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# Recent advances in the investigation of nanoeffects of Fischer-Tropsch catalysts

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**Abstract**

Fischer-Tropsch synthesis (FTS) is a structure-sensitive reaction for sustainable production of green fuels and value-added chemicals via syngas derived from coal, biomass, shale gas and natural gas. The nanostructure of a Fischer-Tropsch (FT) catalyst plays a crucial role in its catalytic performance. This review summarizes recent advances in the investigation of nanoeffects of FT catalysts, especially the effects of the active phase, particle size and exposed facet on catalytic performance. Perspectives and challenges for further research in nanocatalysis for syngas conversion are also given.

**Keywords:**

Fischer-Tropsch synthesis; Nanocatalysis; Nanoeffect; Active phase; Size effect; Facets effect