

предположить, что реакция этерификации протекает как на В-центрах, так и на L-центрах.

Таким образом, для получения H-формы цеолита ЦВК со стабильными В-центрами цеолит Na ЦВК сначала необходимо обработать раствором HCl и лишь затем подвергать ТО.

## VOC REMOVAL FROM AIR BY OZONE OXIDATION ON THE Pt CATALYST

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Different methods are used for removal of organic pollutants from air. Oxidation is one of the methods which has attracted much interest and a lot of experimental studies have been done. In this study ozonation of polluted air in the presence of Pt catalyst was done. Toluene was selected as a pollutant and the air was saturated by toluene. Toluene removal at different temperatures with and without ozone was studied and the results were compared with the experiments with the same conditions with a porous material namely Silica.

A pilot to conduct experiments was set up and online analysis of input and output streams was established using GC analyzer.

The experiments were carried out at temperatures 50, 100, 200, 300, 400°C. The ozone concentration was varied and the experiments were repeated for 80, 125 and 150 gr/m<sup>3</sup>. All these experiments were conducted with surface area of 50 m<sup>2</sup> of Pt catalyst and Silica. It was found that by using ozone there is a considerable toluene removal percentage compared with using only air. Increase in temperature increases the removal

efficiency, when ozone is used as an oxidizing agent. In experiments without ozone increasing temperature always increases removal efficiency. Use of Pt catalyst decreases the temperature required for total removal of toluene. So it is concluded that Pt catalyst has great effect on removal of toluene. Also removal temperatures can be lowered remarkably by using ozone compared with using air. Ozone concentration also has a direct effect on removal efficiency and as the concentration increases the removal efficiency reaches complete removal.

*Reference:* A. Khudiev, S.Shafiei, J.S.S.Mohammadzadeh, S.Rajabzadeh, M. Haghighi, J.Odak, "Removal of VOC from Air by Ozone on Silica", *Proceedings of the 9th Iranian Chemical Engineering Congress*, 23-25 November 2004, Tehran, Islamic Republic of Iran.

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## **О ПУТЯХ ПРЕВРАЩЕНИЯ $i\text{-C}_3\text{H}_7\text{OH}$ НА НИКЕЛЬ-СОДЕРЖАЩЕМ КАТАЛИЗАТОРЕ**

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Среди описанных в литературе способов получения ацетона особый интерес представляет каталитического дегидрирования изопропилового спирта. Почти 50% производимого изопропилового спирта расходуется на получение