

## Effect of titanium pretreatment on the catalytic properties of Co/Ti-Al<sub>2</sub>O<sub>3</sub> in Fischer-Tropsch synthesis

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The Fischer-Tropsch Synthesis (FTS) on cobalt-based catalysts has been a promising route to synthesize clean and environmentally benign fuels in the near future. Alumina is one of the most employed supports for cobalt-based FT catalysts due to its favorable mechanical and surface properties. The present study focuses on the development of simple pretreatment of alumina support by Ti(OR)<sub>4</sub>. Our results suggest that the small amounts of Ti(OR)<sub>4</sub> during preparation of catalysts play an important role in the catalytic properties during FTS reaction. The increase of CO conversion and C<sub>5</sub><sup>+</sup> selectivity with Ti pretreatment seems to be mainly due to the facile reducibility at much lower temperature than that of cobalt oxides on alumina support itself.