

材料工程专栏

Fischer-Tropsch Synthesis over Modified Cobalt Catalysts

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摘要 The catalysts of Co/Zr-SiO₂ were prepared by precipitation and the promoter of Pt was supported by impregnation. The reducibility of the cobalt oxide and the other physicochemical properties of the catalysts were characterized by TPR, TPD, BET and XPS. With the evaluation of the reduction temperature, the reduction degree increased but the surface area of the catalysts and the adsorption property for reactant CO distinctly decreased; The addition of Pt resulted in the improvement of the reducibility by decreasing the reduction temperature of cobalt oxide species. The FT-synthesis has been performed in a quartz fixed-bed reactor, and the experimental results showed that the best activity for promoted catalyst has been found at the reduction temperature of 400°C, in spite of its uncompleted reduction.

关键词 [FT synthesis, cobalt, reduction, XPS](#)

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