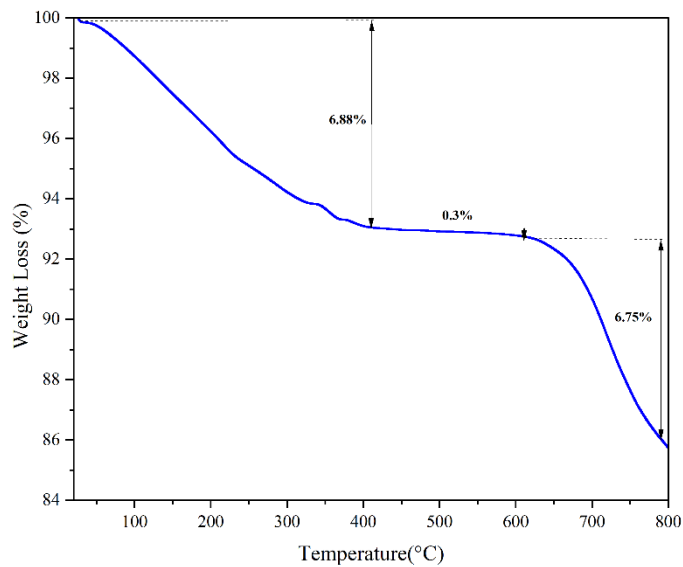
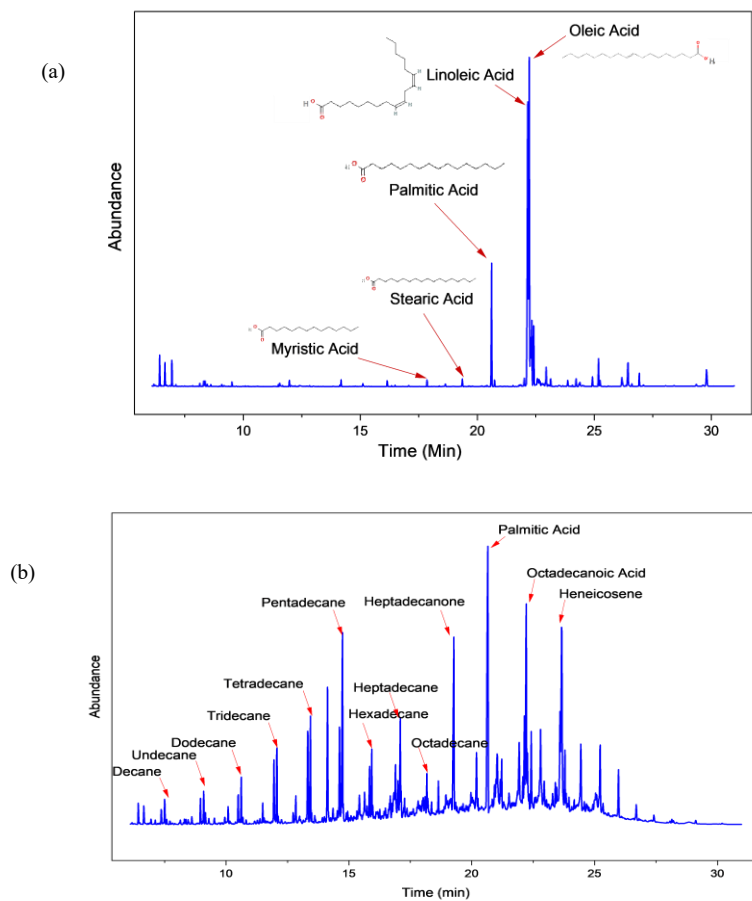


