

Catalyst of Mg Doped Pyrochlores on Oxidative Steam Reforming of Ethanol for Hydrogen Production

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Catalysts of Mg- doped pyrochlores were synthesized through sol-gel method, which were characterized by X-ray powder diffraction (PXRD), X-ray photoelectron spectroscopy (XPS), and temperature-programmed reduction (TPR). Performance test on oxidative steam reforming reaction of ethanol showed high conversion of ethanol (~100%) and high yield of hydrogen production (>100% hydrogen selectivity). The effect of Mg- doping was further studied to understand the effect of doped metal ion to activation temperature and production of hydrogen.

Keywords: Stream Reforming of ethanol; Pyrochlores; solid solution, Ruthenium

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