

عنوان مقاله:

NiAPO Nano-structured Crystals: Synthesis & Characterization

محل انتشار:

پنجمین همایش ملی مهندسی محیط زیست (سال: 1390)

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خلاصه مقاله:

Molecular sieves and zeolites are materials whose crystalline frameworks form nanometer or subnanometer pores. A variety of different crystal structures are known having a range of pore sizes. Because the pore sizes are usually smaller than 2 nm, they are classified as microporous materials. Although microporous materials have ordered structure over the nanometer scale, they do not typically have ordered structure at larger dimensions. NiAPO is a nano-zeolite that synthesis with combining AIPO4-5 nano-zeolite and Ni. This nano-zeolite used to separation of heavy metals from chemical processes. Existence of heavy metals in chemical processes is an environmental pollution. NiAPO has been synthesized via hydrothermal technique. The crystals have been structurally characterized using X-ray diffraction (XRD), scanning electron microscope (SEM), energy dispersive X-ray analysis (EDAX). Effect of crystallization temperature and duration on morphology of the powder and difference of AIPO4-5 and NiAPO has been studied. Then morphology of NiAPO with AIPO4-5 crystals was compared.

کلمات کلیدی:

Nano-Zeolite, AIPO4-5, NiAPO, Synthesis, Environmental risk

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