



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.5, pp 930-937, 2017

Preparation and Characterization of Ni/Al₂O₃ Catalyst and Its Utilization for Catalytic Cracking of Glycerol

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Abstract : The objective of this research was to prepare Ni-Al₂O₃ catalyst for catalytic cracking application. The catalyst was prepared by varying Ni concentration in the range of 2-10% and it was tested in catalytic cracking of glycerol with microwave as external energy. The result of showed that the peak of Ni impregnated in Al₂O₃ appeared at $2\theta = 62.9^\circ$ and crystallinity of catalyst increased from 35 to 40%. Furthermore, SEM analysis showed that during impregnation process Ni filled the active sites of Al catalyst. The highest yield was achieved at 84.67% with Ni- Al₂O₃ 6% catalyst.

Hadiyanto *et al* /International Journal of ChemTech Research, 2017,10(5): 930-937.
