

## Effects of process variables on the Fischer–Tropsch synthesis over iron–based catalysts in a fixed–bed reactor

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Iron–based catalysts are highly promising for the Fischer–Tropsch synthesis (FTS) because of their high activity and low cost. In this study, we carried out the Fischer–Tropsch synthesis (FTS) over precipitated iron–based catalysts in a fixed–bed reactor (FBR) in a temperature range of 220–280 °C. The results showed that the higher CO conversion and the lower selectivity to heavy hydrocarbons at the higher reaction temperature. In case of the reaction below 250 °C, the catalytic activity gradually decreased with increased time possibly due to the deactivation by re–oxidation of catalysts.