Surface oxygenate species enhance cobalt-catalyzed Fischer-Tropsch synthesis
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The researchers achieved direct structural observation at nanoscopic scale for the metal-support interaction and revealed that the migration of surface TiOx species on the metallic active site significantly involved in the modulation of the interaction between metal and TiC substrate.

The formation of Co-TiOx-TiC heterojunction structure over Co/TiC-SiC catalyst not only benefited the dispersion of Co NPs, but also rendered the superior intrinsic FTS activity.

"This work paves the way for the future rational design of advanced catalysts through moderate metal-support interaction by employing surface oxide species on carbide materials," said Prof. LIU.


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