

## عنوان مقاله:

Modified  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> and its application for FT synthesis

## محل انتشار:

پانزدهمین کنگره ملی مهندسی شیمی ایران (سال: 1393)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

In this research,  $\gamma$ -Alumina was pretreated in the presence of phosphoric acid-ethanol, and then used to prepare the supported cobalt catalysts for Fischer-Tropsch synthesis (FTS). Different concentrations of phosphoric acid were applied for pretreatment of  $\gamma$ -Alumina to modify its surface properties. The catalysts were prepared by incipient wetness impregnation of the cobalt precursor, and deionized water was used as preparation medium. The reduction degree and dispersion of  $\gamma$ -alumina-supported cobalt catalyst were improved through this pretreatment. The obtained catalysts were characterized by FTIR, NH<sub>3</sub>-TPD, XRD, TPR, TEM and H<sub>2</sub> chemisorption. These characterizations clearly showed the changes of morphology (surface area, pore volume, pore size distribution and crystallite phase) as well as chemical properties (e.g. acidity) of the supports. Optimize the support pretreatment parameters exhibited significant catalyst's stability and activity, applying to FTS reaction in CSTR reactor during 320 h test.

## کلمات کلیدی:

$\gamma$ -Alumina, Cobalt catalyst, Fischer-Tropsch synthesis, Phosphoric acid, Activity and stability

## لینک ثابت مقاله در پایگاه سیویلیکا:

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