

# 13<sup>th</sup> International Conference on Chemistry Meeting

April 25-26, 2023 | Webinar

Volume : 09

## Hydroconversion of n-C10 alkanes using functionalized AlMCM-41 as catalysts

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The hydroconversion of n-C10 was studied over functionalized AlMCM-41 with platinum rate exchange (0.5—4 wt%) and ammonium ions (95%). The n-C10 underwent conversion with bi-functional catalysts Pt/H-AlMCM-41. The tests were carried out in a continuous fixed bed reactor under the following conditions of atmospheric pressure, ratio alkanes/H<sub>2</sub> 5:1, temperature (up to 600 °C), acidity and space velocity ( $0.1 \text{ h}^{-1} < \text{WHSV} < 2.1 \text{ h}^{-1}$ ). Relatively high yields of light products were obtained. Ptn+/H-AlMCM-41 catalysts showed a good catalytic activity.

The study revealed bimodal distribution; the adsorption of n-alkanes on acids sites and then their subsequent conversion. Thus; this phenomenon is improved by the textural/ structural characteristics and (Ptn+/H) bi-functionalization, responsible for the acidity on the inner surface of catalysts. This work has established a close relationship between structure, selectivity, activity and acidity of functionalized AlMCM-41. The nature and distribution of the obtained products suggest that the bi-functional catalysts show a good performance and better selectivity in hydrocracking reactions than hydroisomerization with its accompanying steric effects biased for multibranched products.

### Biography

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Abstract received : Febraury 02, 2023 | Abstract accepted : Febraury 05,2023 | Abstract published : 10-05-2023