

## The catalytic performance of Ru/Co/Zr-Al<sub>2</sub>O<sub>3</sub> Fischer-Tropsch catalysts prepared from different methods

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Cobalt-based catalysts with 20 wt.%Co and 0.5wt.%Ru supported on zirconia-alumina mixed oxide was prepared by three different methods, such as co-precipitation (COP), physical-mixing of precipitates (PMP) and conventional impregnation (IMP) to investigate its performance during Fischer-Tropsch (FT) synthesis. Ru/Co/Zr-Al<sub>2</sub>O<sub>3</sub> catalysts prepared by COP have shown higher CO conversion and higher selectivity to C<sub>8</sub>+. The catalytic properties during FT synthesis are related to the structural aspects of cobalt-based catalysts and their cluster size distribution observed with different preparation methods.