Journal of Catalysis 305 (2013) iii–x

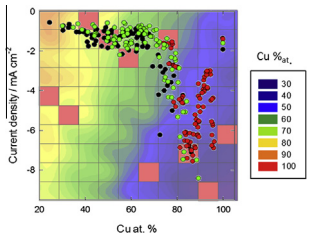
Contents lists available at SciVerse ScienceDirect

Journal of Catalysis

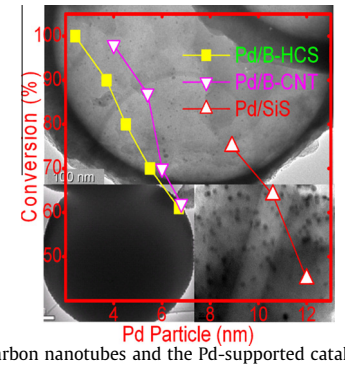
journal homepage: www.elsevier.com/locate/jcat

Journal of Catalysis Vol. 305, 2013

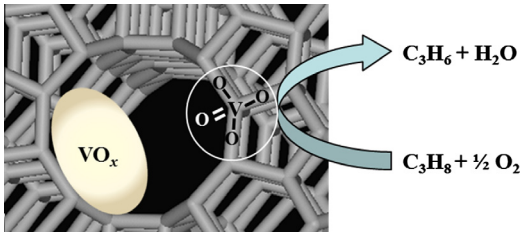
Contents



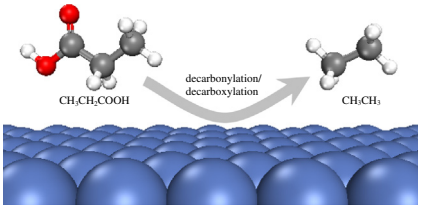
PdCu alloy catalysts are optimal for nitrate reduction in alkali media in a small compositional range with a maximum in activity at 84% Cu. This optimum is a result of a combination of a bi-functional and an electronic effect of Pd addition to Cu.



Pd was supported on boron-doped hollow carbon spheres and carbon nanotubes and the Pd-supported catalyst showed activity controlled by Pd particle size.



C_3H_8 ODH was studied on VSiBEA catalysts for which the Td/Oh V species ratio was tuned via the two-step synthesis method. It was found that framework Td V species were much more active in the formation of C_3H_6 than VO_x species on a TOF basis.



The reaction mechanism of the decarboxylation and decarbonylation of propanoic acid to alkanes has been investigated over Pd(1 1 1) model surfaces by a combination of microkinetic modeling and density functional theory calculations. The decarbonylation mechanism is preferred over the decarboxylation mechanism at various H_2 partial pressures.