The effect of digestion time on the catalytic performance over Ni/MgO catalysts for CO_2 reforming of CH_4

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Digestion time has been optimized to prepare MgO supports for Ni catalysts. Digestion time was changed from 0 to 120 h. Ni/MgO catalysts were prepared by an incipient wetness impregnation method for CO_2 reforming of CH_4 reaction. An optimum digestion time for the synthesis MgO support has been found to be 72 h for Ni/MgO catalyst to achieve high CH_4 and CO_2 conversion at a very high gas hourly space velocity (GHSV) of 1,000,000 h^{-1}. The outstanding catalytic performance is mainly due to strong interaction between Ni and MgO.