

## عنوان مقاله:

A Study on the Effects of Metal on the Acidity of MeAPO/MeAPSO

## محل انتشار:

دومین کنفرانس ملی فرآیندهای گاز و پتروشیمی (سال: 1398)

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## نویسنده:

Mohadese Nazari - Chemical Engineering Department, Esfarayen University of Technology, Esfarayen, Iran

## خلاصه مقاله:

Microporous crystalline metal aluminophosphates (MeAPOs) and metal silicoaluminophosphates (MeAPSOs) having appropriate acidic properties and porous structure have been considered as the novel and useful catalysts in petrochemical industries. In present work, a theoretical study has been carried out on parameters affecting the acidity of MeAPOs and MeAPSOs by the extensive review of the literature. Metal incorporation manner, bond length and angle of T-O-T, substitution mechanism, and structural effects were found to be the effective parameters on acidic properties of these molecular sieves. Among the methods of metal incorporation, the isomorphous substitution was known as the most successful way of modifying the acid sites. The coordination needs, the order of material addition in synthesis procedure, pH, and Me/P+Al values in the synthesis gel, charge of the template used and metal ionic radius are the most effective factors on isomorphous substitution. It revealed that Metal ions of Ti, V, Mn, Co, and Zn show the most isomorphous incorporation by the formation of tetrahedral coordination in the lattice.

## کلمات کلیدی:

Metal Silicoaluminophosphate, Acidity, Isomorphous substitution, Transition metals, Structure

## لینک ثابت مقاله در پایگاه سیویلیکا:

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