

Catalytic Degradation of Polystyrene Using HUSY Catalysts

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The performance of HUSY zeolites in the degradation of polystyrene(PS) was investigated in this study. The degradation was carried out in a semi-batch reactor with a mixture of PS and catalysts at 400–450 °C. The HUSY showed good catalytic activity for the degradation of PS with very high selectivity to aromatic liquids. The effects of catalyst acidity, reaction temperature and process time on the distribution of aromatics are discussed. The increase of process time and surface acidity enhanced the production of ethylbenzene. High degradation temperature favored the selectivity to styrene monomer.