

#### **460c Effect of Support on Autothermal Reforming of Propane**

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Propane can be used as a surrogate for gasoline in studying the conversion of gasoline to hydrogen for fuel-cell use on board vehicles. Autothermal reforming combines exothermic oxidation with endothermic steam reforming to generate hydrogen from hydrocarbons with relatively small thermal costs. Three different kinds of ceria support have been used as the support for a Pt catalyst for this reaction. A commercial alumina support has also been used. The properties of the supports alone and the supported catalysts are compared and correlated with catalytic performance.