Vairous supported Rh-based catalyst for autothermal reforming of iso-octane

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Hydrocarbonaceous fuel such as gasoline has an existing infrastructure, a high power density and extensive public acceptance. Accordingly, reforming process of gasoline recently applied with Solid oxide fuel cell (SOFC) and Polymer electrolyte membrane fuel cell (PEMFC). In this study, autothermal reforming of iso-octane were investigated by using various supports. The used supports were alumina, ceria and zirconia which doped rhodium (0.5wt%) by wetness impregnation method. When autothermal reforming of gasoline was carried out, temperature of mixing zone and reaction zone applied at 350℃, 700℃, respectively. Feed conditions were adopted with S/C ratio of 2, O2/C ratio of 0.42.