

Abstract

Fe–Cr–O and Fe–Mg–O catalysts were used for hydrogen production via the water-gas shift reaction. Fe–Cr–O catalysts were synthesized by different methods such as co-precipitation, impregnation and substitution technique. Catalysts were characterized by XRD, TG, BET and TPR. Addition of Mg improved the catalytic activity of Fe–O by favouring the development of small and well dispersed Fe particles (MgFe_2O_4). As a consequence, MgO prevented iron phase sintering in the presence of a large amount of water in the WGS reaction.