

The effect of preparation method on the catalytic performance over Ce-promoted Cu/CeO₂ catalyst for low temperature water-gas shift reaction

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The low temperature water-gas shift reaction has been carried out at a very high gas hourly space velocity of 72,152 h⁻¹ over Ce-promoted Cu/CeO₂. The preparation method was optimized to get a highly active Ce-promoted Cu/CeO₂ catalyst for LT-WGS reaction. Ce-promoted Cu/CeO₂ catalysts were prepared by co-impregnation (Cu-Ce/CeO₂) and sequential impregnation (Cu/Ce/CeO₂ and Ce/Cu/CeO₂) methods. The effect of preparation method on catalytic performance has been interpreted through characterization of TPR, BET, XRD, and related to activity results in low temperature water-gas shift reaction.