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研究通讯

客体诱导**LiCl/FER**沸石客/主体材料主体相变行为的研究

汪靖，程晓维，毕怡，王梯，龙英才*

(复旦大学化学系 上海市分子催化与新材料重点实验室 上海 200433)

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摘要 用热扩散法将客体LiCl组装进入主体FER沸石孔道生成的客/主体材料中, 客体与主体骨架在一定温度下发生相互作用, 诱导该沸石发生相转变. XRD, FT-IR, TG/DTA/DTG等方法表征该客/主体材料相变过程证明, 相变起始温度500 ℃, 500～600 ℃生成$LiAlSi_3O_8$, 800 ℃的相变产物主要为β-石英, $LiAlSi_3O_8$的相对含量随LiCl的组装量增多而增加.

关键词 FER沸石 LiCl 客/主体相互作用 相变 $LiAlSi_3O_8$ β-石英

分类号

Studies on Phase Transformation Behavior of Host Induced by Guest in LiCl/FER Zeolite Guest/Host Material

WANG Jing, CHENG Xiao-Wei, BI Yi, WANG Ti, LONG Ying-Cai*

(*Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, Department of Chemistry, Fudan University, Shanghai 200433*)

Abstract In a novel LiCl/FER zeolite guest/host material prepared by assemble of the guest LiCl into the channels of host FER zeolites with thermal dispersion method, an interaction between the guest and the host occurred upon elevating the temperature, thus inducing a phase transformation of the complex material. By characterization via XRD, FTIR and TG/DTA/DTG, the process of phase transformation was proved to commence at the temperature of 500 ℃ with the production of $LiAlSi_3O_8$. With further elevating the temperature, β-quartz emerged at the temperature of 800 ℃ as the primary product in the process of phase transformation, the relative content of which was increased with decreasing the loadings of LiCl of the guest/host materials.

Key words FER zeolite LiCl guest/host interaction phase transformation $LiAlSi_3O_8$ β-quartz

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通讯作者 龙英才 yclong@fudan.edu.cn