

## عنوان مقاله:

Catalytic role of natural zeolite in via electrolysis method transesterification reaction to produce biodiesel

## محل انتشار:

دومین کنفرانس ملی ژئولیت ایران (سال: 1394)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

Biodiesel is an alternative, biodegradable and renewable form of energy consisting of mono alkyl esters of fatty acids derived from sources such as vegetable oils, animal fats and cooking oil, has cardinal potential as alternative fuels. In this work, biodiesel production from catalyzed transesterification of triglyceride with excess methanol was studied using KOH/zeolite as solid heterogeneous catalysts. Reaction parameters such as reaction time, mass ratio of catalyst to oil were investigated. Loading KOH/zeolite for preparation by two ways: Method A was contained mixing catalyst with potassium hydroxide solution and calcined at 300 °C for 2h. Method B was treated hydrothermally with KOH solutions during 16 h, either fusion with KOH powder at 500 °C. The catalyst A and B used for biodiesel production by electrolysis method. The conversion for catalyst B was 91% but did not respond to catalyst A. Characterization of the catalyst sample was performed by Fourier transform infrared spectroscopy (FTIR), scanning (electron microscopy (SEM) and X-ray diffraction (XRD).

## کلمات کلیدی:

Biodiesel, Transesterification, Heterogeneous catalysts, Clinoptilolite, Zeolite

## لینک ثابت مقاله در پایگاه سیویلیکا:

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