

CATALYTIC CONVERSION OF PALM OIL TO GASOLINE OVER H-ZSM-5: EFFECT OF TEMPERATURE AND HYDROTREATMENT OF CATALYSTS

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Catalytic conversion of palm oil to gasoline was performed over H-ZSM-5 zeolite catalyst. Palm oil was converted in a down flow fixed bed reactor at atmospheric pressure and weight hourly space velocity (WHSV) of 2.5 h^{-1} . Temperature was varied in the range of 450-525°C and hydrogen flow rate for activation of 1-2 L/h. Increasing reaction temperature to 500°C increased the conversion of palm oil. OLP yield and gasoline selectivity increased with temperature until 500°C before decreasing slightly. Hydrotreatment of catalysts increased OLP and gasoline formation while coke and gas decreased. However, increasing the hydrotreating flow rate more than 1L/h gave little effect towards palm oil cracking activity.

*Annual Fundamental Science Seminar 2005
July 4-5, 2005, Ibnu Sina Institute for Fundamental Science Studies,
Universiti Teknologi Malaysia*