

Fischer-Tropsch synthesis over promoted Molybdenum Carbide catalysts

This book is a synopsis of recent investigations on the performance of promoted molybdenum carbide catalysts for Fischer-Tropsch synthesis (FTS) referring to the reaction between carbon monoxide and hydrogen for producing an alternative and green fuel to replace petroleum-based energy. A comprehensive literature review about the current advanced FTS technology and detailed experimental set-up are provided in this book. "State-of-the-art" characterization techniques and a modern computer-controlled fixed bed reactor are implemented for characterizing and evaluating promoted Mo carbide catalysts previously synthesized using a systematic catalyst design for optimal long chain hydrocarbon selectivity and FT activity. The correlation between physicochemical attributes and FT catalytic performance is also determined for catalyst optimization. Detailed methodology for kinetic studies, catalyst stability evaluation and catalytic deactivation modelling are also discussed in this book.



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978-3-639-71234-6

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Catalyst design and kinetic studies of Fischer-Tropsch synthesis for green fuel production

