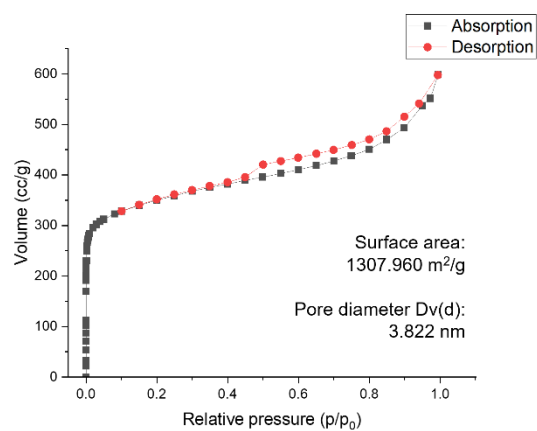


Supplementary materials for:

Conversion of Polyethylene to Low-Molecular-Weight Oil
Products at Moderate Temperatures Using
Nickel/Zeolite Nanocatalysts

(a)



(b)

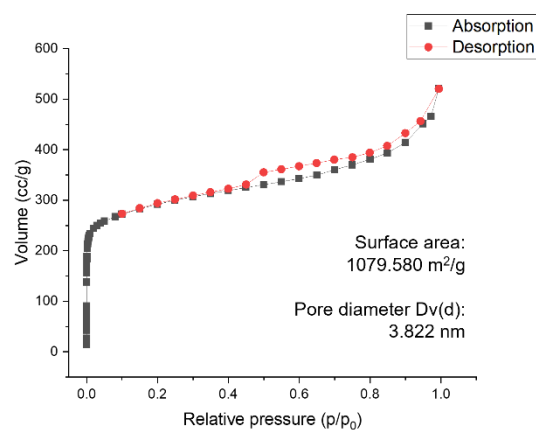


Figure S1. Absorption(black)-desorption(red) nitrogen isotherms of the (a) Pure Y-zeolite (surface area 1307.960 m^2/g), (b) Nickel on Y-zeolite (surface area 1079.580 m^2/g).

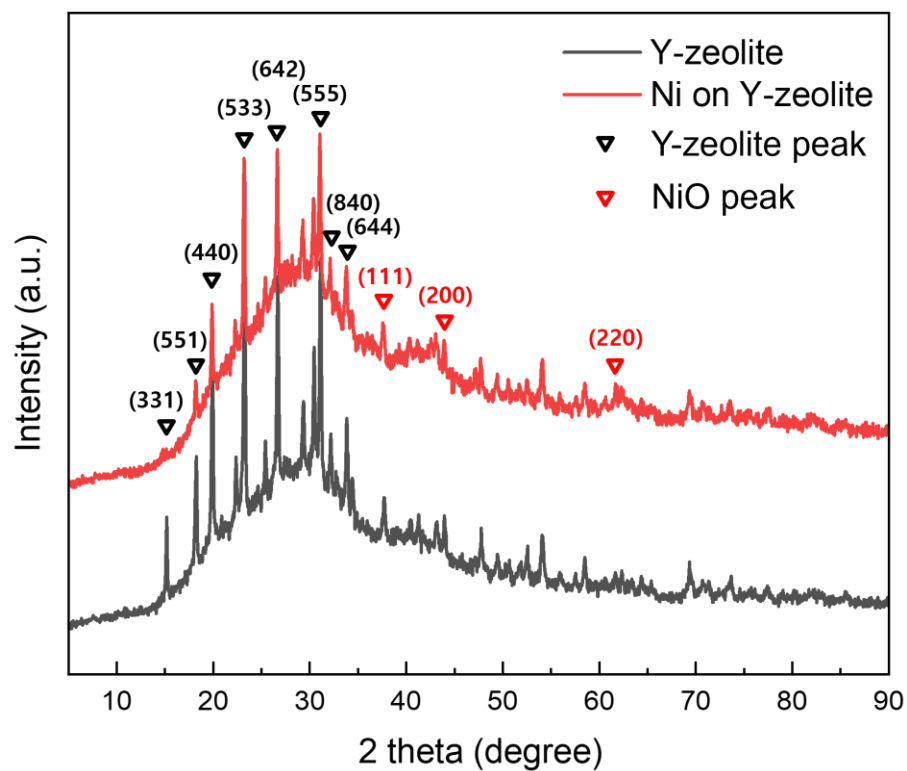


Figure S2. X-ray diffraction spectra of nickel on Y-zeolite(red) and Y-zeolite(black). Due to nickel's polycrystalline structure, its XRD peak appears smaller and less prominent compared to that of zeolite, which forms a crystalline structure.

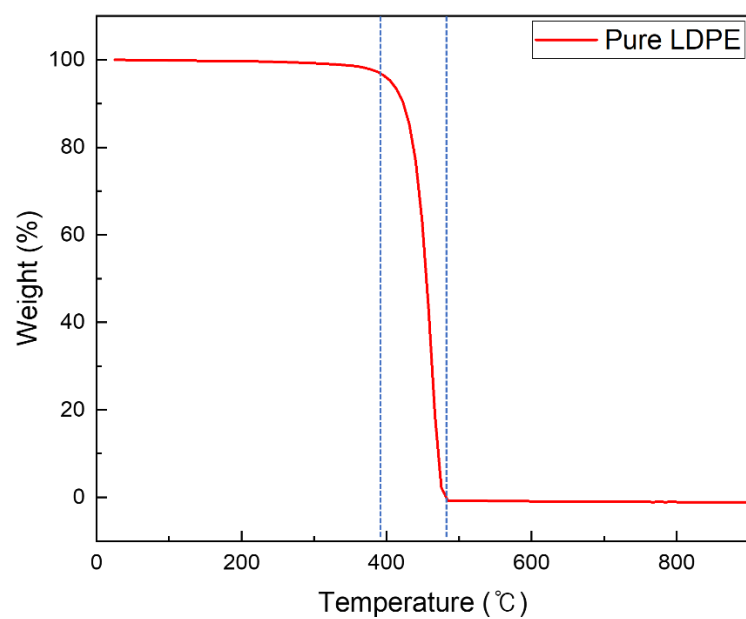


Figure S3. Thermogravimetric curve of pure LDPE at a heating rate of 10 °C/min under N₂ atmosphere.