

### Effect of promoter on the catalytic FT performance over granule type Co-based catalyst

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Fischer-Tropsch Synthesis(FTS) for the production of clean synthetic fuels has been considered as a key technology in GTL (gas-to-liquids) process.

In this work, Co-based modified catalysts supported on spherical  $\gamma$ -Alumina were prepared by an impregnation method. To confirm the effect of the promoter, the prepared catalysts were characterized by  $N_2$  physisorption, CO chemisorption, TPR, and SEM techniques. Specially, EDX analysis showed the metal loading efficiency of the promoter. The catalytic performance for FTS was carried out in a fixed bed reactor system with the  $H_2/CO$  ratio of 2:1, reaction temperature of 230°C and reaction pressure of 20bar.