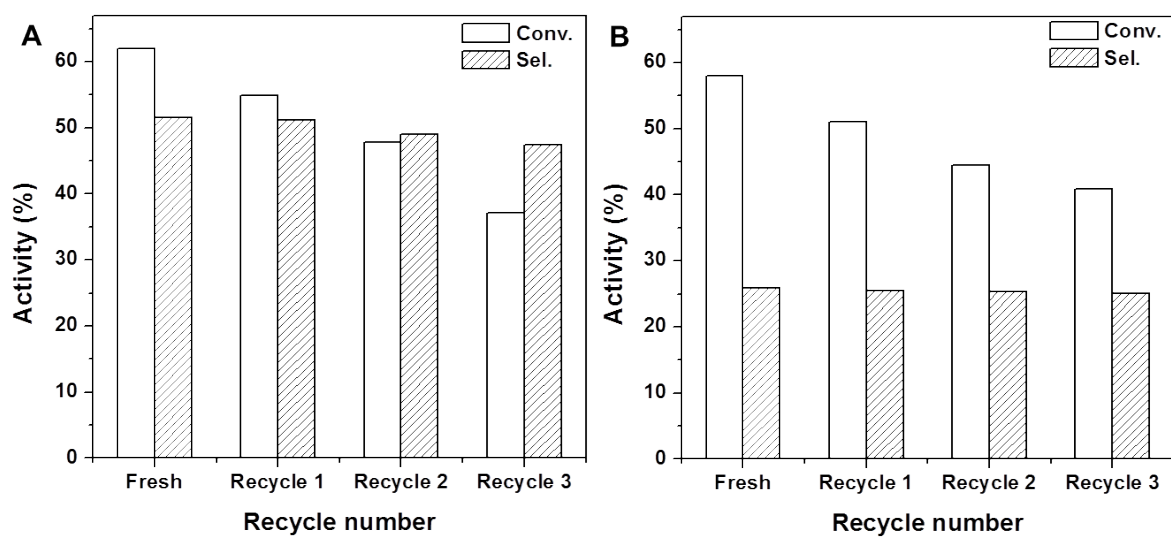
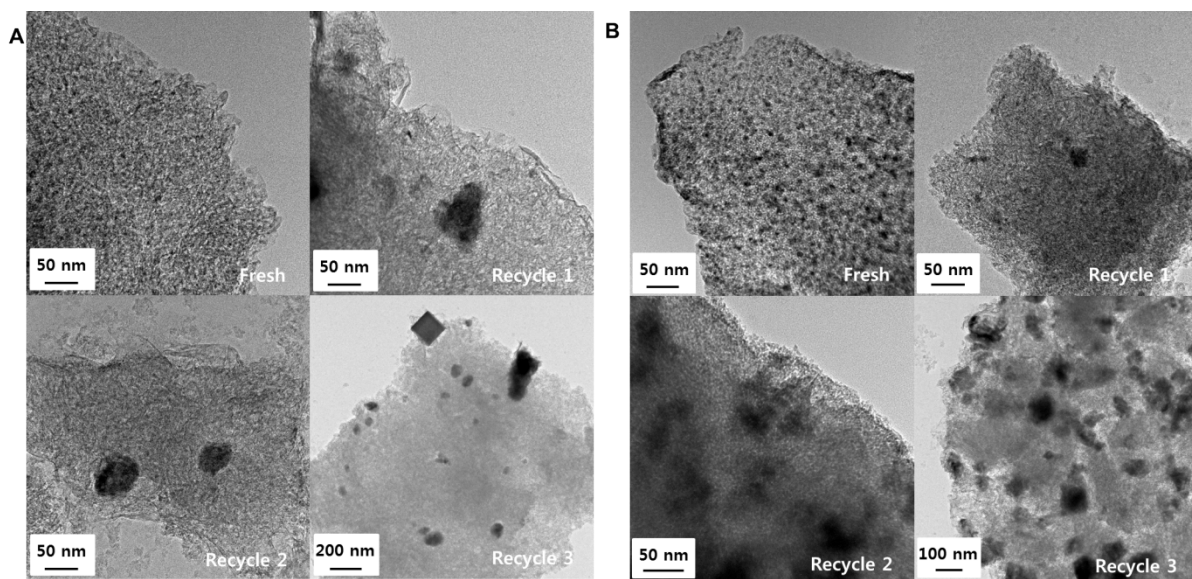


