

عنوان مقاله:

Solvent Pre-treated Effects of Carbon Nanotube-supported Cobalt Catalysts on Activity and Selectivity of Fischer-Tropsch Synthesis

محل انتشار:

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خلاصه مقاله:

In this study, the effect of preparation technique of carbon nanotube (CNT)-supported cobalt catalysts on the activity and selectivity of Fischer-Tropsch synthesis (FTS) was studied. Different concentrations of acetic acid were used for the pretreatment of the catalyst support to modify the surface properties of CNT. This modification improved the reduction degree and dispersion of supported cobalt simultaneously. The catalysts were prepared by incipient wetness impregnation of the cobalt precursor, and deionized water was used as the preparation medium. The obtained catalysts were characterized by XRD, TPR, TEM, and H₂ chemisorption. The catalysts prepared under the optimum conditions exhibited significant stability and activity for FTS reaction in a CSTR reactor during ۱۲۰ hr of experimental tests.

کلمات کلیدی:

Carbon Nanotube, Cobalt Catalyst, Fischer-Tropsch Synthesis, Acetic Acid, Functional Groups

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