

Study the effect of synthesis of (silico-)aluminophosphate EMM-8 zeolite in the presence or absence of HF

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EMM-8 zeolite, with SFO topology, having 2-dimensional intersecting channel system with one 8-membered ring channel perpendicular to another 12-membered ring exhibits a high surface area. This material may be a potential molecular sieve for gas separation and purification. In this work, we prepared AlPO/SAPO-EMM-8 zeolite by hydrothermal synthesis in the presence or absence of fluoride ions using gel composition: $(0-0.2)\text{SiO}_2:1\text{Al}_2\text{O}_3:0.8\text{P}_2\text{O}_5:(0-0.5)\text{HF}:2.0\text{DMAPy}:40\text{H}_2\text{O}$. Here, DMAPy is N,N-dimethylamino-4-pyridine. Different sources of silica and alumina were used here in order to form zeolites of high crystallinity. The synthesized materials were characterized by XRD, BET and SEM-EDX technologies.