) anode of solid oxide fuel cells (SOFC) promoted with palladium catalyst nano particles were used to investigate the possibility of direct utilization of hydrocarbons as the fuel in SOFCs. Presence of palladium catalyst nano particles at anode electrode significantly decreases the activation energy for methanol oxidation reaction. Among the hydrocarbon fuels studied, methanol provides the less chance for carbon deposition in direct utilization of hydrocarbon fuels. The probable relation between better performance of methanol fuel and .molecular structure of the hydrocarbon fuels is discussed

کلمات کلیدی:

,Solid oxide fuel cell; Hydrocarbon, Palladium, Nano Particles

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