# Catalytic Production of Hydrogen through Aqueous Phase Reforming over Porous Carbon Supported Platinum Catalyst

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This study focuses on production of hydrogen from ethylene glycol through aqueous phase reforming (APR) process using porous carbon supported platinum catalyst. Catalyst characterization of catalysts were performed by X-ray powder diffraction pattern, transmission electron microscopy, N2 sorption, and H2 chemisorption techniques. The effect of catalytic properties such as amount of platinum loading, metal particle size and metal dispersion were investigated. The results show that a highly porous structure, high surface areas, large pore volumes, uniform pore sizes, and a high dispersion of platinum nanoparticles in the pores are maintained after APR of ethylene glycol. The porous carbon exhibits outstanding hydrothermal stability in aqueous phase under high pressure and temperature. It might give a good conversion and selectivity for hydrogen production using the porous carbon supported platinum catalyst comparing with other inorganic oxide supports.