# Supplementary Information

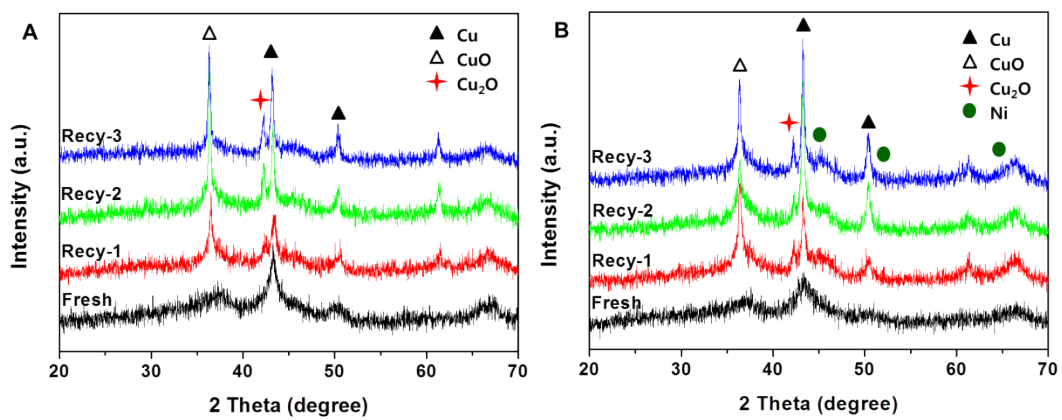
Effect of nickel on catalytic behaviour of  
bimetallic Cu-Ni catalyst supported on  
mesoporous alumina for the hydrogenolysis of  
glycerol to 1,2-propanediol



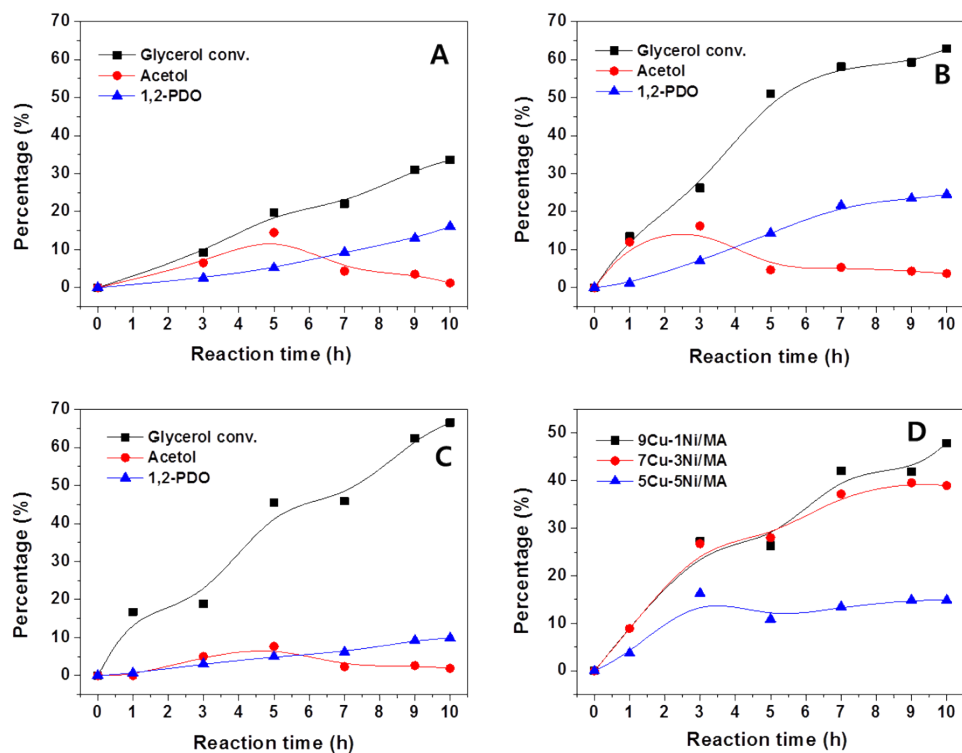
**Fig. S1** Catalytic recycling tests of A) 10Cu/MA and B) 7Cu-3Ni/MA catalysts in glycerol hydrogen olysis.



**Fig. S2** HR-TEM images of A) 10Cu/MA and B) 7Cu3Ni/MA catalysts after recycling tests.



**Fig. S3** XRD patterns of A) 10Cu/MA and B) 7Cu3Ni/MA catalysts after recycling tests.



**Fig. S4.** Time on stream activity for (A) 9Cu-1Ni/MA, (B) 7Cu-3Ni/MA and (C) 5Cu-5Ni/MA catalysts, (D) Selectivity of 1,2-PDO at 10h in TOS test without a hydrogen supply in batch reactor.

**Table S1.** Compositions of various liquid and gas-phase products in TOS activity test without H<sub>2</sub>

Products	9Cu-1Ni/MA	7Cu-3Ni/MA	5Cu-5Ni/MA
<i>Liquid-phase (%)</i>			
Formaldehyde	0.4	0.4	0.2
Ethanol	0.4	0.1	0
1PO + 2PO	0.1	0.2	0.2
Acetol	4.8	4	1.7
EG	2.6	1.2	0.8
1,2-PDO	47.90	38.90	14.90
<i>Gas-phase (%)</i>			
X <sub>Glycerol</sub>	10.9	11.5	12.6
S <sub>CO2</sub>	68.3	55.3	35.1
S <sub>CO</sub>	10.6	9.8	7.8
S <sub>CH4</sub>	6.6	14.3	21.3
S <sub>H2</sub>	36.2	36.6	52.8