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Copper(II)-Exchanged α-Zirconium Phosphate as an Oxidative Dehydrogenation Catalyst

In the preceding Letter to the Editors, Hattori, Hanai, and Murakami present evidence to show that crystalline α-zirconium phosphate is a good catalyst for the oxidative dehydrogenation of ethylbenzene. They suggest that the catalytically active sites are the acid sites, presumably the P–OH groups. However, appreciable amounts of styrene were only obtained above 400°C.

Our results with Cu^{2+}-exchanged α-zirconium phosphate were obtained at 300°C (*1*). At this temperature α-ZrP is a relatively inactive catalyst for oxidative dehydrogenation and this agrees with the results in Fig. 1 of the preceding note. However, high conversions of cyclohexene to benzene were obtained with the copper (II)-exchanged phase. Quantitative data will be presented in the near future. Thus, the results obtained by Hattori *et al.* in no way invalidates the role played by copper (II) ions in certain types of catalytic reactions of α-ZrP, nor did we mean to imply that zirconium phosphate itself was inactive at higher temperatures.

REFERENCE

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