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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