

研究论文

以高岭土为原料合成沸石分子筛的相变规律

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摘要 以天然粘土矿物高岭土为原料, 采用水热晶化法合成了NaX, NaP和SOD三类沸石. 利用XRD、静态饱和水吸附等测试手段详细考察了晶化温度、初始反应混合物的碱浓度对沸石结晶的影响. 通过实验研究得到了三类沸石的结晶相区和结晶变化规律, 并优化出最佳合成工艺条件和相转变规律.

关键词 [高岭土](#) [沸石](#) [二元结晶相图](#)

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Phase Transformation Regularity of Synthesizing Zeolite with Kaolin as Raw Material

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Abstract Zeolites NaX, NaP and SOD were synthesized with hydrothermal treatment from the raw material of kaolin. The effects of temperature and the concentration of NaOH solution of the initial mixture on the crystallinity of zeolite were investigated *via* X-ray diffraction and water adsorption capacity. The binary crystallization phase diagram of three type zeolites and the rule of crystallization as well as phase transformation were obtained. Besides, the technical parameters of synthesizing zeolites were optimized to achieve the best synthetical conditions.

Key words [Kaolin](#) [Zeolites](#) [Binary crystallization phase diagram](#)

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