

## The prospective of ionic liquids as a solvent for the Fischer-Tropsch synthesis

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Recently, ionic liquids (IL) are being known for an alternative and prospective materials for many areas because of their characters such as thermal stability, non-flammability, low vapor pressure and high ionic conductivity etc. In this study, many ionic liquids were researched about the effects on the performance of Fischer-Tropsch Synthesis (FTS). FTS was carried out in a slurry reactor with Fe-Mn catalyst under a specific condition including reaction temperature of 553K, pressure of 20bar, inlet H<sub>2</sub>/CO molar ratio of 2 and space velocity of  $0.93 \times 10^{-3} \text{Nm}^3 \text{kgcat}^{-1} \text{s}^{-1}$ . Products in the effluent gas and traps were analyzed by GC. The CO conversion and the light olefin selectivity were focussed mainly. Also, the performance of IL for FTS were compared with commercial solvents such as a squalane or a paraffin liquid.