

products contain propionaldehyde, acetaldehyde, acetone, and methanol. The catalyst properties depend on the method of preparation.

Effect of Prior Reduction (with Hydrogen) of a Chromia-Alumina-Potassium Catalyst on Its Later Activity in Dehydrogenation of Butane to Butylenes

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The authors have studied the effect of the temperature and duration of the reduction of the above catalyst with hydrogen on its later activity in fluidized bed catalysis. Up to 600° and 6 hours, an increase of the above factors increases the subsequent activity. The authors have discovered a deactivation of a freshly activated catalyst upon its contact with dry air.

Low-Pressure Catalytic Dehydrogenation of Isopentane

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The authors have studied the time variation of activity of an unreduced chromia-alumina-potassium catalyst during dehydrogenation of isopentane at low pressures. Under these conditions, the catalyst is activated by the dehydrogenation and rearrangement reactions. At atmospheric pressure,

the yield of dehydrogenation products is much higher than that of rearrangement products.

Kinetics of the High-Temperature Reactions of H₂S and COS with Bauxite

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The author has studied all aspects (including the calorimetry) of the kinetics of those reactions of H₂S and COS with bauxite which take place during removal of sulfur compounds from flue gases, and has described the mechanism by a system of interlocking consecutive reactions. This mechanism requires the assumption that the reaction of COS with H₂O, catalyzed by the bauxite surface, accelerates the reaction of H₂S with iron oxide. This interlocking of reactions requires the presence of intermediate activated molecules.

Ultraviolet Spectra of Diphenylamine Adsorbed on X and Y Zeolites

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The spectrum of diphenylamine adsorbed on cationic zeolites exhibits only the bands of the physically adsorbed molecules. In the event of adsorption on de-cationized zeolites, the spectrum also exhibits bands due to oxidation products and ions produced by donation of electrons from the diphenylamine to the aprotonic sites of the zeolite.