

RESEARCH NOTES

Ni-Zn/C催化剂上乙醇气相羰基化动力学研究

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摘要 A novel heterogeneous Ni-Zn/C catalyst was used for vapor-phase carbonylation of ethanol under atmospheric pressure. Experiments were designed with the elimination of mass-transfer resistances. The data of primary reactions in the carbonylation were collected with a differential tubular reactor. Power law rate models were employed to express the conversion of ethanol and the yields of ethyl propionate and diethyl ether. The results obtained with the models were in agreement with the experimental data.

关键词 [ethanol](#) [carbonylation](#) [kinetics](#) [catalysis](#) [nickel catalyst](#)

分类号

Kinetics of Vapor-Phase Carbonylation of Ethanol on Ni-Zn/C Catalyst

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Abstract

A novel heterogeneous Ni-Zn/C catalyst was used for vapor-phase carbonylation of ethanol under atmospheric pressure. Experiments were designed with the elimination of mass-transfer resistances. The data of primary reactions in the carbonylation were collected with a differential tubular reactor. Power law rate models were employed to express the conversion of ethanol and the yields of ethyl propionate and diethyl ether. The results obtained with the models were in agreement with the experimental data.

Key words [ethanol](#) [carbonylation](#) [kinetics](#) [catalysis](#) [nickel catalyst](#)

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