

Adsorbed Probe Molecules on Surface for Analyzing the Properties of Cu/SnO₂ Supported Catalysts

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Abstract : The interaction of CO, H₂ and LPG with Cu-dosed SnO₂ catalysts was studied by means of Fourier transform infrared spectroscopy (FTIR). With increasing Cu loading, pronounced and progressive red shifts of the C-O stretching frequency associated with molecular CO adsorbed on the Cu/SnO₂ component were observed. This decrease in n(CO) correlates with enhancement of CO dissociation at higher temperatures on Cu promoted SnO₂ catalysts under conditions, where clean Cu is almost ineffective. In the conclusion, the capability of our technique is discussed, and a technique for enhancing the sensitivity in our technique is proposed.

Keywords : FTIR, spectroscopic, dissociation, n(CO)

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