

عنوان مقاله:

Kinetics and Mechanism of Zeolite "m" Crystallization

محل انتشار:

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خلاصه مقاله:

The numerous structurally possible hypothetic zeolite frameworks were suggested recently. One of the forecasting structurally-possible and practically realized zeolite is the zeolite "m". This zeolite was realized by hydrothermal crystallization in Na₂O-Al₂O₃-SiO₂-H₂O system at 150°C in the NaOH solution of various concentrations from the mixture of meta-kaolin and obsidian. Initial reaction masses have the following compositions: Na₂O/Al₂O₃ = 5.5-6.5; SiO₂/ Al₂O₃ = 21-27; H₂O/Al₂O₃ = 60-120. Its hypothetic structure with cubic symmetry and parameters of elementary cell $a = 19.5 \pm 0.5 \text{ \AA}$ has the chemical formula : Na₁₆Al₁₆Si₁₁₂O₂₅₆·64H₂O. Phase and chemical composition of crystallization products have been determined by the methods of Xray phase (DRON-2.5; CuK α -radiation; Ni-filter), thermo graphic (Derivatograph Q-1500D) and X-ray spectral (SRM-18).The kinetics of zeolite "m" crystallization has been studied and crystallization mechanism is given

کلمات کلیدی:

Zeolite m, meta-kaolin, hydrothermal crystallization

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