## Supplementary Materials



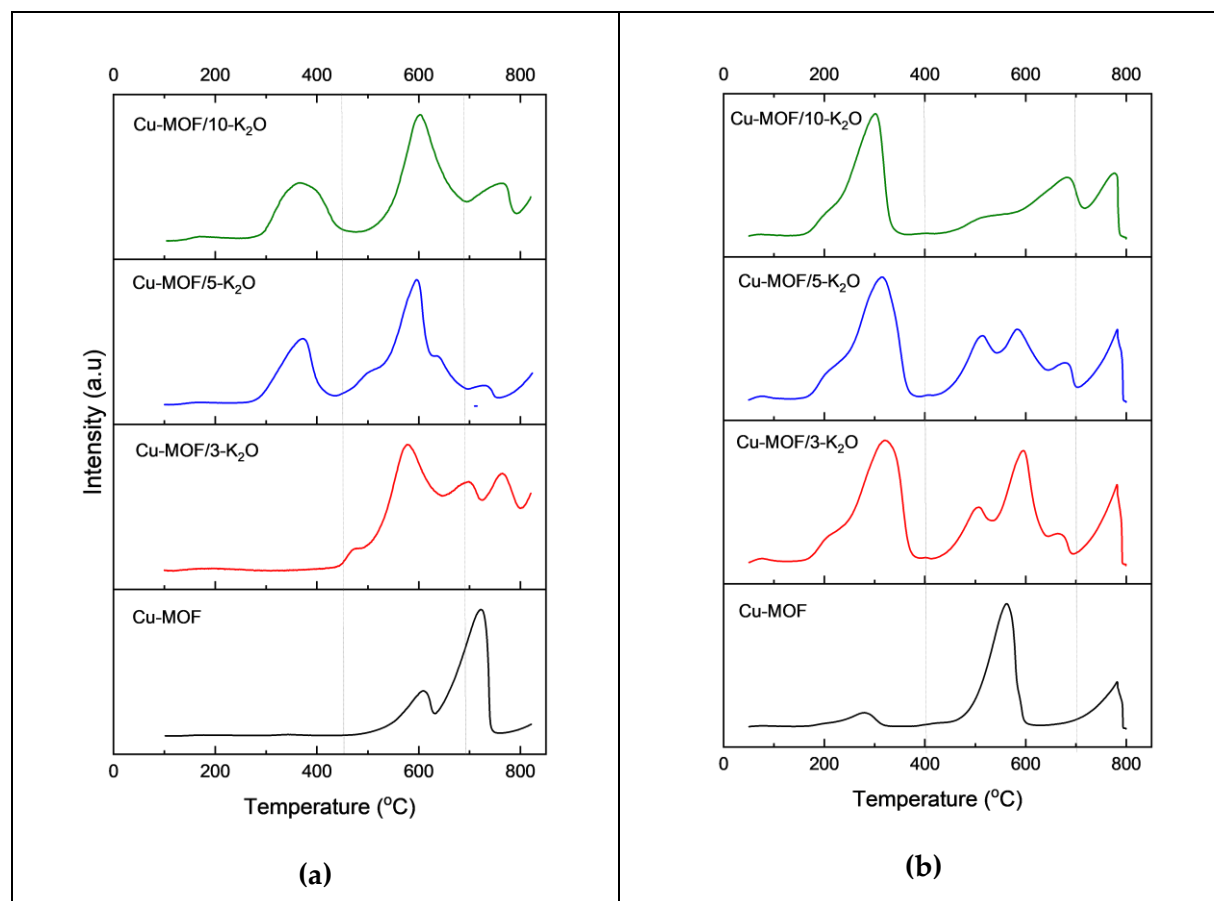
**Figure S1.** TGA analysis of Cu-MOF/5-K<sub>2</sub>O



**Figure S2.** GCMS Chromatogram of Waste Cooking Oil (WCO) (a) and Oil Liquid Product (OLP) after reaction using Cu-MOF/10-K<sub>2</sub>O at 370 °C during 1h

**Table S1.** WCO composition and OLP product resulted with/without catalyst

Compound	WCO	No catalyst <sup>a</sup>	Cu-MOF/10-K <sub>2</sub> O catalyst <sup>b</sup>
Fatty acid	89.56	39.43	0
Saturated hydrocarbon	0.52	16.24	61.10
Unsaturated hydrocarbon	0.31	21.69	28.09
Cyclic Hydrocarbon	0.69	11.44	6.4
Glycerol derivative	4.30	0	0.74
Others	4.61	11.20	3.67

<sup>a</sup>Reaction condition: 272 g WCO, 400 °C<sup>b</sup>Reaction condition: 272 g WCO, 15 g Cu-MOF/10-K<sub>2</sub>O, 370 °C**Figure S3.** (a) NH<sub>3</sub> and (b) CO<sub>2</sub>-TPD profile of the synthesized catalyst